ALASKA LEGISLATURE COMMITTEE FILES, 1989-1990

5749 HOUSE JUDICIARY

8672

153

1 [, INCLUDING, WITHOUT LIMITATION, FACILITIES FOR TRANSPORTATION,
2 FACILITIES FOR POLLUTION CONTROL AND WASTE DISPOSAL, FACILITIES FOR
3 THE LOCAL FURNISHING OF GAS, FACILITIES FOR WATER, FACILITIES FOR
4 INDUSTRIAL PARKS, MASS COMMUTING VEHICLES, FACILITIES FOR LOCAL DIS-
5 TRICT HEATING OR COOLING, PARKING FACILITIES, OR A STORAGE OR TRAINING
6 FACILITY RELATING TO A PLANT OR FACILITY];
7 * Sec. 2. AS 44.88.010(c) is amended to read:
8 (c) It is further declared to be the policy of the state, in the
9 interests of promoting the health, security, and general welfare of
10 all the people of the state, and a public purpose of the state, to
11 accomplish the objectives set out in (b) of this section through the
12 provision of financial support in cooperation with a municipality, and
13 federal, state, municipal, and private institutions [FOR THE PURPOSE
14 OF INCREASING THE EXPORT OF ALASKA GOODS, TALENT, RAW MATERIALS, AND
15 SERVICES].
16 * Sec. 3. AS 44.88.060 is amended to read:
17 Sec. 44.88.060. ALASKA INDUSTRIAL DEVELOPMENT AND EXPORT AU-
18 THORITY REVOLVING FUND. The Alaska Industrial Development and Export
19 Authority revolving fund is established in the authority. The revolv-
20 ing fund consists of appropriations made to the revolving fund by the
21 legislature, money or other assets transferred to the revolving fund
22 by the authority, and unrestricted payments on loans made or purchased
23 by the authority. Unless otherwise expressly stated, the accounts
24 created in this chapter are accounts in the revolving fund. The
25 authority may create additional accounts either in the revolving fund
26 or outside the revolving fund. Subject to agreements made with the
27 holders of the authority's bonds or with other persons, the authority
28 may transfer amounts in an account in the revolving fund to another
29 account in the revolving fund. Amounts deposited in the revolving

fund may be pledged to the payment of bonds of the authority or expended for the purposes of the authority under this chapter. The authority has the powers and responsibilities established in AS 37.10.071 with respect to the investment of amounts held in the revolving fund.

* Sec. 4. AS 44.88.080(14) is amended to read:

(14) to acquire, manage, and operate projects as the authority considers necessary or appropriate to serve a public purpose or to exercise its powers under this chapter;

* Sec. 5. AS 44.88 is amended by adding a new section to read:

Sec. 44.88.082. SHARED OWNERSHIP, OPERATION, OR CONSTRUCTION PROHIBITED. Notwithstanding AS 44.88.080, the authority may not enter into an agreement with other persons, including governmental entities or institutions, for shared ownership, operation, or construction of projects.

* Sec. 6. AS 44.88.090(a) is amended to read:

(a) The [SUBJECT TO (g) OF THIS SECTION, THE] authority may borrow money and may issue bonds, including but not limited to bonds on which the principal and interest are payable

(1) exclusively from the income and receipts or other money derived from the project or development project financed with the proceeds of the bonds or derived from the exporter or exporting transaction financed, guaranteed, or insured with the proceeds of the bonds;

(2) exclusively from the income and receipts or other money derived from designated projects or development projects or other sources whether or not they are financed, insured, or guaranteed in whole or in part with the proceeds of the bonds; or

(3) from its income and receipts or other assets generally,

1 or a designated part or parts of them.
2 * Sec. 7. AS 44.88 is amended by adding a new section to read:
3 Sec. 44.88.095. BONDING LIMITATIONS. (a) The authority may not
4 issue bonds in a 12-month period in an amount that exceeds
5 $400,000,000.
6 (b) The authority may not issue revenue bonds, other than re-
7 funding bonds, to purchase a loan for a project under AS 44.88.155 -
8 44.88.159, to acquire a development project under AS 44.88.172 -
9 44.88.177 or to provide money to finance, guarantee, or insure an
10 exporting transaction under AS 44.88.300 - 44.88.390 in an amount
11 greater than $50,000,000 during any 12-month period unless the issu-
12 ance is included separately in the estimates required in the report of
13 the authority under AS 44.88.210(b) and unless the legislature, by
14 law, approves the issuance.
15 (c) Before entering into a lease or other agreement under
16 AS 44.88.090(e) regarding a project for which the authority agrees to
17 issue bonds in an amount in excess of $6,000,000, there must be filed
18 with the authority a certified copy of a resolution of the governing
19 body of the political subdivision of the state, if any, in which the
20 project is to be located, consenting to the location of the project.
21 The consent need only refer to the general nature of the project
22 ultimately to be acquired, as set out in a request of the proposed
23 project applicant. Before entering into a lease or other agreement
24 under AS 44.88.090(e) regarding a project, the authority shall find,
25 on the basis of all information reasonably available to it, that
26 (1) the project and its development under this chapter will
27 be economically advantageous to the state and the general public
28 welfare and will contribute to the economic growth of the state;
29 (2) the project applicant is financially responsible;

1 (3) provision to meet increased demand upon public facili-
2 ties that might result from the project is reasonably assured; and
3 (4) the project will provide, or retain, employment reason-
4 ably related to the amount of the financing by the authority, con-
5 sidering the amount of investment per employee for comparable facil-
6 ities and other relevant factors.
7 (d) Before adopting a resolution approving a project to be
8 financed under AS 44.88.172 for which bonds must be issued, the au-
9 thority shall, on the basis of all information reasonably available to
10 it, make findings, with respect to the project, as described in
11 (c)(1) - (4) of this section, and also find that
12 (1) the project is economically and financially feasible
13 and able to produce revenue adequate to repay the bonds or loans with
14 which it is financed;
15 (2) the project complies with applicable law; and
16 (3) issuance of the bonds is not expected to adversely
17 affect the ability of the state or any political subdivision of the
18 state to market other bonds.
19 (e) Before entering into an agreement to finance or to develop a
20 proposed project with a cost in excess of $10,000,000 financed under
21 AS 44.88.172 for which bonds must be issued, the authority shall
22 obtain the approval of each Regional Resource Advisory Council ap-
23 pointed under AS 44.88.174 or municipality in the area in which the
24 proposed project is to be located. Approval under this subsection
25 must be evidenced by a certified copy of a resolution of the council
26 or of the governing body of the municipality. Before considering a
27 resolution regarding the approval or rejection of the development or
28 financing of a proposed project under this subsection, a Regional
29 Resource Advisory Council shall conduct a public hearing in the

region. If a proposed project is located in a municipality, the governing body of the municipality shall conduct a hearing on the proposed project.

(f) Without prior legislative approval, the authority may not issue bonds in an amount greater than $10,000,000 to assist in the financing of a development project under AS 44.88.172 - 44.88.177.

* Sec. 8. AS 44.88.105(a) is amended to read:

(a) For the purpose of securing one or more issues of its bonds, the authority may establish one or more special funds, called "capital reserve funds", and shall pay into those capital reserve funds the proceeds of the sale of its bonds and other money which may be made available to the authority from other sources for the purposes of the capital reserve funds. A capital reserve fund may be established only if the authority determines that the establishment of the fund would enhance the marketability of the bonds [, AND IF THOSE COSTS OF A PROJECT, AS DEFINED IN AS 44.88.900, WHICH ARE TO BE FINANCED WITH THE PROCEEDS OF THE BONDS, DO NOT EXCEED $10,000,000]. Money in a capital reserve fund, except as provided in this section, may be used as required only for (1) the payment of the principal of, and interest on, bonds or of the sinking fund payments with respect to those bonds; (2) the purchase or redemption of the bonds; or (3) the payment of a redemption premium required to be paid when the bonds are redeemed before maturity. However, money in a capital reserve fund may not be withdrawn if the withdrawal would reduce the amount in the capital reserve fund to less than the capital reserve <u>fund</u> requirement, except for the purpose of making payment, when due, of principal, interest, redemption premiums on the bonds, and sinking fund payments when other money of the authority is not available for the payments. Income or interest earned by, or increment to, a capital reserve fund, from the

1 investment of all or part of the fund, may be transferred by the
2 authority to other funds or accounts of the authority if the transfer
3 does not reduce the amount of the capital reserve fund below the
4 capital reserve fund requirement.
5 * Sec. 9. AS 44.88.105(d) is amended to read:
6 (d) With respect to a capital reserve fund created under this
7 section on or before January 1, 1989, the [THE] chairman of the au-
8 thority shall annually, no later than January 2, certify in writing to
9 the governor and the legislature the amount, if any, required to
10 restore the [A] capital reserve fund to the capital reserve fund
11 requirement. The legislature may appropriate to the authority the
12 amount certified by the chairman of the authority. The authority
13 shall deposit the amounts appropriated under this subsection during a
14 fiscal year in the proper capital reserve fund. Nothing in this
15 section creates a debt or liability of the state.
16 * Sec. 10. AS 44.88.155(b) is amended to read:
17 (b) The authority may establish in the enterprise development
18 account the [A SMALL ENTERPRISE LOAN ACCOUNT, A LOAN INSURANCE
19 ACCOUNT, AND OTHER] accounts it considers appropriate.
20 * Sec. 11. AS 44.88.155(c) is amended to read:
21 (c) Money and other assets of the enterprise development account
22 may be used to secure bonds of the authority issued to finance the
23 purchase of loans for projects [AND SHALL BE HELD AND INVESTED BY THE
24 AUTHORITY IN ACCORDANCE WITH AS 37.10.071] or shall be used to pur-
25 chase loans for projects.
26 * Sec. 12. AS 44.88.155(d) is amended to read:
27 (d) A loan purchased in whole or in part by the authority with
28 assets of the enterprise development account or with proceeds of bonds
29 secured by assets of the enterprise development account, other than a

1 loan which is financed with the proceeds of bonds of the authority and
2 secured only by a project applicant or a project,
3 (1) may not exceed
4 [(A)] $10,000,000; [OR
5 (B) $500,000 IF THE LOAN IS PURCHASED UNDER AS 44.88.-
6 158;]
7 (2) may not exceed the cost of the project or 75 percent of
8 the appraised value of the project, whichever is less, unless the
9 amount of the loan in excess of this limit is federally insured or
10 guaranteed or is insured by a qualified mortgage insurance company;
11 (3) may not be for a term longer than three-quarters of the
12 authority's estimate of the life of the project or 25 years from the
13 date the loan is made, whichever is earlier;
14 (4) shall contain complete amortization provisions satis-
15 factory to the authority requiring periodic payments by the borrower;
16 (5) shall be in the form and contain the terms and provi-
17 sions with respect to insurance, repairs, alterations, payment of
18 taxes and assessments, default reserves, delinquency charges, default
19 remedies, acceleration of maturity, secondary liens, and other matters
20 the authority prescribes;
21 (6) shall be secured as to repayment by a mortgage or other
22 security instrument in the manner the authority determines is feasible
23 to assure timely repayment under a loan agreement entered into with
24 the borrower;
25 (7) may not be made unless
26 (A) at least <u>20</u> [10] percent of the principal amount
27 of the loan is retained by the originator of the loan <u>as long as</u>
28 <u>the loan is outstanding</u>; or
29 (B) 100 percent of the principal amount of the loan is

guaranteed by the United States or an agency or instrumentality of the United States;

(8) must be

(A) [AT LEAST PARTIALLY GUARANTEED BY THE UNITED STATES OR AN AGENCY OR INSTRUMENTALITY OF THE UNITED STATES, SUBJECT TO THE PROVISIONS OF AS 44.88.158;

(B)] financed from the proceeds of bonds; or

(B) [(C)] expected by the authority to be financed from the proceeds of bonds.

* Sec. 13. AS 44.88.165 is repealed and reenacted to read:

Sec. 44.88.165. DELINQUENT LOANS. The authority shall adopt regulations to describe the circumstances under which it will discontinue purchasing loans from a financial institution because of excessive delinquencies among the loans previously purchased by the authority from the financial institution. In adopting the regulations, the authority must consider the authority's delinquency experience with loans it purchased from all financial institutions. The authority may include in the regulations other remedies it considers appropriate as alternatives to the discontinuance of purchasing loans from the financial institution.

* Sec. 14. AS 44.88.172(a) is amended to read:

(a) The economic development account is established in the revolving fund. The economic development account consists of money or assets appropriated, loaned, or transferred to the authority for deposit in the account [,] and other money or assets deposited in the account by the authority. While money is on deposit in the economic development account, the money [THE ACCOUNT] may be used only to finance, acquire, manage, and operate development projects that the authority intends to own and operate. The term "operate" includes

1 operation directly by the authority [,] or by an agent of the author-
2 ity.
3 * Sec. 15. AS 44.88.535(b) is amended to read:
4 (b) The authority may provide a guarantee from the fund for up
5 to 80 [70] percent of a loan that qualifies under AS 44.88.500 -
6 44.88.599. The ratio of the guarantee to the outstanding principal of
7 the loan may not increase over the term of the loan.
8 * Sec. 16. AS 44.88.545 is amended to read:
9 Sec. 44.88.545. LIMITATIONS OF GUARANTEES WITH RESPECT TO
10 BORROWERS. The authority may not provide a guarantee
11 (1) [A LOAN] of more than $1,000,000;
12 (2) [LOANS] to an individual borrower that cumulatively
13 exceeds [EXCEED] $1,000,000 of guaranteed indebtedness.
14 * Sec. 17. AS 44.88.560 is amended to read:
15 Sec. 44.88.560. POWERS OF THE AUTHORITY. The authority may
16 (1) adopt regulations to implement AS 44.88.500 - 44.88.-
17 599;
18 (2) establish terms and conditions for loan guarantees and
19 refinancing agreements subject to the requirements of AS 44.88.500 -
20 44.88.599;
21 (3) make and execute contracts and other instruments to
22 implement AS 44.88.500 - 44.88.599;
23 (4) charge
24 (A) [(i)] one percent of the amount guaranteed for the
25 service it provides under AS 44.88.500 - 44.88.599; and
26 (B) [(ii)] any other reasonable fee that the authority
27 may establish by regulation;
28 (5) acquire real or personal property by purchase, trans-
29 fer, or foreclosure when the acquisition is necessary to protect an

interest in the fund; and

(6) exercise any other power necessary to implement AS 44.-88.500 - 44.88.599;

(7) to the extent the authority considers it to be in its best interest to do so, use money in the business assistance fund to pay expenses relating to the liquidation of collateral securing loans guaranteed by the business assistance fund.

* Sec. 18. AS 44.88.900(4) is repealed and reenacted to read:

(4) "development project" has the meaning given to "project" in (9)(A) of this section;

* Sec. 19. AS 44.88.900(9) is amended to read:

(9) "project" means

(A) a plant or facility used or intended for use

[(i)] in connection with making, processing, preparing, transporting, or producing in any manner, goods, products, or substances of any kind or nature or in connection with developing or utilizing a natural resource, or extracting, smelting, transporting, converting, assembling, or producing in any manner, minerals, raw materials, chemicals, compounds, alloys, fibers, commodities and materials, products, or substances of any kind or nature;

[(ii) AS AN INDUSTRIAL PARK; IN CONNECTION WITH TRANSPORTATION; FOR THE PREVENTION, LIMITATION OR CONTROL OF POLLUTION; FOR THE DISPOSAL OF SEWAGE OR SOLID WASTE; FOR THE LOCAL FURNISHING OF GAS; FOR THE FURNISHING OF WATER; AS OR IN CONNECTION WITH MASS COMMUTING VEHICLES; FOR LOCAL DISTRICT HEATING OR COOLING; AS A PARKING FACILITY; OR AS A STORAGE OR TRAINING FACILITY DIRECTLY RELATED TO A PLANT OR FACILITY DESCRIBED IN THIS PARAGRAPH;]

(B) a plant or facility used or intended for use in connection with a business enterprise;

(C) commercial activity by a small enterprise;

* Sec. 20. AS 44.88.090(g), 44.88.090(i), 44.88.105(e), 44.88.105(g), 44.88.157, 44.88.158, 44.88.159(c), 44.88.160, 44.88.172(b), 44.88.172(c), 44.88.175, 44.88.176, 44.88.212(a), and 44.88.900(3) are repealed.

* Sec. 21. This Act takes effect immediately under AS 01.10.070(c).

RECEIVED APR - 3 1989

465-3700

ALASKA INDUSTRIAL DEVELOPMENT
AND EXPORT AUTHORITY

1577 "C" STREET • SUITE 304 • ANCHORAGE, ALASKA 99501-5177 • (907) 274-1651

TELECOPY

TO: The Honorable Peter Goll
House of Representatives
Alaska State Legislature

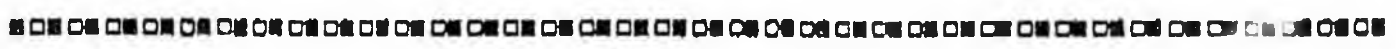
FROM: Bertram L. Wagnon, Executive Director
Alaska Industrial Development & Export Authority

SUBJECT: House Bill 123

DATE: April 3, 1989

TIME SENT: 9:56a

Bert Thank you
This letter
Back to me.



THIS FORM PLUS 2 PAGES. PHONE CONTACT IF NOT RECEIVED PROPERLY IS (907) 274-1651. ATTENTION: Sharron.

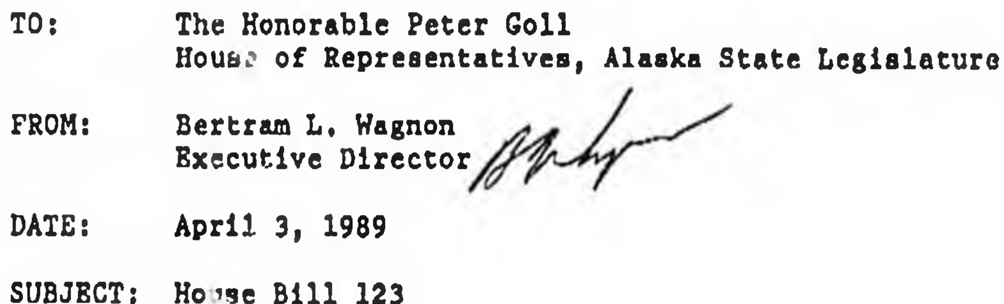
THANK YOU.

NOTE: Original Memorandum with attachments will be hand delivered on Tuesday, April 4, 1989

ALASKA INDUSTRIAL DEVELOPMENT
AND EXPORT AUTHORITY

1577 "C" STREET • SUITE 304 • ANCHORAGE, ALASKA 99501-5177 • (907) 274-1651

M E M O R A N D U M



TO: The Honorable Peter Goll
House of Representatives, Alaska State Legislature

FROM: Bertram L. Wagnon
Executive Director

DATE: April 3, 1989

SUBJECT: House Bill 123

Per our phone conversation I have attempted to set out belc an explanation of the two areas of concern you mentioned on Thursday.

1. <u>Public access to bonds issued by the Authority.</u>

The debt issued by the Authority in the form of its bonds are sold through underwriting syndicates lead by a senior underwriter, Goldman Sachs & Company and Prudential Bache Securities. Efforts have been made to make these securities available to Alaskans by including brokerage houses that have offices in Alaska in the underwriting group. Dean Witter, Paine Webber and Merrill Lynch have all participated in our selling groups and all three have offices located in Anchorage. Due to the structure of our financings, about 2/3 of the volume is taken down by institutional buyers with the balance being sold to the retail market. This split between buyers changes over time with changes in the economy and lately continual changes in federal taxation policy. For example the 1986 tax code change made our bonds subject to A.M.T (the Alternative Minimum Tax) which in time will most likely cause fewer insurance companies to be buyers. All reasonable efforts are made to have our bonds available to the Alaska public at the initial public offering.

For background information, I have attached official statements from several of our past transactions for your review.

2. How lo[illegible] are participated in by AIDEA.

The Authority functions as a participate to banks who make loans to Alaskan residents. An individual needing to obtain funds for a business would approach a bank of their choice.

The bank would evaluate the proposal and if satisfied with the credit aspects, would then forward the package to the Authority for its review. If the Authority concurs with the bank, the Authority will issue a commitment letter to the bank and once the bank has closed the loan, purchase its participation (usually 80%). The rationale for having the bank originate the transaction is to keep the private banking sector involved in making both money available to Alaska business as well as performing the credit analysis.

As you mentioned on smaller loans, some banks may not find it cost effective to go through the participation process and undoubtedly some smaller customers are not being served. Two avenues exist to address the particular needs of the very small loan.

The Federal SBA operates a program that many banks take advantage of. This program allows the banks to make a loan to a small business and have SBA guaranty up to 85% of the loan amount. This transfer of risk from the bank to the SBA often will entice a bank to make loans it otherwise could not.

A second alternative is the Authority's own Guaranty program (amendments to this program are contained in Sections 15, 16 & 17 of CSHB123 to make the program more acceptable to banks) operated by the Authority. This program operates similar to the SBA program and its intent is to once again entice banks to made loans to credit worthy businesses.

BLW/ss
attachment(s)

HB
126

STATE OF ALASKA
THE LEGISLATURE

POUCH Y - STATE CAPITOL
JUNEAU, ALASKA 99811
907-465-3800

LEGISLATIVE AFFAIRS AGENCY

LEGISLATIVE REFERENCE LIBRARY

Copies of minutes listed below were originally included in this file. The minutes are available on the STAIRS database CMPR. In order to save space copies of minutes have not been left in the files.

Mary Van Nimwegen

HB 126

H. HESS 2/15/89

TANANA CHIEFS CONFERENCE, INC.
Board of Directors
Resolution No. 89-118

HB 126

ANABOLIC STEROIDS

WHEREAS, there is a significant use of anabolic steroids by athle[illegible] body builders to increase performance and muscle size [illegible]

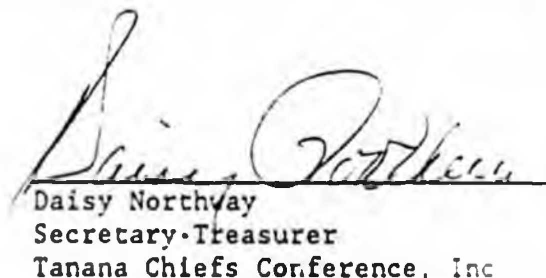
WHEREAS, the use of anabolic steroids for such purposes can res[illegible] long lasting and substantial physical harm to the body [illegible] ing heart disease, drastically elevated cholesterol [illegible] reproductive disorders, hypertension, liver disorder, [illegible] deficiencies, psychological disturbances; and

WHEREAS, the Tanana Chiefs Conference region has many athletes who [illegible] be exposed to such drugs.

NOW THEREFORE BE IT RESOLVED that the Tanana Chiefs Conference Boar[illegible] Directors recommend adding anabolic steroids and their rel[illegible] drugs to the list of controlled substances under the State [illegible] Alaska criminal code.

CERTIFICATION

I hereby certify that this resolution was duly passed by the Tanana Chiefs Conference, Inc. Board of Directors on March 16, 1989 at Fairbanks, Alaska [illegible] a quorum was duly established.



Daisy Northway
Secretary-Treasurer
Tanana Chiefs Conference, Inc

Submitted by: Alcohol/Drug Workshop

389-222.119

Table of Contents

1) Memo from Rep. Menard

2) "Estimated Prevalence of Anabolic Steroid Use Among Male High School Seniors," study by Penn St. University.

3) Penalties for class 5a controlled substance violations

4) "The Risks of Using Anabolic Steroids," NY Times 2/18/88 Article on harmful effects of steroids.

5) "The Bad News About Steroids" A list of established and possible side effects.

6) Editorial from Jan 11, 1989 Fairbanks Daily News-Miner on Anabolic Steroids.

7) Zero fiscal notes from Dept. of Health and Social Services and Dept. of Law.

8) "Athletes and Steroids: Playing a Deadly Game" by Roger W. Miller, U.S. Dept. Health and Social Services. 6 pgs. Pamphlet on Anabolic Steroid use, abuse, and effects.

9) Wall St. Journal article, "Among Teen-Agers, Abuse of Steroids May Be Bigger Issue Than Cocaine Use,"

10) "Kids Have to Learn about Steroid Dangers," USA Today article on kids, steroids, and task oriented addiction.

11) "Description of Anabolic Steroid Compounds," chapter 2 of Anabolic Steroids and the Athlete, by William Taylor.

12) American College of Sports Medicine Position Stand on the Use of Anabolic-Androgenic Steroids in Sports.

13) The "Underground Steroid Handbook for Men and Women," explains how and where to get steroids illegally.

14) "The Death of an Athlete," by Rick Telander and Merrell Noden, Sports Illustrated, Feb 20, 1989 pp68-78. Account of high school football player's death after using anabolic steroids.

15) "The Nightmare of Steroids," by Tommy Chaikin with Rick Telander, Sports Illustrated, Oct. 24, 1988 pp82-102. Testimonial of ex-steroid user and football player on physical and psychological effects of anabolic steroids.

ALASKA STATE LEGISLATURE

REPRESENTATIVE CURT MENARD

165 E. Parks Hwy.
Wasilla, Alaska 99687
(907) 373-2878

P.O. Box V
Juneau, Alaska 99811
(907) 465-2679

M E M O R A N D U M

TO: Members of the House HESS Committee

FROM: Representative Curt Menard

RE: House Bill 126

DATE: March 22, 1989

Steroids are hazardous to your health.

Item 14 in your packet is the story of the death of high school athlete Benji Ramirez. Anabolic steroids contributed to his death.

The attached study published in the Journal of American Medical Association states that as many as 500,000 or 7% of all high school students may be taking anabolic steroids to enhance their athletic performance or physical appearance." A memo from Dr. Jon May of the Federal Food and Drug Administration, states that this figure may actually be as high as 10 percent or 700,000 users. For comparison purposes, the use of cocaine by high school students in Alaska is between 2 and 6 percent (Alaska Department of HESS).

Steroids have become an epidemic in our gyms and schools. The past testimony of Drs. Caldwell and Nolan and Coach Doug Bean corroborate this fact. Dr. May indicated that the federal government is unlikely to place anabolic steroids on the controlled substance list. He said that the states themselves must take the lead on this problem. At this time, 13 states have passed laws or adopted regulations regarding steroids. An additional 25 have legislation pending. Let's make Alaska the fourteenth State to address this problem.

Copies of the statutes from other states, as well as Dr. May's memo are on file in my office. Feel free to contact me for any additional information. Thank you for your time.

Original Contributions

Estimated Prevalence of Anabolic Steroid Use Among Male High School Seniors

William E. Buckley, PhD; Charles E. Yesalis III, ScD; Karl E. Friedl, PhD;
William A. Anderson, PhD; Andrea L. Streit, MHA; James E. Wright, PhD

The use of anabolic-androgenic steroids (AS) is perceived by the media, by segments of the sports medicine and athletic communities, and by the public to have grown to epidemic proportions. Unfortunately, the incidence and prevalence of AS use among elite, amateur, and recreational athletes is poorly documented. This study was designed to help identify AS use patterns among the male portion of the general adolescent population. The overall participation rate on a schoolwide basis was 68.7% and on an individual basis reached 50.3%. Participants in this investigation were 12th-grade male students (N = 3403) in 46 private and public high schools across the nation who completed a questionnaire that established current or previous use of AS as well as user and nonuser characteristics. Results indicate that 6.6% of 12th grade male students use or have used AS and that over two thirds of the user group initiated use when they were 16 years of age or younger. Approximately 21% of users reported that a health professional was their primary source. The evidence indicates that educational intervention strategies should begin as early as junior high school; the intervention should not be directed only toward those individuals who participate in school-based athletics.

(JAMA 1988;260:3441-3445)

MUCH of the public and scientific interest in anabolic-androgenic steroids (AS) tends to be focused on the use patterns exhibited by athletes (*Sports Illustrated*, Oct 3, 1988, p 20; *Sports Illustrated*, Oct 24, 1988, p 82; *New York Times*, Oct 25, 1987, p C1).[1] The large majority of studies regarding the ergogenic efficacy and health risks of AS use have dealt with adult athletic subjects.[2-10] While most of the effects of AS use among adults may be reversible, several studies suggest that they could have more serious biophysical consequences for adolescents, particularly in regard to premature skeletal maturation, spermatogenesis, and an elevated risk of injury. Approximately 27% of adolescents reach Tanner stage V (sexual maturity) after 16 years of age, and many high school students may be at risk of permanent effects from AS use.[5,11]

For editorial comment see p 3484.

The incidence of AS use appears to have expanded since its first reported use by athletes in the 1950s. Few studies have attempted to determine actual prevalence using appropriate epidemiologic methods, and these have generally been restricted to athletic populations.[12-14] It has been hypothesized but not documented that the elite athletic population may be the smallest but most visible user group and that a larger user group exists that is composed of lower-level amateur and recreational individuals with other reasons for use, such as physical appearance. A review of the literature yields only tentative estimates of the prevalence of AS use in the general population. For example, in 1973, at five American universities, 1.5% of the general college population, including women, were AS users.[11] In 1975, AS use among the general population in Arizona high schools was found to be 0.7%, and there was a 4% use rate among athletes at these schools.[5] A more recent study by the Hazelden Foundation, Minneapolis, found that in 1986, the rate of current or previous AS use was 3% for all students polled, including grades 8, 10, and 12.[6] According to the responses of the seniors, 5% of the males and 1% of the females used or had used AS. At one high school, 8% of the senior males said they had used steroids. No national figures are available for comparison.

This study was designed to help establish the prevalence of AS drug use among the male portion of the general adolescent population. Impetus for the development of this study was provided by the regional studies mentioned above and by anecdotal evidence from high school athletes, coaches, and athletic administrators that suggests that AS use is much more widespread than previously documented.

METHODS

Study Population

Participants in this investigation were 12th-grade male students in private and public high schools. This population was selected because of a priori evidence that this group made up a significant portion of users within the general adolescent population. According to Jessor's concept of developmental transition, problem behaviors such as illicit drug abuse play a key role in the lives and behavior patterns of this age group.[14,15] It has been postulated that a significant proportion of the developmental transition has occurred by the time students reach the 12th grade, and it can be argued that students in this grade make up the best study population.

A sample of schools was drawn from a pool of 150 high schools across the nation that employed certified athletic trainers who had participated in a sports epidemiology survey within the past two years.[9] A certified athletic trainer has graduated from an accredited institu-

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Table 1 – Stratification*

Characteristic	Cell 1	2	3	4	5	6	7	8
Sunbelt?	Yes	No	Yes	No	Yes	No	Yes	No
Statistical area	Metropolitan	Metropolitan	Metropolitan	Metropolitan	Nonmetropolitan	Nonmetropolitan	Nonmetropolitan	Nonmetropolitan
Total No. of students in each school	>700	>700	<700	<700	>700	>700	<700	<700
No. of schools contacted	9	14	5	10	6	10	3	10
No. (%) of schools that participated	2 (22.2)	10 (71.4)	3 (60.0)	8 (80.0)	4 (66.7)	8 (80.0)	1 (33.3)	10 (100.0)
Total male enrollment in participating schools	450	2466	398	614	703	1196	20	918
Total No. (%) of questionnaires returned	224 (49.8)	1152 (46.7)	174 (43.7)	342 (55.7)	352 (50.1)	656 (54.8)	20 (100)	446 (48.6)

*Forms for 32 respondents could not be linked to an institution. These subjects are not included in Table 1 but are included in all analyses.

tion and has successfully completed a certification examination administered by the National Athletic Trainers Association Inc, Greenville, NC. This association is a member of the National Commission for Health Certifying Agencies, which maintains rigorous standards for education and certification programs for allied health care professions. Certified athletic trainers are generally based in high school, university, and professional athletic environments, and their primary responsibilities are the prevention, recognition, treatment, and rehabilitation of athletic injuries. The 150 schools in this study do not represent a random sample of all US high schools in that only 10% of high schools employ a certified athletic trainer. Our sample schools, however, do share the characteristics of a large number of schools in the United States. These high schools were stratified into eight categories (Table 1) based on general demographic characteristics: (1) urban (metropolitan statistical area) and rural (nonmetropolitan statistical area) locale, (2) large (>700 students) and small (<700 students) enrollment, (3) and Sunbelt and non-Sunbelt locale. Sunbelt locale was defined as states that were contiguous and bordered any ocean body or Mexico from Virginia south and west to Texas, Arizona, New Mexico, and California. The strata were selected based on anecdotal accounts that the rate of steroid use is higher among students in large, urban schools in Sunbelt states.

A random proportional sample of schools was drawn within each of the eight categories. The schools were treated as clusters of potential respondents, and all male seniors were invited to participate. All Sunbelt schools with enrollments less than 700 and rural Sunbelt schools with enrollments more than 700 were used due to the small numbers available in these pools.

The athletic trainer at each school was contacted by the principal investigators and asked to collaborate on the study. In total, 46 of the 67 schools contacted completed the study protocol, for a return rate of 68.7%. Out of 6765 male senior students who were eligible from the responding institutions, 3403 (50.3%) voluntarily participated.

Data Collection

A questionnaire was employed to collect the data. The first section of the instrument was completed by all the respondents. It consisted of 11 questions, the last of which established current or previous use of AS. Those who answered "yes" to this question were instructed to proceed to a series of 12 questions that further elaborated their usage. Those who responded "no" were directed to a different series of 12 questions related to basic health behavior. This strategy likely resulted in equal survey completion times for AS users and nonusers, helping to assure anonymity during the administration of the instrument. Pilot surveys were conducted and established that the instrument could be used with this population without difficulty and required similar time commitments for both users and nonusers to complete.

The questionnaires were administered to all male seniors by their homeroom teachers. This setting provided a normal testing environment and was used for completion of all the surveys. The students' confidentiality was maintained by having the homeroom teachers seal the collection envelopes before returning them to the athletic trainer, who then forwarded them to the researchers for scoring and tabulation.

The tabular analysis involved simple frequency counts and percentages. The χ^2 statistic was used to test for significant differences between groups, primarily between AS users and nonusers.

RESULTS

The mean rate of AS drug use for the entire sample, using the school as the unit of analysis, was 6.34% ± 5.61% (N = 46); with the student as the unit of analysis a mean use rate of 6.64% (226/3403) was derived. It is necessary to consider both of these rates in interpreting the data to account for possible "nesting" effects related to the stratification.[6] These data indicate that the nesting effects were negligible (calculation of a weighted mean of 6.41% demonstrates a small nesting effect of school size) and not at all confounding, because in either case, between six and seven individuals out of 100 reported current or previous use of AS. The results indicate, however, that there was significant variation among the participating institutions, with seven schools reporting no AS use.

The test for dependence between AS use and sampling strata (metropolitan statistical area designation, enrollment, and locale) showed only enrollment to be associated with use/nonuse behavior ($P<.05$). While schools with greater than 700 students made up 69.6% of the sample, 76.1% of the users attended the larger schools.

While all respondents were males in the 12th grade, the user group tended to be chronologically older (>19 years, $P<.001$) (Table 2). The racial composition also differed between user and nonuser groups, with greater minority representation in the user group ($P<.001$). In addition, respondents in the nonuser group were more likely to have a parent who finished high school ($P<.001$).

Participation in sports activities was significantly different between users and nonusers, with the users more inclined to participate in school-sponsored athletics ($P<.05$) and, specificially, more likely to participate in football and wrestling (Table 3). More revealing was that 35.2% of the user group did *not* intend to participate in a school-sponsored activity.

Two questions were specifically designed to differentiate between the attitudes and self-perceptions of the users

Table 2 – Basic Demographic Data for AS* Users vs Nonusers

Characteristic	% of Respondents	
	AS Users	Nonusers
Age, y†		
<17	7.5	6.2
17	51.8	69.0
18	30.5	23.3
19	4.4	1.4
≥20	5.8	0.1
Race†		
White	77.4	87.9
Black	8.9	4.7
Hispanic	4.9	3.5
Asian	4.0	2.7
Other	4.9	1.3
Parents' education†		
Not a high school graduate	10.2	5.3
High school graduate	14.2	22.5
Some college	17.7	19.3
College graduate	52.2	49.1
Not known	5.8	3.8

*AS indicates anabolic steroids.
†$P<.001$.

Table 3 – School-Sponsored Sport Participation

Sports Participation	% of Respondents	
	AS* Users	Nonusers
School-sponsored sports participation?†		
Yes	64.8	52.3
No	35.2	42.7
Main sport at school‡		
Baseball or basketball	14.7	21.3
Football	43.5	32.6
Track and field	12.3	14.9
Wrestling	17.2	8.9
Other	12.3	22.3

*AS indicates anabolic steroids.
†$P<.05$.
‡$P<.001$.

Table 4 – Attitudes and Perceptions of AS* Users vs Nonusers

Perception	% of Respondents	
	AS Users	Nonusers
Strength self-perception†		
Above average	57.8	27.8
Average	31.2	59.3
Below average	5.9	8.8
Don't know	3.1	4.2
Health self-perception†		
Excellent	39.7	24.1
Very good	31.7	40.7
Good	17.4	29.4
Fair	6.3	5.3
Poor	4.9	0.5

*AS indicates anabolic steroids.
†$P<.001$.

and nonusers (Table 4). The first asked the respondents to rate their personal strength levels compared with their peers. Approximately 57.8% of all users believed their strength was "greater than average," while only 27.8% of the nonusers were so inclined ($P<.001$). It should be noted, however, that there was a significant difference ($P<.05$) between users and nonusers relative to their intention to participate in school-sponsored sports in the next academic year. It could be hypothesized that the users were more likely to be athletes and, therefore, would believe that their strength was "greater than average." In fact, 65.4% of the users who intended to participate in school-sponsored sports thought their strength was "greater than average," while only 35.1% of the nonusers who intended to participate in school-sponsored sports responded in the same fashion ($P<.001$). Likewise, 39.7% of all users reported their overall health as "excellent" compared with only 24.1% of the nonusers ($P<.001$). However, perhaps a preexisting bias toward this response was in effect, as previously noted, because 45.9% of the users who intended to participate in school-sponsored sports reported this response, and 29.6% of the nonusers who anticipated participation in a sport chose the "excellent" response category ($P<.001$). Interestingly, 4.9% of the users rated their health in the "poor" category vs only 0.4% of the nonusers.

User Characteristics

This study also established a profile of adolescent AS users. More than one third of the sample of users (38.3%) reported that they first used AS at age 15 years or younger, and another third had started by age 16 years (Fig 1). These data indicate that AS have been used at all high school grade levels and perhaps at the junior high school level as well.

The self-identified users in this study reported from one to more than five cycles of steroid use, with each cycle usually lasting six to 12 weeks. Only 18.2% of the users reported one cycle, while almost 40% of the users reported five or more cycles of use. Of those who reported first using AS at age 15 years or younger, only 9.5% said they had used AS for *only* one cycle. Twelve percent of the users reported cycles of steroid use lasting 13 weeks or more. A long-term use pattern for some of the users can be postulated even at this early stage of drug abuse.

Approximately 44% of the users responded that they had used more than one AS drug at the same time ("stacking"). More revealing is that 38.1% of the users had used both oral *and* injectable methods of administration.

The largest percentage of users (47.1%) reported that their main reason for using the drug was "to improve athletic performance" (Fig 2). "Appearance" was selected as the main reason for use among 26.7% of the user group. And, while it is not accepted medical practice in this country, the use of AS for injury prevention or treatment was reported by 10.7% of users.

The reported sources of AS for this user group included the black market (60.5%), defined as "other athletes, coaches, gyms, etc" (Fig 3). However, approximately one fifth of the users reported that their primary source was a health care professional (defined in this study as a physician, pharmacist, or veterinarian). Health professionals were the most frequent source (43%) when the reported reason for AS use was to "prevent or treat a sports-related injury" vs 15.5% and 18% of users whose reasons were "appearance" and "increased performance," respectively.

COMMENT

This study represents the first nationwide survey of AS use among the general adolescent male population. As such, it offers a picture of the nature and

scope of AS use that can be employed when developing intervention strategies, substance control programs, and health risk assessments. Indeed, these data indicate that the population at risk is much broader than previously believed. Not surprising is the fact that significant variability in user rates was observed among the participating schools, with 15% of the schools having no reported users. This could indicate that diffusion of use is still operating and is in part supported by our finding that schools with small enrollments reported significantly lower use rates.

One important consideration is the level of AS use among schools that did not participate in the study. It is possible that if school administrations held a self-perception that there was little AS use at their schools, they were more likely to participate in this study. School administrations that perceived that they had a problem with AS use may have been less likely to participate in the study because of the emotion and controversy about this issue. The methodology of the study addressed this point by establishing that no institution would or could be identified individually. Therefore, on balance, it is reasonable to conclude, albeit not with complete confidence, that the results reflect an underreported use rate.

Likewise, we have no information on individual students who chose not to volunteer in the study, but, again, it could be hypothesized that those who did not participate were more likely to be AS users. This could also result in an underreported use rate. Regardless of this, it is well established in self-report studies that by appropriately addressing the standard protection of human subjects through the use of permission (if required), voluntary participation, and assurance of anonymity, a significant level of validity can be achieved. All of these concerns were appropriately addressed through a review process at the research institution.

The basic user characteristics identified in this study demonstrate that educational intervention strategies should probably be in place at the high school level or earlier. Our evidence indicates that responsible adults who deal directly with this age group need to be aware of user behavior characteristics so that appropriate interventions can be initiated. This would obviously include coaches and athletic trainers, but the responsibility can legitimately be broadened to include high school health instructors, physical education specialists, school nurses, school physicians, and others who would come in contact with the subgroup of users (35.2%) who did not participate in school-sponsored athletics. While many of these users may still participate in athletic competition, it is primarily on an amateur and individual basis, such as bodybuilding and power lifting. These users may belong to private fitness or health clubs or local YMCAs, or they may train on their own. Still, these data indicate that a significant impact on the reduction of AS use may be achieved by targeting intervention efforts at school-based athletics. In fact, with 43.6% of the users reporting participation in interscholastic football, athletic directors, team physicians, coaches, and athletic trainers cannot assume that their institutions are not affected. Also, these data implicate a range of sport activities, such as wrestling, basketball, and track and field, that cannot be overlooked in assessing the presence of AS use at any individual school.

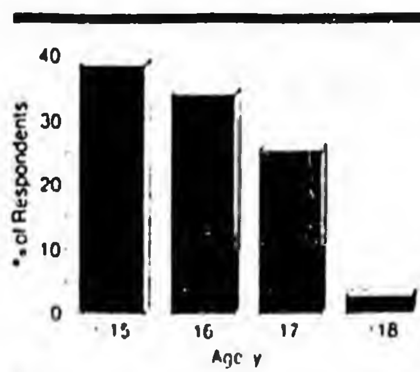


Fig 1.—Age of respondents at first use of anabolic steroids

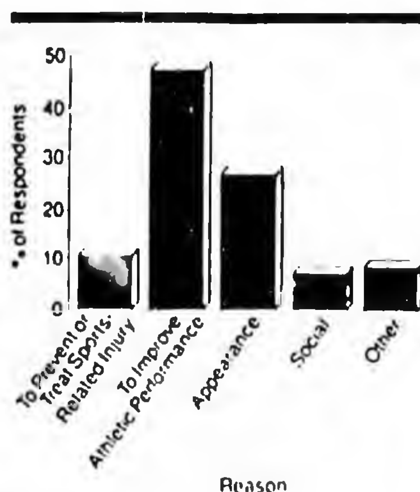


Fig 2.—Main reasons for using anabolic steroids

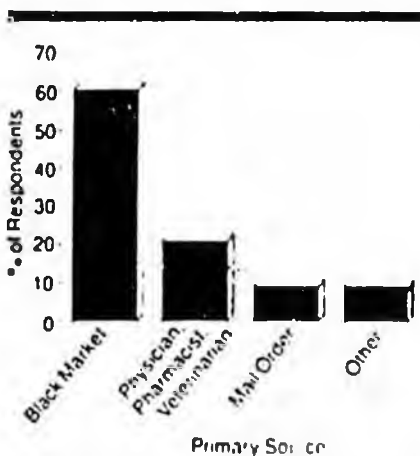


Fig 3.—Primary sources of anabolic steroids

This study elicited descriptive data that can be used to establish guidelines for subsequent studies dealing with specific psychological, sociologic, or pathologic attributes of the AS user group. The users were more extreme in their health perceptions; the majority believed they were in decidedly better general health than their peers. Similarly, a greater percentage believed their strength levels exceeded those of their peers. The accuracy of these perceptions cannot be determined from this study, but the implication that the AS user group perceives benefits from drug use behavior is important. Changing a behavior that has resulted in strongly perceived benefits to the user will require carefully planned and implemented interventions and strategies.

While we could not specifically establish the prevalence of use at each junior high school grade level, the data strongly indicate that there is significant AS use in boys 15 years old and younger (38.3%, the largest single response group). This is particularly distressing in that premature epiphyseal closure is potentially a permanent side effect of AS use in adolescents. Also, exogenous testosterone and its derivatives have a marked effect on the pituitary gland and testes, resulting in decreased endogenous hormone production and suppression of spermatogenesis. It is currently known that discontinuation of AS use by mature males results in an eventual return to normal hormonal activity.[2,9] This has not been established in biologically immature males, however, and questions remain regarding the effects of AS use on pubarche. Anabolic steroids may affect not only the rate of maturation but also the developmental blueprint for biochemical homeostasis.

Coinciding with the evidence of a relatively early onset of AS use behavior is evidence of what may be described as long-term use behavior. Twelve percent of users in this study reported average cycles of 13 weeks or more. Other studies indicate that adult power lifters who are familiar with AS use rarely exceed a 13-week cycle.[3,7] These adolescents are experimenting with cycle

lengths that are longer than those of older admitted AS users. This must be further investigated relative to dosage patterns and multiple drug administrations. When one considers that 44% of the users had taken multiple kinds of AS simultaneously and over 38% had used injectable preparations, it is clear that the potential for the development of long-term use patterns is real.

To what extent did respondents accurately report their AS use? It is possible that they intentionally or unintentionally underreported or overreported their AS use. The respondents may have underreported their drug use to meet more socially acceptable standards of behavior. Intentional overreporters could be characterized as "braggarts" who overemphasize drug use to present themselves in a more worldly manner. Reasons for unintentional reporting errors include the reading levels of the respondents, the reporting time frames for drug use, and the complexity of the scales for reporting frequencies and amounts of drug use.

It was not possible to objectively validate the self-reported use rates for AS. However, inferential evidence suggests that the reported use rates are generally valid or slightly underreported, that the schools did not represent a biased selection, and that the respondents were not a biased sample. Research on the use of self-report methods has shown them to be valid for documenting drug use, especially for this age group.[illegible] When the drug use rates from self-report studies have been compared with external methods of documenting drug use (reports by others, blood, urine samples, etc), the self-report use rates have been similar or only slightly lower than rates from the other methods.[illegible] The methods used in this study allowed respondents to have complete confidentiality. There was no motivation to intentionally overreport or underreport AS use. Effects of variables that have an impact on self-report methodologies had been reviewed and incorporated into the conduct of this study. Furthermore, the results obtained from this study are somewhat similar to the results of earlier studies of AS use by high school and college athletes.[illegible] Lastly, respondents were permitted to skip questions they believed they could not answer honestly. The missing data rate for questions about self-use of AS (1%) indicates that there was no intentional skipping pattern for these questions.

Inferential evidence suggests that the self-reported use rates for AS are generally valid. There is some evidence to indicate that respondents did under-report their own use. In fact, the schools assigned to cell 1 of our stratification criteria (ie, large, urban, Sunbelt schools, Table 1) were expected to have the highest use rate, but the school participation rate was the lowest for this cell (16%). This potential bias may have deflated our reported use rate.

This study has established the presence of anabolic AS use among high school males. Based on our findings, 6.64% of 12th-grade male students use or have used AS, and it is also probable that there was a certain amount of underreporting. More importantly, if the AS use rate from our self-selected sample is applied to the national population of males enrolled in secondary schools, it suggests that between 250 000 and 500 000 adolescents in the country have used or are currently using these drugs.

References

1. Cowart V: Steroids in sports: After four decades, time to return these genies to bottle? *JAMA* 1987;257:421-427.
2. Lamb DR: Anabolic steroids in athletics: How well do they work and how dangerous are they? *Am J Sports Med* 1984;12:31-38.
3. Wright JE: *Anabolic Steroids in Sports.* Natick, Mass, Sports Science Consultants, 1978.
4. Haupt HA, Rovere GD: Anabolic steroids: A review of the literature. *Am J Sports Med* 1984;12:469-484.
5. Strauss RH, Wright JE, Finerman GAM, et al: Side effects of anabolic steroids in weight trained men. *Phys Sportsmed* 1983;11:87-96.
6. Shephard RJ, Killinger D, Fried T: Responses on sustained use of anabolic steroid. *Br J Sports Med* 1977;11:170-173.
7. Webb OL, Laskarzewski PM, Glueck CJ: Severe depression of high-density lipoprotein cholesterol levels in weight lifters and bodybuilders by self-administered exogenous testosterone and anabolic-androgenic steroids. *Metabolism* 1984;33:971-975.
8. Holma PK: Effects of an anabolic steroid (methandienone) on spermatogenesis. *Contraception* 1977;15:151-162.
9. Bagheri SA, Boyer JL: Peliosis hepatis associated with androgenic-anabolic steroid therapy: A severe form of hepatic injury. *Ann Intern Med* 1974;81:610-618.
10. Carrasco D, Prieto M, Pallardo L, et al: Multiple hepatic adenomas after long-term therapy with testosterone enanthate: Review of the literature. *J Hepatol* 1985;1:573-578.
11. McCaughan GW, Bilous MJ, Gallagher ND: Long-term survival with tumor regression in androgen-induced liver tumors. *Cancer* 1985;56:2622-2626.
12. Nadell J, Kosek J: Peliosis hepatis: Twelve cases associated with oral androgen therapy. *Arch Pathol Lab Med* 1977;101:405-410.
13. Overly WL, Dankoff JA, Wang BK, et al: Androgens and hepatocellular carcinoma in an athlete. *Ann Intern Med* 1984;100:158-159.
14. Westaby D, Ogle JS, Paradinas FJ, et al: Liver damage from long-term methyltestosterone. *Lancet* 1977;1:261-263.
15. Rosenfeld RG, Northcraft GB, Hentz RL: A prospective, randomized study of testosterone treatment of constitutional delay of growth and development on male adolescents. *Pediatrics* 1982;69:681-687.
16. Strauss RH: Anabolic steroids, in Strauss RH (ed): *Drugs and Performance in Sports.* Philadelphia, WB Saunders Co, 1987, pp 59-67.
17. Blether SL, Gaines S, Weldon V: Comparison of predicted and adult heights in short boys: Effect of androgen therapy. *Pediatr Res* 1984;18:467-469.
18. Wilson DM, Kei J, Hintz RL, et al: Effects of testosterone therapy for pubertal delay. *AJDC* 1988;142:96-99.
19. Anderson W, McKeag D: *The Substance Use and Abuse Habits of College Student-Athletes.* Mission, Kan, National Collegiate Athletic Association, 1986.
20. Yesalis C, Herrick R, Buckley WE, et al: Self-reported use of anabolic-androgenic steroids by elite power lifters. *Phys Sports Med*, in press.
21. Corder BW, Dezelsky TL, Toohey JV, et al: An analysis of trends in drug use behavior at five American universities. *J School Health* 1974;44:386-389.
22. Corder BW, Dezelsky TL, Toohey JV, et al: Trends in drug use behavior at ten central Arizona high schools. *Ariz J Health Phys Ed Recreation Dance* 1975;18:10-11.
23. Newman M: *Michigan Consortium of Schools Student Survey.* Minneapolis, Hazelden Research Services, 1986.
24. Jessor R: Problem behavior and developmental transition in adolescence. *J School Health* 1982;52:295-300.
25. English G: A theoretical explanation of why athletes choose to use steroids, and the role of the coach in influencing behavior. *Natl Strength Cond Assoc J* 1987;9:53-56.
26. Powell J: 636 000 Injuries Annually in High School Football. *Ath Training* 1987;22:19-22.
27. Whiting-O'Keefe QE, Henke C, Simborg DW: Choosing the correct unit of analysis in medical care experiments. *Med Care* 1984;22:1101-1114.
28. Strauss RH: Anabolic steroids, in Strauss RH (ed): *Drugs and Performance in Sports.* Philadelphia, WB Saunders Co, 1987, pp 62-64.
29. Steinberger E, Smith K, Rodriguez-Rigau L: Suppression and recovery of sperm production in men treated with testosterone enanthate for one year: A study of a possible reversible male contraceptive. *Int J Androl*, suppl 2, 1978, pp 748-759.
30. Swerdloff RS, Anselmo P, McClure RD, et al: Male contraception: Clinical assessment of chronic administration of testosterone enanthate. *Int J Androl*, suppl 2, 1978, pp 731-745.
31. Burkett LN, Falduto MT: Steroid use by athletes in a metropolitan area. *Phys Sports Med* 1984;12:69-74.
32. Smart RG, Blair NL: Test-retest reliability and validity information for a high school drug use questionnaire. *Drug Alcohol Depend* 1978;3:265-271.
33. McClary SA, Lubin B: Effects of type of examiner, sex, and year in school on self-report of drug use by high school students. *J Drug Educ* 1985;15:49-55.
34. Ausel S, Mandell W, Mathias L, et al: Reliability and validity of self-reported illegal activities and drug use collected from narcotic addicts. *Int J Addict* 1976;11:325-336.
35. Edwards G, Orford J, Egert S, et al: Alcoholism: A controlled trial of treatment and advice. *J Stud Alcohol* 1977;38:1004-1031.
36. Bonito AJ, Nurco DN, Schaffer JW: The veridicality of addicts' self-reports in social research. *Int J Addict* 1976;11:719-724.
37. Petzel TP, Johnson JE, McKillip J: Response bias in drug surveys. *J Consult Clin Psychol* 1973;40:437-439.
38. Polich JM, Armor D, Braiker HB: *The Course of Alcoholism: Four Years After Treatment.* Santa Monica, Calif, The RAND Corp, 1979.
39. Freedberg E, Johnston W: Validity and reliability of alcoholics' self-reports of use of alcohol submitted before and after treatment. *Psychol Rep* 1980;46:999-1005.
40. Deaux E, Callaghan JW: Estimating statewide health-risk behavior: A comparison of telephone and key informant survey approaches. *Eval Rev* 1984;8:467-492.
41. Stacy AW, Widaman KF, Hays R, et al: Validity of self-reports of alcohol and other drug use: A multitrait-multimethod assessment. *J Personality Social Psychol* 1985;49:219-232.

VA Classifications
Alaska State Statutes 11.71.030-11.71.050

Misconduct involving controlled substance in the third degree
Class B Felony--Max 10 years, $50,000 fine
(AS12.55.035,12.55.125)

-delivers any amount to a person under 19 years of age who is at least three years younger than deliverer

Misconduct in the fourth degree:
Class C Felony--Max 5 years, $50,000 fine
(AS12.55.035,12.55.125)

-manufactures or delivers any amount or possess with intent to manufacture or deliver
-if over 18, possession within grounds of a school or adjacent parking lot
-possession of greater than 50 tablets, preparations, ampules, or syrettes

Misconduct in the fifth degree:
Class A Misdemeanor--Max 1 year, $5,000 fine
(AS12.55.035,12.55.135)

-possess less than 50 tablets, ampules, or syrettes
-posesses one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than six grams

Currently, anabolic steroids are under the Federal Food and Drug Adminstration's jurisdiction. They will not be a Federal controlled substance since the DEA has determined that they are not harmful enough. One of their criteria for a controlled substance is that it be psychoactive and have addictive qualities. However, studies have shown that anabolics are more psychoactive than many substances on schedule 1 (the most dangerous) of the Federal Controlled Subs. list. In addition, they have been shown to be task oriented addictive.

there the first meetings four years ago.

"The search is on now for a supertherapy that combines the most effective elements of all the types of psychotherapy," said Paul Wachtel, a psychologist at the Graduate Center of City University of New York,

... there is still a wide disparity in what therapists mean when they say they are eclectic. Many mean that they combine elements from just two schools. Others mean that they borrow techniques from a loose grab bag of therapies in which they have happened to have had training.

Even a proponent of the approach, ... tends to use the term "integrated psychotherapy," rather than eclectic.

Dr. Lazarus is the developer of "multimodal therapy," one of the first systematic therapies to draw from a wide variety of schools.

Some of the newest data to show the popularity of such eclectic approaches is from a survey of 710 psychotherapists by John Norcross, a ... were the second most popular.

Other evidence that the eclectic movement is gaining momentum can be seen among graduate programs for psychotherapists. The majority of them in all disciplines now subscribe to an integrated approach. Moreover, within the last two years there have been almost 50 professional books on the integration of therapies, accord... psychiatrists that uses the integrated approach.

Within psychiatry, the integrated approach seems to be healing a long-standing rift between those who favored exclusive treatment of psychiatric problems with drugs and those who favored therapies that involved talking.

"The two camps — the biological ... to integrate therapies is seeking the similarities that already underlie different approaches, but that are hidden by differences in the language used to describe what goes on in therapy.

"When you clear away the jargon you find there is much in common," said Marvin Goldfried, a psychologist at the State University of New York at Stonybrook.

Personal Health | Jane E. Brody

N Y TIMES 2/18/88

...reading use of steroids by young athletes ...arms sports medicine specialists.

...serious and possibly life-threatening effects of body building drugs becoming better known, specialists are increasingly alarmed by the growing use of these drugs by college and high school athletes and teen-age boys who want an ideal body without the work.

For years the hormonelike drugs have been used by adult athletes who are willing to risk possible long-term damage for what they believed is a short-term competitive edge. The well-known dangers include the ... ability of sexual and reproductive disorders. Recent research also indicates that use of the drugs can dangerously change cholesterol levels.

Not only are more people now using the drugs, experts say they are taking them at younger ages, in higher doses and for longer periods, which can greatly exacerbate the risks. In some cases, parents of high school athletes have asked doctors to prescribe the drugs to help their youngsters excel in competition or win college scholarships.

Anabolic steroid drugs are not approved for athletic use. But they are easily obtained under the counter from mail-order companies that operate in Mexico and abroad, as well as from some veterinarians and doctors willing to prescribe them for nonmedical purposes.

...steroids are expectally ...young men and boys who ... athletes, body builders, football linemen, shot-putters, discus throwers and swimmers. They are ...woman body build... more muscle than their ... will allow.

According to Dr. John A. Lombardo, medical director of sports medicine at the Cleveland Clinic Foundation, "runners, swimmers, wrestlers and cyclists who want to train harder also ask for steroids because they seem to speed recovery from intense workouts."

For some activities, especially powerlifting, athletes believe they have no choice but to take the drugs if they wish to hold their own in competitions with others who take them.

Since the late 1950's, when anabolic steroids were introduced, thousands of athletes have injected or swallowed them in hopes of improving performance. Sports Illustrated has reported that as many as 80 percent of the linemen and half of the linebackers in the National Football League are thought to have used steroids.

Although the drugs were banned in 1976 by amateur athletic organizations and have since resulted in several competitors being disqualified or losing medals, professional athletic groups have not taken similar action.

Even in amateur sports, the drugs remain popular among some athletes, who seek to foil the urine tests used to detect them. The Mayo Clinic estimates that a million people in this country are now taking the steroids for nonmedical purposes, with annual sales (mostly black market) exceeding $100 million.

Anabolic Steroids

Anabolic steroids are sometimes used medically in patients with certain blood disorders, severe burns, muscle-wasting diseases and some endocrine gland abnormalities.

The drugs are synthetic derivatives of the natural male hormone testosterone, which increases protein synthesis and promotes the growth of lean muscle tissue rather than fat when excess calories are consumed.

Dr. David Lamb, director of exercise physiology at Ohio State University in Columbus, said most athletes who use anabolic steroids take three to four times the natural daily "dose" of testosterone and many take 20 to 40 times the amount their bodies would produce of this hormone.

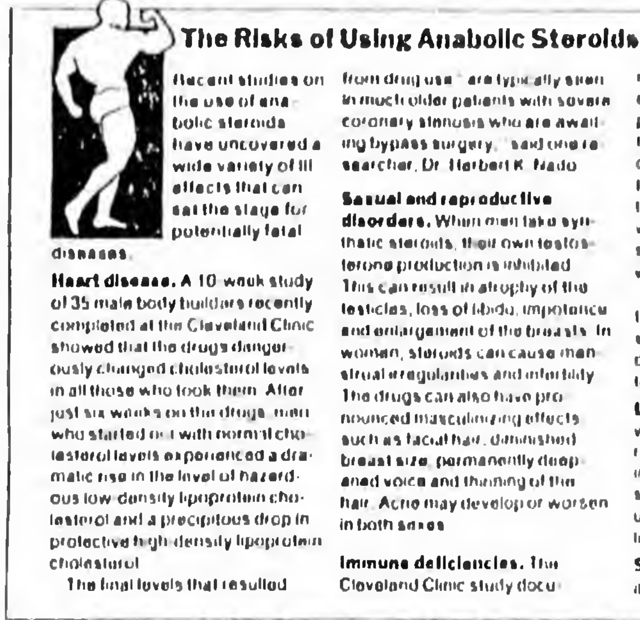
Do They Work?

There is little question that the steroids can help men, women and teenagers lay down more muscle tissue. However, to maintain this muscle mass, the drugs must be used indefinitely. Furthermore, the drug-stimulated muscle tissue appears to be highly susceptible to injuries, which take much longer to heal than damage to ordinarily developed muscle.

Then there is the matter of documenting an increase in strength. In 1981 Dr. Allan Ryan, a former team physician at the University of Wisconsin who is now retired, reviewed more than two dozen studies of the effects of steroids on physical strength and endurance. In 13 of the better studies, there were no significant improvements in the athletes.

In another review several years later, 14 studies of weight lifters indicated a significant increase in strength when steroids were used, but 16 studies reported no such increase. The primary benefits were described as accruing from previous training in weight lifting and continuous training in the period of drug use, an effect that would result from training even without the drugs.

But even if the drugs do work for some athletes, Dr. Lamb seriously questions the wisdom of their use, given the fact that they "almost invariably cause adverse side effects, certainly minor ones and possibly life-threatening effects as well."



The Risks of Using Anabolic Steroids

Recent studies on the use of anabolic steroids have uncovered a wide variety of ill effects that can set the stage for potentially fatal diseases.

Heart disease. A 10-week study of 35 male body builders recently completed at the Cleveland Clinic showed that the drugs dangerously changed cholesterol levels in all those who took them. After just six weeks on the drugs, men who started out with normal cholesterol levels experienced a dramatic rise in the level of hazardous low-density lipoprotein cholesterol and a precipitous drop in protective high-density lipoprotein cholesterol.

The final levels that resulted from drug use "are typically seen in much older patients with severe coronary stenosis who are awaiting bypass surgery," said one researcher, Dr. Herbert K. Naito.

Sexual and reproductive disorders. When men take synthetic steroids, their own testosterone production is inhibited. This can result in atrophy of the testicles, loss of libido, impotence and enlargement of the breasts. In women, steroids can cause menstrual irregularities and infertility. The drugs can also have pronounced masculinizing effects such as facial hair, diminished breast size, permanently deepened voice and thinning of the hair. Acne may develop or worsen in both sexes.

Immune deficiencies. The Cleveland Clinic study documented a significant suppression of the white blood cells that produce antibodies, as well as those that fight off viruses and cancer. "This could possibly lead to more frequent, severe infections and decreased immune surveillance against malignancies," said Dr. Leonard H. Calabrese, who directed the study.

To further complicate the picture, in some gyms body builders share needles used to inject the drugs, increasing their risk of contracting serum hepatitis and AIDS.

Liver disorders. Both men and women who take these steroids risk serious liver damage, including jaundice, tumors and gall stones. Half of the athletes who use steroids develop abnormal liver function tests.

Stunted growth. In teenagers and young adults who have not yet completed growth, the steroids can close the growth plates in the long bones and permanently stunt their growth. If used by women during pregnancy, the drugs can impair fetal growth and possibly cause fetal death.

Psychological disturbances. Steroid use by athletes has been linked to increased fighting and other aggressive and hostile behavior. The former wives of some football players who have used steroids said their husbands became superaggressive and sexually violent. Dr. Lamb at Ohio State has seen such psychological disturbances as violent mood swings, psychotic episodes and extreme euphoria. Dr. Lamb said severe depression can occur when use of the steroids is discontinued.

...ew Medical Costs ...e Focus of Campaign

By GLENN KRAMON

...operation, de... was still uncom... but as techniques ... Americans began to ... insurance plans began ... of lives have ... the procedure, in ... around ... artery to the ... more than ...

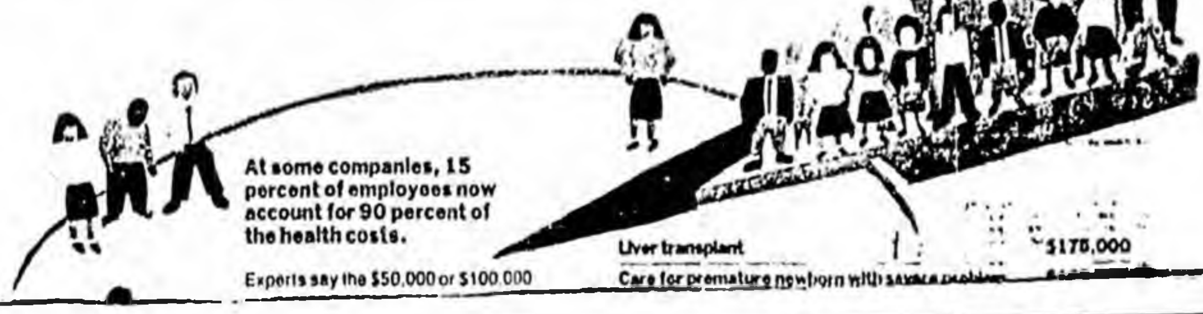
treatments are performed, arguing that some expensive procedures are overused on people with health insurance yet underused for the 37 million Americans with little or no coverage.

The procedures range from the $250,000 effort to save a premature baby with severe problems to the $175,000 liver transplant.

Figures compiled by the Government for The New York Times show that at least five procedures that did

The High Cost of Advanced Treatments

Relatively few major procedures and conditions absorb a large and rising share of the nation's medical expenditures. Experts have called for better guidelines on when the expensive treatments are beneficial.



d Abuser

The Bad News About Steroids

Established side effects and adverse reactions from anabolic steroids are:

- acne
- cancer
- cholesterol increase
- clitoris enlargement
- death
- edema (water retention in tissue)
- fetal damage
- frequent or continuing erections (mature males)
- HDL (which helps reduce cholesterol) decrease
- heart disease
- hirsutism (hairiness in women—irreversible)
- increased frequency of erections (boys)
- increased risk of coronary artery disease (heart attack, stroke)
- jaundice
- liver disease
- liver tumors
- male pattern baldness (in women—irreversible)
- oily skin (females only)
- peliosis hepatitis (a liver disease)
- penis enlargement (young boys)
- priapism (painful, prolonged erections)
- prostate enlargement
- sterility (reversible)
- stunted growth
- swelling of feet or lower legs
- testicular atrophy
- yellowing of the eyes or skin

Other possible side effects and adverse reactions:

- abdominal or stomach pains
- aggressive, combative behavior ("'roid rage")
- anaphylactic shock (from injections)
- black, tarry, or light colored stools
- bone pain
- breast development (sore or swelling—male)
- chills
- dark-colored urine
- depression
- diarrhea
- fatigue
- feeling of abdominal or stomach fullness
- feeling of discomfort
- fever
- frequent urge to urinate (mature males)
- gallstones
- headache
- high blood pressure
- hives
- hypercalcemia (too much calcium)
- impotence
- increased chance of injury to muscles, tendons and ligaments, plus longer recovery period from injuries
- insomnia
- kidney disease
- kidney stones (from hypercalcemia)
- listlessness
- menstrual irregularities
- muscle cramps
- nausea or vomiting
- purple- or red-colored spots on body, inside of mouth, or nose
- rash
- septic shock (blood poisoning from injections)
- sexual problems
- sore tongue
- unexplained darkening of skin
- unexplained weight loss
- unnatural hair growth
- unpleasant breath odor
- unusual bleeding
- unusual weight gain
- urination problems
- vomiting blood

Sources: Physicians' Desk Reference, 1987; AMA Drug Evaluations, 1986; Death in the Locker Room by Bob Goldman, D.O., with Patricia B. ..., Ph.D., and Ronald Klatz, D.O.; and U.S. Pharmacopeia Drug Index, Vol. 2, 1986.

The popularity of anabolic steroids is attested to by the growth of a large black market and the development of quack steroid products. Conservative estimates put the black market gross at $100 million a year. A lot of the black market products come from underground labs and foreign countries and are of questionable quality and purity.

Some doctors have readily written prescriptions for athletes. Robert Voy, M.D., chief medical officer for the U.S. Olympic Committee, tells of a small study that he did indicating that 30 percent to 40 percent of the steroids used by body builders came from physicians. However, he believes those figures are dropping as doctors become more aware of the drugs' dangerous side effects. Malpractice suits are further cutting into the mindless prescribing of these drugs.

Many athletes claim they take steroids to help mend their bodies after injuries. But the *AMA Drug Evaluations* calls this a "medically trivial indication." The only uses FDA allows on anabolic steroid labels are for treating certain types of anemia, certain kinds of breast cancer in women, and hereditary angioedema, a type of allergic reaction to some insect bites, foods, viruses, and so forth.

Despite such limitations, use of anabolic steroids by football players has become notorious. In a celebrated case late in 1986, a University of Oklahoma All-American was barred from a bowl game because he tested positive for steroids. In 1987, the National Football League checked for steroids for the first time in training camps and set standards for steroid levels. A player who tests positive is sidelined for 30 days; two additional positive readings of equal or higher levels result in being barred from the league. The NFL has also started an education effort [illegible] includes a videotape on the dangers of [illegible]

Testing to detect steroids has been used for a number of years in major track-and-field and weight-lifting events. These days some athletes look for ways to cheat the tests, as evidenced in a recent issue of a body-building magazine in which a British lifter bragged of using water-based steroids because, he said, they couldn't be detected after a day or two. Dr. Voy, the U.S. Olympic medical director, scoffed at that idea. "Let them think that's true," he remarked.

Testing is becoming more sophisticated all the time. The magazine *Muscle & Fitness* notes in its August 1987 issue that "Steroid detectio[n] today exists in the nanogram range, or one *billionth* of a gra[m]." (Italics in original.) In some cases, the magazine adds, [detect]ion can be made of one-quarter part per billion.

While test[illegible] it a[pp]arently has not stopped the growth [illegible] Experts such as Dr. Voy, Bob Gold[man], [co-author] of *Death in the Locker Room*, and FDA's Don Leg[illegible], who handles enforcement efforts against illegal steroid sales, agree that the problem has become more widespread, involving younger children and more groups.

FDA, the U.S. Justice Department, and the Customs Service are cracking down on the steroid black market. Last May, their efforts resulted in a 100-count indictment against 34 people, including a former British Olympic medalist. The indictment charged that counterfeit steroids were manufactured and smug-

(Continued on page 21)

Attachment 3

Opin

Editorial Opinion and Comment of

Daily News-Miner

"Independent in All Things Neutral in None"

Other opinions expressed on this page do not necessarily reflect those of the Daily News-Miner.

Steroids are stupid

Men have described vanity as a female characteristic, but women have not done anything as destructive for the sake of vanity as men who inject steroids into their bodies.

The use of anabolic steroids to improve athletic performance and muscle appearance came to world attention when Olympic sprinter Ben Johnson was disqualified after winning a gold medial last September. But Olympic athletes and professional football players aren't the only people who take steroids. In gymnasiums across the country, athletes and body builders take steroids to improve their performance and make their bodies look better.

Fairbanks is not immune to the problem. Use has been reported in high schools and local health clubs.

Anabolic steroids are a group of drugs that synthetically recreate testosterone, the male hormone produced naturally by the testicles. Large doses of the synthetic hormone cause muscles to become larger. The drug causes natural production of the hormone to slow down and can lead to temporary sterility, premature hair loss, mood swings, aggressiveness, abnormal liver function and high-blood pressure. Long-term use can cause cardiovascular disease and possibily cancer of the liver and testicles.

Athletes who use steroids to improve performance are cheating. In a society increasingly concerned with steroids, their actions will be discovered and condemned. Body builders who use them to look good are engaged in an absurd form of vanity. Improving their bodies, they run the risk of long-term damage to them.

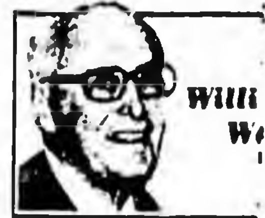
Sid Swerman, a Fairbanksan who has promoted body building and weight lifting competitions in Alaska since the early 1970s, says he is fed up with steroids and will test for their use in winners of all future competitions he sponsors. He expects this will help clean up their use by local weight lifters.

High school coaches can also do much to discourage steroids by making certain that students are aware of the dangers and know that their use is not condoned. A directive from the school board to so require would not be out of order.

The use of steroids is stupid, there's no kinder way to put it. If that message gets out to athletes and body builders, we should see their use decline in our community.

Speedy response

UAF institute



Willi
We

Views expressed here do no: represent those of the Daily

Long ignored or downplayed in significance by temperate and tropical zone residents generally, the North is now gaining a measure of merited recognition through its own efforts. An emerging leader in this development is the University of Alaska, headquartered in the recently opened, yet unfinished, Butrovich Building on the West Ridge campus here in Fairbanks. It is the northernmost center of advanced higher education in the Western Hemisphere—and growing in prestige and prominence.

Among its many assets are geographic location; a beautiful campus; a small but highly talented teaching, research, and service faculty; the Geist Museum; and the world-renowned Rasmuson Library with its highly specialized, unique Alaska and Polar Regions Department.

Currently featured UAF programs of particular import for the future of the North are: anthropology, Arctic engineering, Arctic biology, Alaska Native languages, business management, communications (highlighted by KUAC-FM and TV), health care studies, space studies at ysical Institute (includi the one-of-a-kind Poker et Range), marine scie resources utilization an tion. Each of these, whil small- to modest-scale. with marks of superior

This is being reco creasingly by knowledg kans as well as by a gr ber Outside, particularl and Asia. Throughout th ty the emphasis is up takes to understand th its people, what it takes good life there, what valuables the North co the rest of the world.

West lacks co

NEW YORK—One day perhaps the West will summon the moral

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: HB 126
PUBLISH DATE: 2/8/89

FISCAL NOTE

REQUEST:

Revision Date:
Title: "An Act relating to steroids, and providing for an effective date."
Sponsor: Curt Menard
Requestor:

Agency Affected: Health & Social Services
BRU: Alcohol and Drug Abuse Services
Components: Administration

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE	0	0	0	0	0	0

FUNDING: (Thousands of Dollars)

	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
GENERAL FUND	0	0	0	0	0	0
FEDERAL FUNDS						
OTHER						
TOTAL	0	0	0	0	0	0

POSITIONS:

	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: (Attach a separate page if necessary)

Prepared by: Matthew C. Felix [signature]
Phone: 586-6201
Division: Office of Alcoholism and Drug Abuse
Date: 2/8/89

Approved by Commissioner: Myra M. Munson [signature]
Date: 2/9/89
Agency: Health & Social Services

Distribution (by preparer):
- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION : HB 126
PUBLISH DATE :

FISCAL NOTE

REQUEST:

Revision Date:
Title : "An Act adding anabolic steroids... to schedule VA...controlled substance..."
Sponsor : Repr. Menard
Requestor : Repr. Menard

Agency Affected : Department of Law
BRU : Prosecution
Components : All

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-

CAPITAL						

REVENUE						

FUNDING: (Thousands of Dollars)

	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
GENERAL FUND	-0-	-0-	-0-	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
FULL-TIME	-0-	-0-	-0-	-0-	-0-	-0-
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a seperate page if necessary)

Please see the attached analysis.

Prepared by : L. Pegues/Director
Phone : 465-3672
Division : Administrative Services
Date : February 10, 1989
Approved by Commissioner : Grace Berg Schaible, Atty. Gen.
Date : February 10, 1989
Agency : Department of Law

Distribution (by preparer) :
- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. HB 126

This bill amends AS 11.71.180 by adding a new subsection that will include anabolic steroids and their related materials and substances in schedule VA of the schedule of controlled substances under the Criminal Code. Violation of schedule VA is misconduct in the fifth degree, the penalty for which in a class A misdemeanor. Although the misuse of anabolic steroids to enhance athletic ability has recently received wide public attention, there is no information available to suggest that this practice is a problem in Alaska. Therefore the Department of Law does not believe that this bill will have a fiscal impact on its operations. The department does, however, caution against adding new crimes at a time when there are not enough resources to adequately enforce existing state laws.

Table of Contents

1) Memo from Rep. Menard

2) Proposed CS for House Bill 126

3) CS for House Bill 126(HESS)

4) AS 11.71.120 Authority to schedule controlled substances.

5) List of Anabolic Steroid Legislation by State in current Legislatures.

6) List of Anabolic Steroid Statutes by State.

7) AS 11.71.160-AS 11.171.180, Schedule IIIA, IVA, VA controlled substance lists.

8) AS 11.71.030-AS 11.71.060, Misconduct involving a controlled substance in the third, fourth, fifth, and sixth degrees.

9) AS 17.30.080, states that a controlled substance may not be prescribed or distributed without a legitimate medical purpose.

10) List of Penalties for distribution of anabolic steroids by state.

11) HESS Committee Packet

ALASKA STATE LEGISLATURE

REPRESENTATIVE CURT MENARD

165 E. Parks Hwy.
Wasilla, Alaska 99687
(907) 373-2878

P.O. Box V
Juneau, Alaska 99811
(907) 465-2679

M E M O R A N D U M

TO: Members of the House Judiciary Committee

FROM: Representative Curt Menard

RE: House Bill 126

DATE: April 11, 1989

Under section 11.71.120(c) of the Alaska Statutes, guidelines exist for adding controlled substances to the various schedules. I would like to address these guidelines in relation to anabolic steroids.

11.171.120(c)(1) Abuse:

The abuse and potential for abuse of anabolic steroids is very high. Documentation of abuse is included in the enclosed HESS Committee packet.

-(2) Biomedical Hazard:

Well known and documented side-effects and methods of addiction are present. These include death, cancer, sterility and both physical and psychological addiction.

-(4) Scientific Knowledge:

Legitimate medical uses exist in small doses. However 10 to 100 times the therapeutic dosage are often encountered in abusers. Scientific studies are difficult and expensive to control and administer.

-(5) Other Criminal Activity:

80-100 percent of the anabolic steroids currently are purchased on the black market. This is in excess of 100 million dollars annually.

In choosing the classification schedule, I examined both the penalties and drug lists in Alaska and other states. Schedule VA would be consistent with these lists. Anabolic steroids are more dangerous than schedule VIA drugs (marijuana) and not as addictive as schedule IVA drugs (barbital, phenobarbital).

The bill substitute was prepared at the request of the Attorney General's office. Assistant A.G. Laurie Otto is here to answer questions regarding the changes. These changes make the language more consistent with similar Alaska Statute entries, notably AS 11.71.140(c).

Let's make Alaska the fourteenth state to address this problem. Thank you for your time.

6-0518H
Chenoweth
4/10/89

Original sponsors: Menard, Larson, C.Davis, et al.

1 IN THE HOUSE

2 CS FOR HOUSE BILL NO. 126 ( )

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 SIXTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act adding anabolic steroids and their related
7 materials and substances to schedule VA of the sched-
8 ule of controlled substances under the Criminal
9 Code."

10 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

11 * Section 1. AS 11.71.180 is amended by adding a new subsection to
12 read:

13 (d) Schedule VA includes any material, compound, mixture, or
14 preparation which contains any quantity of the following substances,
15 including their isomers, esters, ethers, salts, and salts of isomers,
16 esters, and ethers, whenever the existence of these isomers, esters,
17 ethers, and salts is possible within the specific chemical designa-
18 tion:

19 (1) 2', 17-dimethylandrost-5(10)-eno[3,2-d]-thiazol;

20 (2) 17-methyl-3-methylene-5-alpha-androst-1-en-17-beta-ol;

21 (3) 1-dehydromethyltestosterone;

22 (4) 11-oxomethyltestosterone;

23 (5) 11-alpha-hydoxymethyltestosterone;

24 (6) 19-nortestosterone;

25 (7) 2-alpha-methylandrostanolone;

26 (8) 2-alpha-methyldihydrotestosterone;

27 (9) 2-alpha-methyldihydrotestosterone-propionate;

28 (10) 4-hydroxymethyltestosterone;

29 (11) 4-hydroxy-19-nortestosterone;

1 (12) 4-hydroxy-19-nortestosterone-cyclopentylpropionate;
2 (13) androisoxazole;
3 (14) androstanediol-3-n-octyl-enol ether;
4 (15) androstanolone;
5 (16) androsterone;
6 (17) bolasterone;
7 (18) boldenone;
8 (19) callusterone;
9 (20) chloro-1-dehydromethyl-testosterone;
10 (21) chloro-19-nortestosterone;
11 (22) chloro-19-nortestosterone-acetate;
12 (23) chloromethyltestosterone;
13 (24) chlorotestosterone;
14 (25) chlorotestosterone-acetate;
15 (26) chlorotestosterone-capronate;
16 (27) clostebol;
17 (28) danazol;
18 (29) dehydrochlormethyltestosterone;
19 (30) dehydroepiandrosterone;
20 (31) dehydroisoandrosterone;
21 (32) dehydroisoandrosterone-acetate;
22 (33) dihydrotestosterone;
23 (34) dihydrotestosterone-valerianate;
24 (35) dimethazine;
25 (36) dimethyltestosterone;
26 (37) dromostanolone;
27 (38) drostanolone;
28 (39) epiandrosterone;
29 (40) ethyldienolone;

1 (41) ethylestrenol;
2 (42) ethylnortestosterone;
3 (43) ethylnortestosterone-propionate;
4 (44) fluoxymesterone;
5 (45) isoandrosterone;
6 (46) mestanolone;
7 (47) mesterolone;
8 (48) methandienone;
9 (49) methandriol;
10 (50) methandriol-3-propionate;
11 (51) methandriol-dipropionate;
12 (52) methandriol-dienanthoylacetate;
13 (53) methandrostenolone;
14 (54) methenolone;
15 (55) methenolone-acetate;
16 (56) methenolone-enanthate;
17 (57) methyl-19-nortestosterone;
18 (58) methylandrostanolone;
19 (59) methylandrostanolone-enanthoyl-acetate;
20 (60) methylandrostenediol;
21 (61) methyldiazirinol;
22 (62) methyltestosterone;
23 (63) nandrolone;
24 (64) nandrolone-propionate;
25 (65) nandrolone-phenylpropionate;
26 (66) nandrolone-furylpropionate;
27 (67) nandrolone-hexahydrobenzoate;
28 (68) nandrolone-n-capronate;
29 (69) nandrolone-hexyloxyphenylpropionate;

(70) nandrolone-laurate;

(71) nandrolone-undecylate;

(72) nandrolone-hemisuccinate;

(73) nandrolone-cyclohexylpropionate;

(74) nandrolone-cyclopentylpropionate;

(75) nandrolone-4-methylbicyclo[2.2.2]oct-2-ene-1-carboxylate;

(76) nandrolone-decanoate;

(77) norbolethone;

(78) norethandrolone;

(79) oxabolone;

(80) oxandrolone;

(81) oxymesterone;

(82) oxymetholone;

(83) stanolone;

(84) stanozolol;

(85) testosterone (17-beta-hydroxyandrost-4-en-3-one), except when naturally occuring in the human body;

(86) testosterone-acetate;

(87) testosterone-propionate;

(88) testosterone-cyclopentyl-propionate;

(89) testosterone-heptanoate;

(90) testosterone-cypionate;

(91) testosterone-enanthate;

(92) thiomesterone;

(93) delta'-testololactone.

Effect of amendments. — The 1986 amendment deleted "or AS 17.35" following "AS 17.30" in the introductory language of subsection (a).

Sec. 11.71.070. Misconduct involving a controlled substance in the seventh degree. (a) Except as authorized in AS 17.30, a person commits the offense of misconduct involving a controlled substance in the seventh degree if the person

(1) manufactures or delivers, or possesses with the intent to manufacture or deliver, one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than one-half ounce of a schedule VIA controlled substance; or

(2) possesses one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than one ounce containing a schedule VIA controlled substance on a public street or sidewalk or on the premises of a public carrier or business establishment or in any other public place.

(b) Misconduct involving a controlled substance in the seventh degree is a violation and is punishable as authorized in AS 12.55, except that if a fine is imposed it shall not be more than $100. (§ 2 ch 45 SLA 1982; am § 12 ch 146 SLA 1986)

Effect of amendments. — The 1986 amendment deleted "or AS 17.35" following "AS 17.30" in the introductory language of subsection (a).

Sec. 11.71.080. Aggregate weight of live marijuana plants.

NOTES TO DECISIONS

Applicability of definition. — The definition in this section did not apply where the marijuana was already dried and processed. Gibson v. State, Ct. App. Op. No. 621 (File No. A-917), 719 P.2d 687 (1986).

Article 2. Standards and Schedules.

Section	Section
120. Authority to schedule controlled substances	160. Schedule IIIA
	180. Schedule VA

Sec. 11.71.120. Authority to schedule controlled substances. (a) If, after considering the factors set out in (c) of this section, the committee decides to recommend that a substance should be added to, deleted from, or rescheduled in a schedule of controlled substances under AS 11.71.140 — 11.71.190, the governor shall introduce legislation in accordance with the recommendation of the committee.

(b) If a substance is added as a controlled substance under federal law, the governor shall introduce legislation in accordance with the federal law.

(c) In advising the governor of the need to add, delete, or reschedule a substance under AS 11.71.110(1), the committee shall assess the

danger or probable danger of the substance after considering the following:

(1) the actual or probable abuse of the substance including

(A) the history and current pattern of abuse both in this state and in other states;

(B) the scope, duration, and significance of abuse;

(C) the degree of actual or probable detriment which may result from abuse of the substance;

(D) the probable physical and social impact of widespread abuse of the substance;

(2) the biomedical hazard of the substance including

(A) its pharmacology, in the effects and modifiers of the effects of the substance;

(B) its toxicology, the acute and chronic toxicity, interaction with other substances, whether controlled or not, and the degree to which it may cause psychological or physiological dependence;

(C) the risk to public health and the particular susceptibility of segments of the population;

(3) whether the substance is an immediate precursor of a substance already controlled under this chapter;

(4) the current state of scientific knowledge regarding the substance, including whether there is any acceptable means to safely use the substance under medical supervision;

(5) the relationship between the use of the substance and other criminal activity, including

(A) whether persons engaged in illicit trafficking of the substance are also engaged in other criminal activity;

(B) whether the nature and relative profitability of manufacturing or delivering the substance encourages illicit trafficking in the substance;

(C) whether the commission of other crimes is one of the effects of abuse of the substance;

(D) whether addiction to the substance relates to the commission of crimes to support the continued use of the substance.

(d) *[Repealed, § 40 ch 6 SLA 1984.]*

(e) The committee has no authority over tobacco or alcoholic beverages as defined in AS 04.21.080. (§ 2 ch 45 SLA 1982; am § 40 ch 6 SLA 1984)

Effect of amendments. — The 1984 amendment repealed former subsection (d), relating to a precursor of an immediate precursor.

Legislative history reports. — For statement of the purpose of the 1984 repeal of subsection (d) of this section, see the 1984 House Journal at p. 2287, in the paragraph captioned "Section 40."

cological status. State v. Erickson, Sup. Ct. Op. No. 1547 (File No. 3250), 574 P.2d 1 (1978).

Constitutionality of classification of cocaine as narcotic. — The classification of cocaine with narcotics under former AS 17.10 was not violative of equal protection or due process. State v. Erickson, Sup. Ct. Op. No. 1547 (File No. 3250), 574 P.2d 1 (1978).

When viewed from the overall legislative purpose of preventing the use of a drug harmful to the health and welfare of society, the classification of cocaine as a narcotic drug was not so irrational or arbitrary as to violate due process. State v. Erickson, Sup. Ct. Op. No. 1547 (File No. 3250), 574 P.2d 1 (1978).

Cocaine was not unconstitutionally classified as a narcotic drug by former AS 17.10. Johnson v. State, Sup. Ct. Op. No. 1596 (File No. 3346), 577 P.2d 230 (1978).

Sec. 11.71.160. Schedule IIIA. (a) A substance shall be placed in schedule IIIA if it is found under AS 11.71.120(c) to have a degree of danger or probable danger to a person or the public less than the substances listed in schedule IIA but higher than substances listed in schedule IVA.

(b) Schedule IIIA includes, unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances having a stimulant effect on the central nervous system, including their salts, isomers whether optical, position, or geometric, and salts of these isomers whenever the existence of these salts, isomers, and salts of isomers is possible within the specific chemical designation:

(1) benzphetamine;

(2) chlorphentermine;

(3) clortermine;

(4) mazindol;

(5) phendimetrazine;

(6) any compound, mixture, or preparation in dosage unit form containing any stimulant substance listed in schedule IIA, which compound, mixture, or preparation was listed on August 25, 1971, as an excepted compound under 21 C.F.R. sec. 1308.32, and any other drug of the quantitive composition shown in that list for those substances, or which is the same except that it contains a lesser quantity of any controlled substance.

(c) Schedule IIIA includes, unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances having a depressant effect on the central nervous system:

(1) amobarbital, secobarbital, or pentobarbital or any salt of these substances, combined with one or more other active medicinal ingredients which are not listed in any other schedule;

(2) amobarbital, secobarbital, or pentobarbital or any salt of these substances, approved by the federal Food and Drug Administration for marketing only as a suppository;

(3) any substance which contains any quantity of a derivative of barbituric acid or any salt of barbituric acid;

(4) chlorhexadol;

(5) glutethimide;

(6) lysergic acid;

(7) lysergic acid amide;

(8) methyprylon;

(9) sulfondiethylmethane;

(10) sulfonethylmethane;

(11) sulfonmethane.

(d) Schedule IIIA includes nalorphine.

(e) Schedule IIIA includes, unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation containing any of the following narcotic drugs or their salts calculated as the free anhydrous base or alkaloid, in the following quantities:

(1) not more than 1.8 grams of codeine per 100 milliliters or not more than 90 milligrams per dosage unit, with an equal or greater quantity of an isoquinoline alkaloid of opium;

(2) not more than 1.8 grams of codeine per 100 milliliters or not more than 90 milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;

(3) not more than 300 milligrams of dihydrocodeinone per 100 milliliters or not more than 15 milligrams per dosage unit, with a fourfold or greater quantity of an isoquinoline alkaloid of opium;

(4) not more than 300 milligrams of dihydrocodeinone per 100 milliliters or not more than 15 milligrams per dosage unit, with one or more active nonnarcotic ingredients in recognized therapeutic amounts;

(5) not more than 1.8 grams of dihydrocodeine per 100 milliliters or not more than 90 milligrams per dosage unit, with one or more active nonnarcotic ingredients in recognized therapeutic amounts;

(6) not more than 300 milligrams of ethylmorphine per 100 milliliters or not more than 15 milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;

(7) not more than 500 milligrams of opium per 100 milliliters or per 100 grams or not more than 25 milligrams per dosage unit, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts;

(8) not more than 50 milligrams of morphine per 100 milliliters or per 100 grams, with one or more active, nonnarcotic ingredients in recognized therapeutic amounts.

(f) Schedule IIIA includes

(1) hashish;

(2) hash oil or hashish oil; and

(3) tetrahydrocannabinols. (§ 2 ch 45 SLA 1982)

Sec. 11.71.170. Schedule IVA. (a) A substance shall be placed in schedule IVA if it is found under AS 11.71.120(c) to have a degree of danger or probable danger to a person or the public which is less than the substances listed in schedule IIIA, but higher than the substances listed in schedule VA.

(b) Schedule IVA includes, unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances, including their salts, isomers and salts of isomers whenever the existence of these salts, isomers, and salts of isomers is possible within the specific chemical designation:

(1) barbital;
(2) chloral betaine;
(3) chloral hydrate;
(4) chlordiazepoxide;
(5) clonazepam;
(6) clorazepate;
(7) diazepam;
(8) ethclorvynol;
(9) ethinamate;
(10) flurazepam;
(11) lorazepan;
(12) mebutamate;
(13) meprobamate;
(14) methohexital;
(15) methylphenobarbital, also known as mephobarbital;
(16) oxazepam;
(17) paraldehyde;
(18) petrichloral;
(19) phenobarbital;
(20) prazepam.

(c) Schedule IVA includes any material, compound, mixture or preparation which contains any quantity of the following substance, including its salts, isomers whether optical, position, or geometric, and salts of these isomers, whenever the existence of these salts, isomers, and salts of isomers is possible: fenfluramine.

(d) Schedule IVA includes, unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances having a stimulant effect on the central nervous system, including their salts, isomers whether optical, position, or geometric, and salts of these isomers whenever the existence of these salts, isomers, and salts of isomers is possible within the specific chemical designation:

(1) diethylpropion;
(2) phentermine;

(3) pemoline, including organometallic complexes and chelates of this substance.

(e) Schedule IVA includes, unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation containing not more than 1 milligram of difenoxin and not less than 25 micrograms of atropine sulfate per dosage unit, or their salts calculated as the free anhydrous base or alkaloid.

(f) Schedule IVA includes, unless specifically excepted or unless listed in another schedule, any material, compound, mixture or preparation which contains any quantity of the following substances, including their salts:

(1) dextropropoxyphene (alpha-(+)-4-dimethylamino-1,2-dephenyl-3-methyl-2-propionoxyoutane);

(2) pentazocine;

(3) propoxphene. (§ 2 ch 45 SLA 1982)

Sec. 11.71.180. Schedule VA. (a) A substance shall be placed in schedule VA if it is found under AS 11.71.120(c) to have a degree of danger or probable danger to a person or the public which is less than substances listed in schedule IVA, but higher than substances listed in schedule VIA.

(b) Schedule VA includes any compound, mixture, or preparation containing any of the following limited quantities of narcotic drugs or their salts, calculated as the free anhydrous base or alkaloid, in limited quantities as specified in (1) — (6) of this subsection, which includes one or more nonnarcotic active medicinal ingredients in sufficient proportion to confer upon the compound, mixture, or preparation valuable medicinal qualities other than those possessed by schedule IA substances alone:

(1) not more than 200 milligrams of codeine per 100 milliliters or per 100 grams;

(2) not more than 100 milligrams of dihydrocodeine per 100 milliliters or per 100 grams;

(3) not more than 100 milligrams of ethylmorphine per 100 milliliters or per 100 grams;

(4) not more than 2.5 milligrams of diphenoxylate and not less than 25 micrograms of atropine sulfate per dosage unit;

(5) not more than 100 milligrams of opium per 100 milliliters or per 100 grams;

(6) not more than 0.5 milligrams of difenoxin and not less than 25 micrograms of atropine sulfate per dosage unit.

(c) Schedule VA includes loperamide. (§ 2 ch 45 SLA 1982)

Sec. 11.71.190. Schedule VIA. (a) A substance shall be placed in schedule VIA if it is found under AS 11.71.120(c) to have the lowest degree of danger or probable danger to a person or the public.

Sec. 11.71.180. Schedule VA. (a) A substance shall be placed in schedule VA if it is found under AS 11.71.120(c) to have a degree of danger or probable danger to a person or the public which is less than substances listed in schedule IVA, but higher than substances listed in schedule VIA.

(b) Schedule VA includes any compound, mixture, or preparation containing any of the following limited quantities of narcotic drugs or their salts, calculated as the free anhydrous base or alkaloid, in limited quantities as specified in (1) — (6) of this subsection, which includes one or more nonnarcotic active medicinal ingredients in sufficient proportion to confer upon the compound, mixture, or preparation valuable medicinal qualities other than those possessed by schedule IA substances alone:

(1) not more than 200 milligrams of codeine per 100 milliliters or per 100 grams;

(2) not more than 100 milligrams of dihydrocodeine per 100 milliliters or per 100 grams;

(3) not more than 100 milligrams of ethylmorphine per 100 milliliters or per 100 grams;

(4) not more than 2.5 milligrams of diphenoxylate and not less than 25 micrograms of atropine sulfate per dosage unit;

(5) not more than 100 milligrams of opium per 100 milliliters or per 100 grams;

(6) not more than 0.5 milligrams of difenoxin and not less than 25 micrograms of atropine sulfate per dosage unit.

(c) *[Repealed, § 1 ch 66 SLA 1987.]* (§ 2 ch 45 SLA 1982; am § 1 ch 66 SLA 1987)

Effect of amendments. — The 1987 amendment deleted subsection (c), which read "Schedule VA includes loperamide."

Article 3. Miscellaneous Provisions.

Section
305. Rehabilitation

Sec. 11.71.305. Rehabilitation. A person convicted of violating a provision of this chapter may, when the violation relates to that person's own personal use of a controlled substance, be committed to the custody of the Department of Corrections for rehabilitative treatment for not to exceed one year. Such treatment may be imposed in place of a fine or imprisonment, but only where the imprisonment would not have exceeded one year. (§ 2 ch 45 SLA 1982; am E.O. No. 55, § 2 (1984))

Sec. 11.71.030. Misconduct involving a controlled substance in the third degree. (a) Except as authorized in AS 17.30 or AS 17.35, a person commits the crime of misconduct involving a controlled substance in the third degree if the person

(1) manufactures or delivers any amount of a schedule IIA or IIIA controlled substance or possesses any amount of a schedule IIA or IIIA controlled substance with intent to manufacture or deliver;

(2) delivers any amount of a schedule IVA, VA or VIA controlled substance to a person under 19 years of age who is at least three years younger than the person delivering the substance; or

(3) being 18 years of age or older, possesses any amount of a schedule IA or IIA controlled substance within the grounds of or on a parking lot immediately adjacent to a public or private preschool, elementary, junior high, or secondary school.

(b) It is an affirmative defense to a prosecution under (a)(3) of this section that at the time of the possession the school was closed to any organized activity involving persons under 18 years of age. Nothing in this subsection precludes a prosecution under any other provision of this section or any other section of this chapter.

(c) Misconduct involving a controlled substance in the third degree is a class B felony. (§ 2 ch 45 SLA 1982)

NOTES TO DECISIONS

Editor's notes. — The cases cited in the notes below were decided under former AS 17.10 and 17.12.

Defenses. — Where, on appeal from a conviction of selling cocaine, the defendants argue that this section under which they were charged, prohibits the sale only of natural or L-cocaine, derived from coca leaves, and where the state's chemist testified on cross-examination that his tests did not exclude the possibility that the substance sold by the defendants was D-cocaine, an artificial compound not produced from coca leaves, but where the chemist also testified that to the best of his knowledge D-cocaine had never been synthesized in any quantity, the supreme court construing his testimony most favorably to the state, concluded that reasonable persons could find beyond a reasonable doubt that D-cocaine was not involved in the case and thus rejected the "D-cocaine" defense. Leduff v. State, Sup. Ct. Op. No. 2192 (File Nos. 4117, 4136), 618 P.2d 557 (1980).

Fact going to weight of evidence, not admissibility. — Where the informer who purchased bags of drugs from defendant testified and, thus, there was no break in the chain of custody of the bags, and where there was no evidence that the informer tampered with the bags, the fact that the informer was out of sight of the police for short periods of time before turning the bags over to the police went to the weight of the evidence, not its admissibility. Robinson v. State, Sup. Ct. Op. No. 1837 (File No. 3393), 593 P.2d 621 (1979).

Sentence for sale of cocaine. — See Johnson v. State, Sup. Ct. Op. No. 1596 (File No. 3346), 577 P.2d 230 (1978); Elliott v. State, Sup. Ct. Op. No. 1798 (File No. 3379), 590 P.2d 881 (1979); Robinson v. State, Sup. Ct. Op. No. 1837 (File No. 3393), 593 P.2d 621 (1979); Mangold v. State, Sup. Ct. Op. No. 2108 (File No. 4678), 613 P.2d 272 (1980); Hawley v. State, Sup. Ct. Op. No. 2137 (File No. 4200), 614 P.2d 1349 (1980); Leduff v. State, Sup. Ct. Op. No. 2192 (File Nos. 4117, 4136), 618 P.2d 557 (1980). See also Strachan v. State, Sup. Ct. Op. No. 2151 (File No. 4901), 615 P.2d 611 (1980); Kelly v. State, Sup. Ct. Op. No. 2268 (File Nos. 4097, 4529), 622 P.2d 432 (1981); State v. Dana, Ct. Op. App. No. 03 (File No. 4888), 623 P.2d 348 (1981).

Sentence for sale of amphetamines. — See Thurlkill v. State, Sup. Ct. Op. No. 1279 (File No. 2735), 551 P.2d 541 (1976).

Sentence for possession of amphetamine tablets with intent to distribute or sell. — See Keller v. State, Sup. Ct. Op. No. 1221 (File No. 2330), 543 P.2d 1211 (1975).

Sentence for selling LSD. — See Aceveda v. State, Sup. Ct. Op. No. 1534 (File No. 2900), 571 P.2d 1013 (1977).

Sentence for sale of acid, mescaline and amphetamines. — See Moyers v. State, Sup. Ct. Op. No. 720 (File No. 1491), 488 P.2d 713 (1971).

Sentence for possession of hallucinogenic drug with intent to sell or distribute. — See Clark v. State, Sup. Ct. Op. No. 1570 (File Nos. 2943, 2964), 574 P.2d 1261 (1978).

Sec. 11.71.040. Misconduct involving a controlled substance in the fourth degree. (a) Except as authorized in AS 17.30 or AS 17.35, a person commits the crime of misconduct involving a controlled substance in the fourth degree if the person

(1) manufactures or delivers any amount of a schedule IVA or VA controlled substance or possesses any amount of a schedule IVA or VA controlled substance with intent to manufacture or deliver;

(2) manufactures or delivers, or possesses with the intent to manufacture or deliver, one or more preparations, compounds, mixtures, or substances of an aggregate weight of one ounce or more containing a schedule VIA controlled substance;

(3) possesses

(A) any amount of a schedule IA or IIA controlled substance;

(B) 25 or more tablets, ampules, or syrettes containing a schedule IIIA or IVA controlled substance;

(C) one or more preparations, compounds, mixtures, or substances of an aggregate weight of three grams or more containing a schedule IIIA or IVA controlled substance;

(D) 50 or more tablets, ampules, or syrettes containing a schedule VA controlled substance;

(E) one or more preparations, compounds, mixtures, or substances of an aggregate weight of six grams or more containing a schedule VA controlled substance; or

(F) one or more preparations, compounds, mixtures, or substances of an aggregate weight of one pound or more containing a schedule VIA controlled substance;

(4) being 18 years of age or older, possesses a schedule IIIA, IVA, VA, or VIA controlled substance within the grounds of or on a parking lot immediately adjacent to a public or private preschool, elementary, junior high, or secondary school;

(5) knowingly keeps or maintains any store, shop, warehouse, dwelling, building, vehicle, boat, aircraft, or other structure or place which is used for keeping or distributing controlled substances in violation of a felony offense under this chapter or AS 17.30;

(6) makes, delivers, or possesses a punch, die, plate, stone, or other thing which prints, imprints, or reproduces a trademark, trade name, or other identifying mark, imprint, or device of another or any likeness of any of these upon a drug, drug container, or labeling so as to render the drug a counterfeit substance;

(7) knowingly uses in the course of the manufacture or distribution of a controlled substance a registration number which is fictitious, revoked, suspended, or issued to another person;

(8) knowingly furnishes false or fraudulent information in or omits material information from any application, report, record, or other document required to be kept or filed under AS 17.30;

(9) obtains possession of a controlled substance by misrepresentation, fraud, forgery, deception or subterfuge, or

(10) affixes a false or forged label to a package or other container containing any controlled substance.

(b) It is an affirmative defense to a prosecution under (a)(4) of this section that at the time of the possession the school was closed to any organized activity involving persons under 18 years of age. Nothing in this subsection precludes a prosecution under any other provision of this section or any other section of this chapter.

(c) Nothing in (a)(5) or (6) of this section precludes a prosecution or civil proceeding brought under any other provision of this section or any other section of this chapter or under AS 17.

(d) Misconduct involving a controlled substance in the fourth degree is a class C felony. (§ 2 ch 45 SLA 1982)

NOTES TO DECISIONS

Editor's notes. — The cases cited in the notes below were decided under former AS 17.10 and 17.12.

Access to cocaine for personal use. — Right of privacy does not permit reasonable access to cocaine for personal and social use. State v. Erickson, Sup. Ct. Op. No. 1547 (File No. 3250), 574 P.2d 1 (1978).

There is a sufficiently close and substantial relationship between the means chosen to regulate cocaine and the legislative purpose of preventing harm to health and welfare so as to justify the prohibition of use of cocaine, even in the home. State v. Erickson, Sup. Ct. Op. No. 1547 (File No. 3250), 574 P.2d 1 (1978).

Possession of even a trace of a prohibited drug may be sufficient to sustain a conviction where other evidence supports the inference of knowledge. Moreau v. State, Sup. Ct. Op. No. 1770 (File No. 2355), 588 P.2d 275 (1978).

Age of purchaser. — Where defendants were charged with selling marijuana to a minor in violation of former AS 17.12, the purchaser's age had no bearing on the question of whether the defendants were guilty of a violation. The purchaser's age was important only in determining the punishment that could be imposed for that offense. Morris v. State, Sup. Ct. Op. No. 2376 (File Nos. 4264, 4318), 630 P.2d 13 (1981).

Knowing possession must be proved for conviction. — To sustain a conviction for possession of narcotics the prosecution must prove a knowing possession by the accused. Davis v. State, Sup. Ct. Op. No. 836 (File No. 1532), 501 P.2d 1026 (1972).

Proving defendant's knowledge of substance's character. — Where the prohibited substance is itself mixed with or contained within an innocuous substance or object, it is necessary that the state prove the defendant's knowledge of the narcotic character of the substance. Moreau v. State, Sup. Ct. Op. No. 1770 (File No. 2355), 588 P.2d 275 (1978).

Knowledge can be shown by inferences. — A defendant's knowledge of the narcotic character of a substance can be shown by inferences that can be reasonably drawn from facts in evidence. Moreau v. State, Sup. Ct. Op. No. 1770 (File No. 2355), 588 P.2d 275 (1978).

Evidence of previous possession of contraband admissible. — In the prosecution of possessive offenses, where it is essential to prove the defendant's knowl-

permit separate sentences, the two offenses violate the same societal interest, namely the regulation of the availability of harmful drugs. Alley v. State, Ct. App. Op. No. 498 (File No. A-368), 704 P.2d 233 (1985).

Convictions and sentences for misconduct involving cocaine affirmed. — See Adams v. State, Ct. App. Op. No. 525 (File No. A-450), 706 P.2d 1183 (1985).

Sentence excessive. — Sentence for one count of misconduct involving a controlled substance under AS 11.71.040(a)(3)(A) and five counts under AS 11.71.030(a)(1) totaling eight years with four years suspended was excessive; the court of appeals remanded for resentencing not to exceed six years with two years suspended where the defendant had a favorable criminal record, a good employment history, and was a good prospect for rehabilitation. The court of appeals also believed that the presumptive sentences established by the revised criminal code for the defendant's most serious offense should constitute a ceiling on his sentence. Rivas v. State, Ct. App. Op. No. 539 (File No. A-671), 706 P.2d 1202 (1985).

Sentence for possession of cocaine upheld. — See Smith v. State, Ct. App. Op. No. 757 (File No. A-2021), P.2d (1987).

Cited in Hodsdon v. State, Ct. App. Op. No. 467 (File No. A-241), 698 P.2d 1224 (1985); Pooley v. State, Ct. App. Op. No. 505 (File No. A-310), 705 P.2d 1293 (1985); Webb v. State, Sup. Ct. Op. No. 3338 (File No. S-1714), P.2d (1988).

Sec. 11.71.050. Misconduct involving a controlled substance in the fifth degree. (a) Except as authorized in AS 17.30, a person commits the crime of misconduct involving a controlled substance in the fifth degree if the person

(1) manufactures or delivers, or possesses with the intent to manufacture or deliver, one or more preparations, compounds, mixtures, or substances of an aggregate weight of one-half ounce or more containing a schedule VIA controlled substance;

(2) manufactures or delivers, or possesses with the intent to manufacture or deliver, one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than one-half ounce containing a schedule VIA controlled substance, for remuneration;

(3) possesses

(A) less than 25 tablets, ampules, or syrettes containing a schedule IIIA or IVA controlled substance;

(B) one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than three grams containing a schedule IIIA or IVA controlled substance;

(C) less than 50 tablets, ampules, or syrettes containing a schedule VA controlled substance;

(D) one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than six grams containing a schedule VA controlled substance; or

(E) one or more preparations, compounds, mixtures, or substances of an aggregate weight of one-half pound or more containing a schedule VIA controlled substance; or

(4) fails to make, keep, or furnish any record, notification, order form, statement, invoice, or information required under AS 17.30.

(b) Misconduct involving a controlled substance in the fifth degree is a class A misdemeanor. (§ 2 ch 45 SLA 1982; am § 10 ch 146 SLA 1986)

Effect of amendments. — The 1986 amendment deleted "or AS 17.35" following "AS 17.30" in the introductory language of subsection (a).

NOTES TO DECISIONS

Required marijuana content. — In order to be charged with misconduct involving a controlled substance involving marijuana, a person must be in possession of a substance that contains its seeds, leaves, buds or flowers; merely possessing stalks, fibers or sterilized seeds would not be enough. Gibson v. State, Ct. App. Op. No. 621 (File No. A-917), 719 P.2d 687 (1986).

Aggregate weight. — In order to be convicted of misconduct involving a controlled substance, defendant need only to have delivered a combination of ingredients that included marijuana; it is the total weight of the entire substance delivered that determines the degree of the offense. Gibson v. State, Ct. App. Op. No. 621 (File No. A-917), 719 P.2d 687 (1986).

The weight of marijuana should be determined absent stalks, fiber and sterilized seeds. Gibson v. State, Ct. App. Op. No. 621 (File No. A-917), 719 P.2d 687 (1986).

Cited in Jones v. State, Ct. App. Op. No. 651 (File No. A-1513), 727 P.2d 6 (1986).

Sec. 11.71.060. Misconduct involving a controlled substance in the sixth degree. (a) Except as authorized in AS 17.30, a person commits the crime of misconduct involving a controlled substance in the sixth degree if the person

(1) uses or displays any amount of a schedule VIA controlled substance or possesses one or more preparations, compounds, mixtures, or substances of an aggregate weight of one ounce or more containing a schedule VIA controlled substance on a public street or sidewalk or on the premises of a public carrier or business establishment or in any other public place;

(2) knowingly possesses any amount of a schedule VIA controlled substance within the immediate control of that person while operating a propelled vehicle;

(3) being under 19 years of age, possesses one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than four ounces containing a schedule VIA controlled substance;

(4) possesses one or more preparations, compounds, mixtures, or substances of an aggregate weight of four ounces or more containing a schedule VIA controlled substance; or

(5) refuses entry into a premises for an inspection authorized under AS 17.30.

(b) Misconduct involving a controlled substance in the sixth degree is a class B misdemeanor. (§ 2 ch 45 SLA 1982; am § 11 ch 146 SLA 1986)

HOUSE COMMITTEE REPORT

(7)
Date Referred: January 30, 1989 FURTHER REFERRALS: JUDICIARY

Date of Committee Action: 3/22/89

The HEALTH, EDUCATION & SOCIAL SERVICES Committee recommends that:

HOUSE BILL NO. 126 [ANABOLIC STEROIDS AS CONTROLLED SUBSTANCE]
"An Act adding anabolic steroids and their related materials and substances to schedule VA of the schedule of controlled substances under the Criminal Code."

[X] be replaced with CSHB 126 (HESS) [✓] the same title [ ] a new title

[ ] have attached amendment(s)

- [X] do pass
- [ ] do not pass
- [ ] no recommendation
- [ ] individual recommendations
- [ ] additional referral to the ____________ Committee

ADOPTS: ____________ letter of intent

ATTACHES NEW FISCAL NOTE(s):

- [ ] fiscal impact
- [X] zero fiscal note
- [X] zero with analysis

APPROVES PREVIOUS:

- [ ] fiscal note(s) published: ____________
- [ ] zero fiscal notes(s) published: ____________

SIGNING DO PASS:

[signatures]

SIGNING OTHER THAN DO PASS:
(Do Not Pass, No Recommendation, Amend)

[signature]
Chairman's signature

HOUSE COMMITTEE REPORT

(7)
Date Referred: March 23, 1989 FURTHER REFERRALS:

Date of Committee Action: 4/28

The JUDICIARY Committee considered: HB 126

HOUSE BILL NO. 126 [ANABOLIC STEROIDS AS CONTROLLED SUBSTANCE]
"An Act adding anabolic steroids and their related materials and substances to schedule VA of the schedule of controlled substances under the Criminal Code."

RECOMMENDATIONS:
[ ] be replaced with CS HB126 (Jud) [ ] the same title [✓] a new title
[ ] have attached amendment(s)
[ ] do pass
[ ] do not pass
[X] no recommendation
[ ] individual recommendations
[ ] additional referral to the ________ Committee

ADOPTS: ________ letter of intent

ATTACHES NEW FISCAL NOTE(s): (Dept)
[ ] fiscal impact ________
[ ] zero fiscal note ________
[ ] zero with analysis ________

APPROVES PREVIOUS: (Date/Dept)
[ ] fiscal note(s) ________
[✓] zero fiscal note(s) 3/23/89 HESS
[ ] zero fn/analysis ________

SIGNING DO PASS:
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SIGNING:
(Check approp. column)

Signature	Do Not Pass	No Rec	Amend
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[signature]		✓	
[signature]		X	
[signature] Ellis		X	
Mike Miller		X	
Terry Martin		X	

[signature] / [signature]
Chairman's Signature

ALASKA STATE LEGISLATURE

REPRESENTATIVE CURT MENARD

165 E. Parks Hwy.
Wasilla, Alaska 99687
(907) 373-2?78

P.O. Box V
Juneau, Alaska 99811
(907) 465-2679

M E M O R A N D U M

TO: Rep. Peter Goll
Rep. Max Gruenberg

FROM: Rep. Curt Menard

DATE: April 3, 1989

RE: HB 126

I would like to request a hearing for House Bill 126 relating to anabolic steroids. This bill would place anabolic steroids on schedule VA of the controlled substance list. There are currently thirteen anabolic steroid statutes in effect in other states and 26 states have introduced legislation this year. Thank you for your consideration.

Andy - schedule next week

6-0518M
Chenoweth
4/28/89

Original sponsors: Menard, Larson, C.Davis, et al.

1 IN THE HOUSE

2 CS FOR HOUSE BILL NO. 126 ( )

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 SIXTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act adding anabolic steroids and their related
7 materials and substances to schedule VA of the sched-
8 ule of controlled substances under the Criminal Code,
9 and prescribing penalties for their possession."

10 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

11 * Section 1. AS 11.71.040(a) is amended to read:

12 (a) Except as authorized in AS 17.30, a person commits the crime
13 of misconduct involving a controlled substance in the fourth degree if
14 the person

15 (1) manufactures or delivers any amount of a schedule IVA
16 or VA controlled substance or possesses any amount of a schedule IVA
17 or VA controlled substance with intent to manufacture or deliver;

18 (2) manufactures or delivers, or possesses with the intent
19 to manufacture or deliver, one or more preparations, compounds, mix-
20 tures, or substances of an aggregate weight of one ounce or more
21 containing a schedule VIA controlled substance;

22 (3) possesses

23 (A) any amount of a schedule IA or IIA controlled
24 substance;

25 (B) 25 or more tablets, ampules, or syrettes contain-
26 ing a schedule IIIA or IVA controlled substance;

27 (C) one or more preparations, compounds, mixtures, or
28 substances of an aggregate weight of three grams or more contain-
29 ing a schedule IIIA or IVA controlled substance;

1 (D) 50 or more tablets, ampules, or syrettes contain-
2 ing a schedule VA controlled substance, except a schedule VA
3 controlled substance described in AS 11.71.180(d);
4 (E) one or more preparations, compounds, mixtures, or
5 substances of an aggregate weight of six grams or more containing
6 a schedule VA controlled substance, except a schedule VA control-
7 led substance described in AS 11.71.180(d); or
8 (F) one or more preparations, compounds, mixtures, or
9 substances of an aggregate weight of one pound or more containing
10 a schedule VIA controlled substance;
11 (4) being 18 years of age or older, possesses a schedule
12 IIIA, IVA, VA, or VIA controlled substance within the grounds of or on
13 a parking lot immediately adjacent to a public or private preschool,
14 elementary, junior high, or secondary school;
15 (5) knowingly keeps or maintains any store, shop, ware-
16 house, dwelling, building, vehicle, boat, aircraft, or other structure
17 or place which is used for keeping or distributing controlled sub-
18 stances in violation of a felony offense under this chapter or AS 17.-
19 30;
20 (6) makes, delivers, or possesses a punch, die, plate,
21 stone, or other thing which prints, imprints, or reproduces a trade-
22 mark, trade name, or other identifying mark, imprint, or device of
23 another or any likeness of any of these upon a drug, drug container,
24 or labeling so as to render the drug a counterfeit substance;
25 (7) knowingly uses in the course of the manufacture or
26 distribution of a controlled substance a registration number which is
27 fictitious, revoked, suspended, or issued to another person;
28 (8) knowingly furnishes false or fraudulent information in
29 or omits material information from any application, report, record, or

other document required to be kept or filed under AS 17.30;

(9) obtains possession of a controlled substance by misrepresentation, fraud, forgery, deception or subterfuge; or

(10) affixes a false or forged label to a package or other container containing any controlled substance.

* Sec. 2. AS 11.71.050(a) is amended to read:

(a) Except as authorized in AS 17.30, a person commits the crime of misconduct involving a controlled substance in the fifth degree if the person

(1) manufactures or delivers, or possesses with the intent to manufacture or deliver, one or more preparations, compounds, mixtures, or substances of an aggregate weight of one-half ounce or more containing a schedule VIA controlled substance;

(2) manufactures or delivers, or possesses with the intent to manufacture or deliver, one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than one-half ounce containing a schedule VIA controlled substance, for remuneration;

(3) possesses

(A) less than 25 tablets, ampules, or syrettes containing a schedule IIIA or IVA controlled substance;

(B) one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than three grams containing a schedule IIIA or IVA controlled substance;

(C) less than 50 tablets, ampules, or syrettes containing a schedule VA controlled substance, except a schedule VA controlled substance described in AS 11.71.180(d);

(D) one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than six grams

1 containing a schedule VA controlled substance, except a schedule
2 VA controlled substance described in AS 11.71.180(d); [OR]
3 (E) any of the following:
4 (i) 200 or more tablets, ampules, or syrettes
5 containing one or more preparations, compounds, mixtures, or
6 substances of a schedule VA controlled substance described
7 in AS 11.71.180(d);
8 (ii) one or more preparations, compounds, mix-
9 t res, or substances of a schedule VA controlled substance
10 described in AS 11.71.180(d) having an aggregate volume of
11 16 cubic centimeters or more, if the controlled substance is
12 in liquid form; or
13 (iii) one or more preparations, compounds, mix-
14 tures, or substances of a schedule VA controlled substance
15 described in AS 11.71.180(d) having an aggregate weight of
16 six grams or more if the controlled substance is in a form
17 that cannot be counted or is not in liquid form;
18 (F) one or more preparations, compounds, mixtures, or
19 substances of an aggregate weight of one-half pound or more
20 containing a schedule VIA controlled substance; or
21 (4) fails to make, keep, or furnish any record, notifica-
22 tion, order form, statement, invoice, or information required under
23 AS 17.30.
24 * Sec. 3. AS 11.71.070(a) is amended to read:
25 (a) Except as authorized in AS 17.30, a person commits the
26 offense of misconduct involving a controlled substance in the seventh
27 degree if the person
28 (1) manufactures or delivers, or possesses with the intent
29 to manufacture or deliver, one or more preparations, compounds, mix-

1 tures, or substances of an aggregate weight of less than one-half
2 ounce of a schedule VIA controlled substance; [OR]
3 (2) possesses one or more preparations, compounds, mix-
4 tures, or substances of an aggregate weight of less than one ounce
5 containing a schedule VIA controlled substance on a public street or
6 sidewalk or on the premises of a public carrier or business establish-
7 ment or in any other public place; or
8 (3) possesses any of the following:
9 (A) less than 200 tablets, ampules, or syrettes
10 containing one or more preparations, compounds, mixtures, or
11 substances of a schedule VA controlled substance described in
12 AS 11.71.180(d);
13 (B) one or more preparations, compounds, mixtures, or
14 substances of a schedule VA controlled substance described in
15 AS 11.71.180(d) having less than an aggregate volume of 16 cubic
16 centimeters, if the controlled substance is in liquid form; or
17 (C) one or more preparations, compounds, mixtures, or
18 substances of a schedule VA controlled substance described in
19 AS 11.71.180(d) having less than an aggregate weight of six grams
20 if the controlled substance is in a form that cannot be counted
21 or is not in liquid form.
22 * Sec. 4. AS 11.71.180 is amended by adding new subsections to read:
23 (d) Schedule VA includes any material, compound, mixture, or
24 preparation that contains any quantity of anabolic steroids, including
25 their isomers, esters, ethers, salts, and salts of isomers, esters,
26 and ethers.
27 (e) In (d) of this section, "anabolic steroid" includes
28 (1) androisoxazole;
29 (2) androstanediol;

(3) bolandiol;

(4) bolasterone;

(5) boldenone;

(6) chlormethandienone;

(7) clostebol;

(8) dihydromesterone;

(9) ethylestrenol;

(10) fluoxymesterone;

(11) formyldienolone;

(12) 4-hydroxy-19-nortestosterone;

(13) mesterolone;

(14) methandriol;

(15) methandrostenolone;

(16) methenolone;

(17) 17-methyltestosterone;

(18) methyltrienolone;

(19) nandrolone;

(20) norbolethone;

(21) norethandrolone;

(22) normethandrolone;

(23) oxandrolone;

(24) oxymesterone;

(25) oxymetholone;

(26) quinbolone;

(27) stanolone;

(28) stanozolol;

(29) stenbolone;

(30) testosterone;

(31) toxandroprione;

1 (32) trenbolone; and
2 (33) any other material, compound, mixture, or preparation
3 having pronounced anabolic properties and relatively weak androgenic
4 properties that is used clinically principally to promote growth and
5 repair of body tissues.
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Athletes and Steroids: Playing a Deadly Game

by Roger W. Miller

Politics and sports usually don't mix too much, but the legacy of just such a mixture some 30 years ago has left modern America with another serious drug problem—abuse of anabolic steroids.

The Russians provided the politics in the 1950s when they gave their athletes—both men and women—a male hormone called testosterone that apparently helped the competitors build muscle. As a result, they dominated many international sports events at the time.

An American doctor, who was later to regret his action, sought to even the score in those coldest of the Cold War days by developing for our athletes a variation of a drug that was related to testosterone. The doctor came up with a form of anabolic steroid for use by weight lifters that was supposed to build muscle while minimizing masculinizing side effects. The weight lifters who found that the prescribed 5-milligram (mg) pills helped build muscle assumed immediately that 10 mg, or two pills, would add even more muscle, 15 mg more yet, and so forth. The race was on.

Today, anabolic steroids are widely used and abused by young athletes in search of bigger muscles. This drug abuse involves boys not yet in their teens; high school, college and professional athletes; and body builders of both sexes.

A more recent problem, according to experts on the subject, is the use of anabolic steroids by law enforcement officers who are lifting weights and using steroids to make themselves more imposing to criminals. The *Miami Herald*, in a May 19, 1987, article, quoted a Florida police chief as saying more police officials should be aware of the problem, adding: "There's a great potential for an officer abusing steroids to physically mistreat people." In fact, possibly the first misuse, or, as the medical people say, the first "nonclinical application," of anabolic steroids was by the Nazis in World War II who gave them to their troops to make them more aggressive.

Steroids were first developed in the 1930s to build body tissue and prevent the breakdown of tissue that occurs in some debilitating diseases. But an FDA review of these drugs years later failed to find evidence that they were effective for those purposes.

Anabolic steroids can produce a host of side effects and adverse reactions (see accompanying list). They include liver cancer, cardiovascular problems, sterility, testicular atrophy, jaundice, and masculinization of female fetuses in pregnant women taking steroids. What's more, steroids don't mix with some other drugs, a fact that can add to the list of unwanted consequences. Actually, the total side effect picture is unknown, for it remains to be seen what complications will develop for today's iron pumpers who take steroids in large quantities and for extremely long periods. It is known that communist athletes in the 1950s were given so much testosterone that many of the men developed large prostates and had to be catheterized (have a tube inserted in the penis) to urinate. And some women athletes had to have chromosome tests to prove that they were really women because of the extensive masculinizing effects of the drugs.

Although the numerous adverse side effects of steroids are unquestioned, the drugs' ability to increase muscle mass has not been fully verified. The current *AMA Drug Evaluations*, published by the American Medical Association, says the evidence on the muscle-building ability of steroids is "equivocal." Writing in the September 1987 issue of *Clinical Pharmacy*, researchers Michael W. Kibble and Mary B. Ross concluded that steroids increase muscle mass and strength "only in persons who are already weight-trained and who continue intensive training while maintaining high-protein, high-calorie diets."

What muscle gain there is may be offset by injuries associated with use of the drugs. That possibility was noted in a *Journal of the American Medical Association* article (Jan. 20/27, 1987): "It seems likely that their use may expose athletes to the risk of injury to ligaments and tendons and that these injuries may take longer to heal."

Weight lifting has gained enormously in popularity in recent years. Not too long ago, musclemen were looked on as freaks. As recently as 1973, the *Wall Street Journal* ran a front page feature on the U.S. heavyweight lifting champion under a headline: "Weight-Lifting Champ Frets as U.S. Yawns Over His Achievement." The champ was quoted in the story as saying: "Do you think I like having people make fun of me?"

But that was four years before the Arnold Schwarzenegger movie "Pumping Iron" transformed barbells and big biceps into status symbols. The movie sent young men thronging to

Death of a Steroid Abuser

He was then admitted to the intensive care unit with acute hepato-renal (liver-kidney) failure. . . . He was treated as a normal hepatic shutdown, like a cirrhotic patient would be treated.

On the fourth hospital day, he suffered cardiac arrest and died. The autopsy showed severe hepatic necrosis (death of liver tissue), complete renal shutdown, and acute tubular necrosis. He had severely degenerating testes. . . . [Examination of] the testicular tissue showed him to be sterile.

—Death of a 23-year-old body builder who had been taking anabolic steroids. He had also taken an anti-histamine to counteract an itchy rash resulting from steroid use. From *Death in the Locker Room*, The Body Press, Tucson, Ariz.

The [illegible] News About Steroids

[illegible] reactions from anabolic [illegible]

- *acne*
- *cancer*
- *cholesterol increase*
- *clitoris enlargement*
- *death*
- *edema (water retention in tissue)*
- *fetal damage*
- *frequent or continuing erections (mature males)*
- *HDL (which helps reduce cholesterol) decrease*
- *heart disease*
- *hirsutism (hairiness in women—irreversible)*
- *increased frequency of [illegible])*
- *increased [illegible] disease (heart attack, stroke)*
- *jaundice*
- *liver disease*
- *liver tumors*
- *male pattern baldness (in women—irreversible)*
- *oily skin (females only)*
- *peliosis hepatis (a liver disease)*
- *penis enlargement (young boys)*
- *priapism (painful, prolonged erections)*
- *prostate enlargement*
- *sterility (reversible)*

health clubs and gymnasiums. There they found out about steroids.

Knowledge of the value of weight lifting gradually spread, as athletes in other sports, particularly football and track, but also some baseball players, put on muscle to play their games better. It was only a matter of time before pumping iron—and using steroids—got into high schools and even junior high schools.

Women have also taken to pumping iron and steroids, as have young men who are not even interested in athletics. In using steroids to build muscle, women athletes run a particular risk, as some of the side effects, including male pattern baldness and a deepened voice, are irreversible.

Some young men are interested in steroids because they hope a more muscular physique will make them look good to young women. Or they don't want to look like "wimps," which seems to be the word of choice these days for degrading a young man's masculinity.

The popularity of anabolic steroids is attested to by the growth of a large black market and the development of quack steroid products. Conservative estimates put the black-market gross at $100 million a year. A lot of the black-market products come from underground labs and foreign countries and are of questionable quality and purity.

Some doctors have readily written prescriptions for athletes. Robert Voy, M.D., chief medical officer for the U.S. Olympic Committee, tells of a small study that he did indicating that 30 percent to 40 percent of the steroids used by body builders came from physicians. However, he believes those figures are dropping as doctors become more aware of the drugs' dangerous side effects. Malpractice suits are further cutting into the mindless prescribing of these drugs.

Many athletes claim they take steroids to help mend their bodies after injuries. But the *AMA Drug Evaluations* calls this a "medically trivial indication." The only uses FDA allows on anabolic steroid labels are for treating certain types of anemia, certain kinds of breast cancer in women, and hereditary an-

[illegible] growth

swelling of feet or lower legs

testicular atrophy

yellowing of the eyes or skin

Other possible side effects and adverse reactions:

abdominal or stomach pains

aggressive, combative behavior ("'roid rage")

anaphylactic shock (from injections)

black, tarry, or light-colored stools

bone pain

breast development (sore or swelling—male)

chills

dark-colored urine

depression

diarrhea

fatigue

feeling of abdominal or stomach fullness

feeling of discomfort

fever

frequent urge to urinate (mature males)

gallstones

headache

high blood pressure

hives

hypercalcemia (too much calcium)

[illegible]

kidney disease

kidney stones (from hypercalcemia)

[illegible]

menstrual irregularities

muscle cramps

[illegible]

rash

[illegible]

gioedema, a type of allergic reaction to some insect bites, foods, viruses, and so forth.

Despite such limitations, use of anabolic steroids by football players has become notorious. In a celebrated case late in 1986, a University of Oklahoma All-American was barred from a bowl game because he tested positive for steroids. In 1987, the National Football League checked for steroids for the first time in training camps and set standards for steroid levels. A player who tests positive is sidelined for 30 days; two additional positive readings of equal or higher levels result in being barred from the league. The NFL has also started an education effort that includes a videotape on the dangers of steroid use.

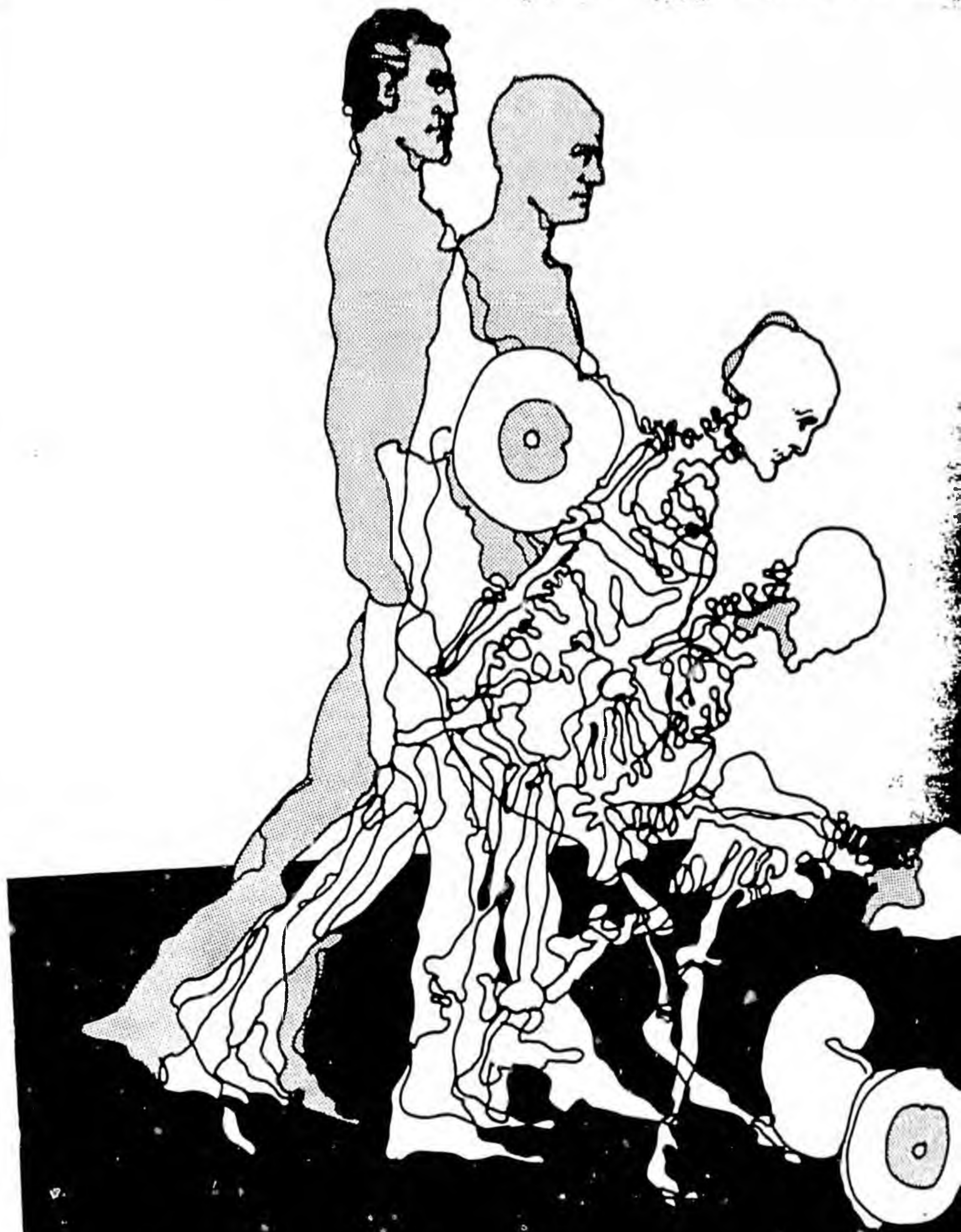
Testing to detect steroids has been used for a number of years in major track-and-field and weight-lifting events. These days some athletes look for ways to cheat the tests, as evidenced in a recent issue of a body-building magazine in which a British lifter bragged of using water-based steroids because, he said, they couldn't be detected after a day or two. Dr. Voy, the U.S. Olympic medical director, scoffed at that idea. "Let them think that's true," he remarked.

Testing is becoming more sophisticated all the time. The magazine *Muscle & Fitness* notes in its August 1987 issue that "Steroid detection today exists in the nanogram range, or one *billionth* of a gram." (Italics in original.) In some cases, the magazine adds, detection can be made of one-quarter part per billion.

While testing may be better, it apparently has not stopped the growth of the drugs' popularity. Experts such as Dr. Voy, Bob Goldman, D.O., author of *Death in the Locker Room*, and FDA's Don Leggett, who handles enforcement efforts against illegal steroid sales, agree that the problem has become more widespread, involving younger children and more groups.

FDA, the U.S. Justice Department, and the Customs Service are cracking down on the steroid black market. Last May, their efforts resulted in a 100-count indictment against 34 people, including a former British Olympic medalist. The indictment charged that counterfeit steroids were manufactured and smug-

(Continued on page 6)



This is the FDA-approved labeling for one anabolic steroid. As such, it is carried on the package insert included with the drug and in the Physicians' Desk Reference. It is important to remember that the adverse reactions cited on this labeling have been noted when the drug is taken in prescribed amounts. But weight lifters and other athletes are known to take such drugs in many times the normally prescribed doses.

WARNINGS

PELIOSIS HEPATIS, A CONDITION IN WHICH LIVER AND SOMETIMES SPLENIC TISSUE IS REPLACED WITH BLOOD-FILLED CYSTS, HAS BEEN REPORTED IN PATIENTS RECEIVING ANDROGENIC ANABOLIC STEROID THERAPY. THESE CYSTS ARE SOMETIMES PRESENT WITH MINIMAL HEPATIC DYSFUNCTION, BUT AT OTHER TIMES THEY HAVE BEEN ASSOCIATED WITH LIVER FAILURE. THEY ARE OFTEN NOT RECOGNIZED UNTIL LIFE-THREATENING LIVER FAILURE OR INTRA-ABDOMINAL HEMORRHAGE DEVELOPS. WITHDRAWAL OF DRUG USUALLY RESULTS IN COMPLETE DISAPPEARANCE OF LESIONS.

LIVER CELL TUMORS ARE ALSO REPORTED. MOST OFTEN THESE TUMORS ARE BENIGN AND ANDROGEN-DEPENDENT, BUT FATAL MALIGNANT TUMORS HAVE BEEN REPORTED. WITHDRAWAL OF DRUG OFTEN RESULTS IN REGRESSION OR CESSATION OF PROGRESSION OF THE TUMOR. HOWEVER, HEPATIC TUMORS ASSOCIATED WITH ANDROGENS OR ANABOLIC STEROIDS ARE MUCH MORE VASCULAR THAN OTHER HEPATIC TUMORS AND MAY BE SILENT UNTIL LIFE-THREATENING INTRA-ABDOMINAL HEMORRHAGE DEVELOPS.

BLOOD LIPID CHANGES THAT ARE KNOWN TO BE ASSOCIATED WITH INCREASED RISK OF ATHEROSCLEROSIS ARE SEEN IN PATIENTS TREATED WITH ANDROGENS AND ANABOLIC STEROIDS. THESE CHANGES INCLUDE DECREASED HIGH-DENSITY LIPOPROTEIN AND SOMETIMES INCREASED LOW-DENSITY LIPOPROTEIN. THE CHANGES MAY BE VERY MARKED AND COULD HAVE A SERIOUS IMPACT ON THE RISK OF ATHEROSCLEROSIS AND CORONARY ARTERY DISEASE.

(Continued from page 3)

eled from a pharmaceutical lab in Tijuana, Mexico. The individuals had a potential of doing $70 million worth of steroid business a year, the U.S. attorney said. (See "For Athletes and Dealers, Black Market Steroids Are Risky Business" in the September 1987 *FDA Consumer*.)

But enforcement efforts aren't going to do it alone, especially with some coaches pushing steroid use on young athletes. "Our children have got to know what steroids really are," says FDA Commissioner Frank E. Young, M.D., Ph.D. "These things aren't a simple shortcut to building muscle. They're complex chemicals that the body doesn't handle easily, particularly in the amounts being taken by many weight lifters and athletes. Anabolic steroids can be dangerous—deadly dangerous." FDA, the Department of Education, and the Drug Enforcement Administration have joined together in sponsoring a public education program on steroids aimed mainly at youngsters.

One problem with trying to educate youth is that young people tend to believe they're immortal. Death, they think, is for old people. Another difficulty is that many of the bad effects of steroids might not show up for a decade or two after the user begins taking the drugs. Cardiovascular problems and liver tumors 10 years down the road aren't going to get much consideration from a high school senior trying to make first-string linebacker. But that young athlete should know that there are dozens of other steroid reactions, and that some, such as acne and uncontrollable "roid rages (aggressive and combative behavior), might cause immediate difficulties. He and the rest of our sports-loving society probably also have to reexamine the fanaticism embedded in the philosophy that "winning isn't everything—it's the only thing."

There's little doubt that steroids can affect human behavior. And withdrawal from steroids can bring on problems that may make an abuser want to go back on the drugs, or take other drugs. Steroids may be considered an ongoing physical necessity for an athlete or body builder when he or she finds, upon withdrawal, that some weight and muscle mass are quickly lost. (However, there is evidence to indicate that the weight loss is really just water, as steroids cause water retention in the body.) Also, depression can result from withdrawal, prompting some former abusers to turn to amphetamines for a lift.

A look at how the body uses testosterone, which anabolic steroids mimic, gives an idea of why steroids are so dangerous. Testosterone is secreted by the testes in mature men in quantities of 2.5 mg to 10 mg daily. (Those who use steroids to build muscle often "stack" them—i.e., take a combination of brands in quantities of 100 mg or more daily.) Testosterone stimulates and maintains many of the sex organs, including the penis, prostate gland, and the semen sacs. The hormone also, as explained in *Remington's Pharmaceutical Sciences*, "stimulates the development of bone, muscle, skin and hair growth and emotional responses to produce the characteristic adult masculine traits."

Women produce little testosterone; thus, their use of steroids leads to the development of masculine characteristics such as balding, facial hair, enlarged clitoris, and deepened voice.

But if testosterone is basically a sex hormone, how can too much of it in the body stunt growth, or result in female breasts for males, or cause cardiovascular problems such as heart disease or stroke? The answer requires an appreciation of that complex machine of ours, the human body. For example, when testosterone levels get too high, the hypothalamus within the brain takes note. It acts to shut down processes in the body involving testosterone. One result is that, in an adolescent, bone growth stops.

The feminization of male breasts is another example of action by the hypothalamus. With excessive testosterone in the blood, that brain unit sends a signal to the pituitary gland to stop producing the hormone gonadotropin, which in turn stops the testicles from producing more testosterone. The process may remain shut down when steroids are discontinued, leading to an imbalance of male and female hormones within the body—and the development of unsightly, enlarged breasts that can even produce milk.

Cardiovascular problems can come about as follows. Steroids cause fluid retention, which in turn can lead to high blood pressure. Steroids also lower high-density lipoproteins (HDLs) in the blood. HDLs help rid the body of cholesterol. Too much cholesterol in the body leads to the formation of plaque on the walls of arteries. Eventually the arteries get clogged, possibly causing stroke or heart attack.

A few anabolic steroid compounds are available by prescription. They come in tablet or injectable form. The listing of these drugs in the *Physicians' Desk Reference* runs less than 10. However, the August 1987 issue of *Muscle & Fitness* magazine listed 22 steroids that are "commonly tested" for. Dr. Voy, in a 1986 speech to the American Pharmaceutical Association, said there are about 80 testosterone derivatives available, including the veterinarian supply.

Records of U.S. sales of anabolic steroids are incomplete. However, such sales are recorded in Norway, where a 42 percent increase was noted in one nine-year period.

The recommended dosages for steroids used for legitimate purposes may range from 1 mg a day to as much as 400 mg intramuscularly (by injection into a muscle) every three to six weeks. These amounts are a far cry from those being "stacked" by some body builders.

There seem to be some indications, in reading the muscle magazines, that the popularity of steroids is wearing thin among body builders. Writing in a recent issue of *Muscleman*, columnist Garry Bartlett said: "Drugs will only ruin your chances of developing a championship physique. My advice to you is to avoid steroids like the plague."

And in *Muscle & Fitness*, Lee (Mr. Olympia) Haney says: "You will ultimately make your best bodybuilding gains if you avoid steroid usage and just concentrate on hard training and good nutrition. But many young and impressionable body builders get on drugs within a couple of weeks or months of starting to pump iron. ... The gains they make are lost very quickly—within a few weeks—once they get off the juice. You're much better off—both in terms of health and ultimate bodybuilding gains—if you train naturally." ■

Roger W. Miller is director of FDA's communications staff.

Among Teen-Agers, Abuse of Steroids May Be Bigger Issue Than Cocaine Use

By Marj Charlier
Staff Reporter of The Wall Street Journal

Aaron Henry wanted to play football in the worst way, but he felt he wasn't big enough or fast enough. So at 13 he started taking anabolic steroids.

Soon it seemed his dream would come true. In his first year in high school, he was a [illegible] guard on a winning St. Charles, Mo., football team. As a sophomore, he had bulked up to 175 pounds.

But he had also become aggressive, so angry that he didn't want to be with others, and he quit playing football. He turned violent, beating his girlfriend, threatening to kill his sister and attempting suicide. Finally, as a senior in high school, he was hospitalized for drug addiction.

Today, Aaron is off steroids, but his football dream is dead. Though he rejoined the team as a high school senior, no college would sign him because of his addiction. "I ended up destroying my dream," he says.

Hundreds of thousands of American teen-agers are taking anabolic steroids, orally or by injection, to play better or to look better. As many as 7% of American high school males have taken or are taking steroids, according to a survey [illegible] by Pennsylvania State University professor Charles Yesalis. In Portland, Ore., [illegible] of high school football players [illegible] Oregon Health Sciences University researchers said they knew where to get the drugs.

"People think the cocaine issue is big," says [illegible], a Philadelphia physical therapist who works with athletes. "It's not as big as anabolic steroids. Among kids, it's epidemic."

In interviews at health clubs around Dallas, teen-agers [illegible] using steroids, but most said they knew [illegible] [illegible]

[illegible] steroids and they were [illegible] says one Dallas high school student [illegible] club.

[illegible] "I'm going to see how big I can get [illegible] before I decide whether to use them," says [illegible]-year-old Jimmy Kaleta of [illegible], who wants to be a professional wrestler. His trainer, a 310-pound pro, says he has taken steroids for seven years and considers the risks overblown.

Steroid use by youngsters can cause problems that last a lifetime: liver tumors, [illegible], blood disorders, sterility. The drugs can shut down bone growth plates. "You may have a kid who's genetically gifted to be 6-foot-3 and 225 pounds, but with steroids you may end up with a 5-foot-[illegible] obese teen on your hands," asserts [illegible] Wheeler, a biochemist at Ross Laboratories in Columbus, Ohio.

But doctors are equally worried about psychological effects. Aggressive behavior is almost universal among anabolic-steroid users. Harvard psychiatrist Harrison Pope has documented cases of full-blown psychosis, [illegible] paranoia and delusions, [illegible] use. One steroid [illegible] Prof. Pope, he [illegible] a friend [illegible] a tree at [illegible]

[illegible] is working [illegible] Dallas, is frightened by her [illegible] behavior shifts when he takes steroids. "One minute he's real nice and the next minute he's nasty," she says. And a student at Stephen F. Austin College in Nacogdoches, Texas, says when he was on steroids he would react to a traffic dispute by running the other car off the road.

Virtually no high-school steroid testing is done. A youngster can take steroids throughout his career and win a college sports scholarship before ever submitting to testing, says Lyle Micheli, sports medicine director at Children's Hospital in Boston. "This is something the medical community is going to have to address."

DOT Chief Lowers Gas-Mileage Standard

INQUIRY

Topic: HOOKED

Scott Driggers, 24, U.S. Olympic men's team handball player, answered some of the questions from the more than 3,000 callers to USA TODAY's hot line on steroids Tuesday. Driggers and Dr. Bud McDougal, an Indianapolis physician and crew chief for one of the U.S. Olympic Committee drug testing teams who also fielded calls, were interviewed by USA TODAY's Steve Woodward.

By Barbara Ries, USA TODAY
Scott Driggers

Kids have to learn about steroid dangers

USA TODAY: Were you surprised by the extent of steroid use as revealed in calls to the USA TODAY hot line?

McDOUGAL: The thing that struck me the most was the large number of young people — 14, 15 and 16-year-olds — who called with really good questions. They were well thought out. These kids knew about steroids, and they're thinking about using them. Fortunately, a lot of them had sense enough to call and ask questions, but it was absolutely amazing to me that so many people so young called.

DRIGGERS: I'd have to agree with that. I spoke with a person who said he'd been on testosterone for six months and now he was completely impotent. He wondered what he could do and how long it would take for that to go away. I found out from Dr. McDougal that it was going to be about a year, and you could just hear the air go out of his balloon. I asked him how old he was, and he was 18, but he said he felt like he was 11 again. It was unbelievable to me that somebody that young was so mature in the use of steroids that he'd already messed himself up.

USA TODAY: Were people calling asking you where they could get steroids for their personal use?

McDOUGAL: I had four or five calls like that. "My doctor won't give them to me. Can you get me prescriptions, or where can I get them? How much do they cost?" In fact, that was probably an unrevised and unexpected but very important part of this survey. There are a certain percentage of people who looked at this as a means of informing them about how to get their hands on steroids.

DRIGGERS: I had a few of those phone calls myself.

USA TODAY: What was the most important message to get out to the public about the use of steroids?

McDOUGAL: We had the opportunity to stress the risky side effects of steroids. People were calling and asking all different kinds of questions, but it basically boiled down in most cases to: "Is it all right to take it, or how can we make it all right to take it?" And we had the opportunity there to point out these severe side effects, ranging all the way from a little hair loss to liver cancer to mental aberrations and death.

USA TODAY: Were you surprised by the ignorance of steroid users about the negative side effects?

McDOUGAL: A lot of them didn't know that the problem is not just with the particular brand that they're taking. For example, they'd call to say, "Well, I'm taking Brand X and I know it's bad, but which one can I take?" And they didn't have a sense that it's steroids in general that are bad for them.

DRIGGERS: I ran into a few situations where a couple wives or girlfriends would actually call up on behalf of somebody else and say, "What are the side effects?" and then say, "I've seen those in him, but he doesn't see those things in himself, and everybody else does." I think people who called were at least willing to face the fact that there are side effects and that they might possibly be affecting themselves.

USA TODAY: What were some of the most frequently asked questions?

DRIGGERS: I got a lot of questions about "If I just take a little bit, is that OK? And if I have a doctor give me just a little bit, is that all right?"

McDOUGAL: I had a lot of those, too. "Is it all right to just take a little bit, or can I just take it for three weeks and stop?" A lot of them asked that. But this one fellow said, "I don't want you to tell me not to take them. I'm going to take them. Just tell me how to take them safely."

USA TODAY: Do steroids have addictive qualities similar to cocaine, for example?

McDOUGAL: I don't think the mechanics of addiction are the same for steroids as they are for cocaine. What can happen is that you look in the mirror and you like the way you look, so you'll do anything to stay that way, to keep looking like that. It takes more and more and more steroids to stay that way, and pretty soon you're beyond the limits and you don't stay that way anyway, and that is an addictive type process.

USA TODAY: So from the calls, it was firmly established that the steroid problem is much bigger than use in world-class competition?

McDOUGAL: That's one thing that this hot line brought to the public. There were over 3,000 calls. That's evidence that there are people other than world-class athletes who are using steroids. An awful lot of them.

DRIGGERS: How many world-class athletes are there in the first place? I've talked to people 25 to 30 years old who are working in the body-building gyms. Invariably, every one of them told me that everybody is doing it — "Everyone in my circle of friends and where I live is doing steroids." And most of them would say they don't see any specific side effects except the irritability. And I said, "Well, that's the point. You don't see it. You don't see people dying of AIDS on the street, either."

USA TODAY: Did the national obsession in recent years with physical well-being and health pave the way for steroids use?

McDOUGAL: Probably so. It was a very important movement that started in the '70s. People started jogging and doing aerobics. They're watching more carefully what they're eating, lowering their cholesterol levels, and people are very much more health-conscious now than they were when I finished medical school 23 years ago. However, you have a certain percentage of people who always feel they have to be that much better than most of the people around them, and all of us are more health-conscious and are getting a little bit better than most of us were 20 years ago, so that percentage of people has to do something to get just a little bit better yet. And it probably has had some influence.

USA TODAY: In a situation like the Olympics, do people suspect steroid use in all sports or do they limit speculation to the sports that have already been affected by the controversy?

DRIGGERS: I'm sure that sports besides the ones that are getting all the attention are being suspected. In our case, with handball, it's not as prevalent. It's more similar to basketball, where steroids would be an advantage, but there are so many other things that you can concentrate on to be better that steroids are not in the forefront, like they would be for weightlifting or track. People associate it with the Olympics and amateur sports. So when someone tests positive in a certain sport, it doesn't relate only to that sport, it relates to all amateur athletics in general.

McDOUGAL: That's very true. A positive test is a reflection on all athletes, not just the power performers, or the runners, whatever.

USA TODAY: Is the suspicion about steroid use aimed at our country more so than others?

DRIGGERS: It's not only so much for one country anymore, either. You used to be able to say the East Germans, then people would label them or they might label the Russians. But now, since the Ben Johnson episode, people say track athletes, then they'll say the U.S. athletes in general. So a positive test for somebody from another country leads many people to think, "OK, are the U.S. athletes doing it as well?" It's not bounded by the country, specific team or sport.

USA TODAY: Who would represent the largest group, those athletes who want to use steroids or those who want to rid sports of them?

DRIGGERS: I would break it down into two categories. There are the elite athletes, who say they want it clean. They want more spontaneous drug testing throughout the year. Right now, it's relatively easy to bypass times of the year when you're going to be tested, in certain competitions. High school athletes look at it like, "OK, we all have to catch up with the other football players, or the other weight lifters or amateur body builders." They have a different attitude. High school and younger students are more or less saying, "The only way to beat it is to join it." That's the impression I am getting.

USA TODAY: Have education efforts been successful in warning against the dangers of steroid use?

DRIGGERS: That 18-year-old I mentioned earlier, one of the last things he said was, "Why didn't anybody tell me this in high school? None of the guys who were telling me to take this told me about this." He said, "I wasn't ready to make that decision, and I had no one to turn to and no one was informing me." I don't think he would have gone out to seek out the information, but it's something that obviously now he regrets not hearing when he was in school. I asked him, "If you were on steroids, and you were impotent, would you tell somebody else?"

USA TODAY: How did he answer that?

DRIGGERS: High school kids aren't going to admit to things like that. And it wasn't the problem when he was on the drug, because by then, he'd boosted his testosterone level. But as soon as he quit, his own body had ceased producing it, and then he didn't find out till he hurt his knee and he had to quit football. He didn't know all that time he was taking it that was going to happen.

USA TODAY: So a big problem, then, is education?

McDOUGAL: I think so. I had calls from everyplace, all over the country. So this information is getting out.

"You look in the mirror and like the way you look so you'll do anything to stay that way. It takes more and more steroids to stay that way, and pretty soon you're beyond the limits and you don't stay that way anyway."

-Dr. Bud McDougal

2
Description of Anabolic Steroid Compounds

Introduction

Anabolic steroids are artificial synthetic derivatives of the natural male steroid hormone, testosterone. They are synthesized in order to retain and magnify some of the effects testosterone produces on the body, and to alleviate or reduce some of the other effects.

Anabolic steroid hormones have the basic four ring structure as depicted in Figure 1. Synthetic steroids differ from the natural androgenic steroid hormone testosterone by alterations in one or more of the positions of the basic steroid ring structure. These alterations include addition of methyl, hydroxyl, alkyl, esters, or benzoyl groups at one or more of the sites along the basic structure. Common sites for these changes are also shown in Figure 1.

Facts Regarding Testosterone

Testosterone is the primarily male steroid hormone end-product of the testes of the male. A much smaller amount of testosterone is also produced by the adrenal glands. In women, the primary source of testosterone is the adrenal glands; however, the daily amount produced by a woman is normally very low when compared to a man.

Testosterone concentrations in the blood are controlled by a negative feedback system called the hypothalamus-pituitary-testes axis, which is illustrated in Figure 2. There is a normal small variation in the testosterone serum concentration throughout the day, which allows a fine tuning effect of the negative feedback system. Even among normal males, there are some individual differences in the daily quantity of testosterone produced.

Testosterone is synthesized by the interstitial Leydig cells of the

Figure 1. Basic Structure of Testosterone and Sites Commonly Altered to Produce Anabolic Steroids.

hypothalamus
releasing hormones
pituitary gland
gonadotropins
testes
testosterone
androgenic functions anabolic functions

Figure 2. Basic Conception of the Hypothalamus-Pituitary-Testes Axis.

testes primarily under control of the gonadotropins secreted by the pituitary gland. Normal adult male testosterone secretion rates range from 5 to 10 milligrams a day, with some normal variation throughout the day. After testicular secretion, testosterone is transported to the target organs and specific receptor sites in both a free form and a protein-bound form. Normally, only about 1% of the total blood testosterone is in the free form, which is the active form. The free form of testosterone is in an equilibrium situation with the protein-bound form so that the bound form serves as a stored reserve of the hormone, readily available if needed by the tissues.

The free testosterone has a relatively short half-life in the body, and most of the circulating free testosterone is converted into water-soluble compounds called 17-ketosteroids. This conversion primarily takes place in the liver. Once the conversion to the inactive 17-ketosteroid compounds takes place they are quickly excreted from the body through the kidneys into the urine. The concentration of these 17-ketosteroids are readily measured in the urine if desired. Normally, almost negligable amounts of the 17-ketosteroids are excreted through the skin, and a low concentration may be identified in the feces.

Several bodily functions are under either direct or indirect control of testosterone. Basically, testosterone has a stimulation effect on skeletal muscle, some visceral organs, the hemoglobin concentration and the red blood cell number and mass. Testosterone also affects characteristics associated with the secondary sexual organs, including the pattern, distribution and amount of facial, body and pubic hair,

Table I. BASIC COMPARISON OF THE ANDROGENIC AND ANABOLIC FUNCTIONS OF TESTOSTERONE

Androgenic Functions	*Anabolic Functions*
initial growth of the penis	increased skeletal muscle mass
growth and development of the seminal vesicles	increased hemoglobin concentration
growth and development of the prostate gland	increased red blood cell mass
increased density of body hair	decreased percentage of body fat
development and pattern of pubic hair	control of the distribution of body fat
increased density and distribution of facial hair	increased calcium deposition in the bones
deepening tone of the voice	increased total body nitrogen retention
increased oil production of the sebaceous glands	increased retention of several electrolytes
increased libido and awakening of sexual interest	

the deepening tone of the voice, the percentage and distribution of fat and several muscular characteristics.

More specifically, the bodily effects of testosterone are artificially divided into two basic classifications: androgenic functions and anabolic functions. However, the total delineation and separation of these two classifications has never been successful. The basic androgenic and anabolic characteristics controlled or produced by testosterone are contained in Table I.

When the testosterone concentration in the blood is low, then the hypothalamus releases its hormones and the stimulation of the pituitary gland causes a release of the gonadotropins (see Figure 2). The gonadotropins then stimulate the Leydig cells of the testes to produce testosterone. When the testosterone concentration is normal to high, the hypothalamus is not stimulated and thus the total axis is depressed and no additional testosterone is produced.

AMERICAN COLLEGE OF SPORTS MEDICINE POSITION STAND ON THE USE OF ANABOLIC-ANDROGENIC STEROIDS IN SPORTS*

Based on a comprehensive literature survey and a careful analysis of the claims concerning the ergogenic effects and the adverse effects of anabolic-androgenic steroids, it is the position of the American College of Sports Medicine that:

1. Anabolic-androgenic steroids in the presence of an adequate diet can contribute to increases in body weight, often in the lean mass compartment.

2. The gains in muscular strength achieved through high-intensity exercise and proper diet can be increased by the use of anabolic-androgenic steroids in some individuals.

3. Anabolic-androgenic steroids do not increase aerobic power or capacity for muscular exercise.

4. Anabolic-androgenic steroids have been associated with adverse effects on the liver, cardiovascular system, reproductive system, and psychological status in therapeutic trials and in limited research on athletes. Until further research is completed, the potential hazards of the use of the anabolic-androgenic steroids in athletes must include those found in therapeutic trials.

5. The use of anabolic-androgenic steroids by athletes is contrary to the rules and ethical principles of athletic competition as set forth by many of the sports governing bodies. The American College of Sports Medicine supports these ethical principles and deplores the use of anabolic-androgenic steroids by athletes.

This document is a revision of the 1977 position stand of the American College of Sports Medicine concerning anabolic-androgenic steroids.[illegible]

BACKGROUND

In 1935 the long-suspected positive effect of androgens on protein anabolism was documented.[illegible] Subsequently, this effect was confirmed,[illegible] and the development of 19-nortestosterone heralded the synthesis of

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Taken from "Drugs + Performance in Sports" Richard H. Strauss, M.D., Editor. © 1987 W.B. Saunders Company.

steroids that have greater anabolic properties than natural testosterone but less of its virilizing effect.[illegible] The use of androgenic steroids by athletes began in the early 1950s[illegible] and has increased through the years,[illegible] despite warnings about potential adverse reactions[illegible] and the banning of these substances by sports governing bodies.

ANABOLIC-ANDROGENIC STEROIDS, BODY COMPOSITION AND ATHLETIC PERFORMANCE

Body Composition. Animal studies investigating the effect of anabolic-androgenic steroids on body composition have shown increases in lean body mass, nitrogen retention and muscle growth in castrated males[illegible] and normal females.[illegible] The effects of anabolic-androgenic steroids on the body weights of normal, untrained, male animals,[illegible] treadmill-trained[illegible] or isometrically trained rats,[illegible] or strength-trained monkeys[illegible] have been minimal to absent, however, the effects of steroids on animals undergoing heavy resistance training have not been adequately studied. Human males who are deficient in natural androgens by castration or other causes have shown significant increases in nitrogen retention and muscular development with anabolic-androgenic steroid therapy.[illegible] Human males and females involved in experimental[illegible] and therapeutic trials of anabolic steroids[illegible] have shown increases in body weight.

The majority of the strength-training studies in which body weight was reported showed greater increases in weight under steroid treatment than under placebo.[illegible] Other training studies have reported no significant changes in body weight.[illegible] The weight gained was determined to be lean body mass in three studies that made this determination with hydrostatic weighing techniques.[illegible] Four other studies found no significant differences in lean body mass between steroid and placebo treatments,[illegible] but in two of those the mean differences favored the steroid treatment.[illegible] The extent to which increased water retention accounts for steroid-induced changes in body composition is controversial[illegible] and has yet to be resolved.

In summary, anabolic-androgenic steroids can contribute to an increase in body weight in the lean mass compartment of the body. The amount of weight gained in the training studies has been small but statistically significant.

Muscular Strength. Strength is an important factor in many athletic events. The literature concerning the efficacy of anabolic steroids for promoting strength development is controversial. Many factors contribute to the development of strength, including heredity, intensity of training, diet, and the status of the psyche.[illegible] It is very difficult to control all of these factors in an experimental design. The additional variable of dosage is included when drug research is undertaken. Some athletes claim that doses greater than therapeutic are necessary for strength gains[illegible] even though positive results have been reported using therapeutic (low-dose) regimens.[illegible] Double-blind studies using anabolic-androgenic steroids are also difficult to conduct because of the physical and/or psychological effects of the drug that, for example, allowed 100% of the participants in one "double blind" study to correctly identify the steroid phase of the experiment.[illegible] The placebo effect has been shown to be a factor in studies of anabolic-androgenic steroids as in all drug studies.[illegible]

In animal studies, the combination of anabolic-androgenic steroids and overload training has not produced larger gains in force production than training alone.[illegible] However, steroid-induced gains in strength have been reported in experienced[illegible] and inexperienced weight trainers[illegible] with[illegible] and without dietary control or supplemental protein.[illegible] In contrast, no positive effect of steroids on gains in strength over those produced by training alone were reported in other studies involving experienced[illegible] and inexperienced weight trainers[illegible] with[illegible] and without dietary control or supplemental protein.[illegible] The studies that reported no changes in strength with anabolic-androgenic steroids have been criticized[illegible] for the use of inexperienced weight trainers, lack of dietary control,, low-intensity training,[illegible] and nonspecific testing of strength.[illegible] The studies that have shown strength gains with the use of anabolic-androgenic steroids have been criticized[illegible] for inadequate numbers of subjects,[illegible] improper statistical designs, inadequate execution, and the unsatisfactory reporting of experimental results.

There have been no studies of the effects of the massive doses of steroids used by some athletes over periods of several years. Similarly, there have been no studies of the use of anabolic-androgenic steroids and training in women or children. Theoretically, anabolic and androgenic effects would be greater in women and children because they have naturally lower levels of androgens than men.

Three proposed mechanisms for the actions of the anabolic-androgenic steroids for increases in muscle strength are:

1. Increase in protein synthesis in the muscle as a direct action of the anabolic androgenic steroid.[illegible]
2. Blocking of the catabolic effect of glucocorticoids after exercise by increasing the amount of anabolic-androgenic hormone available.[illegible]
3. Steroid-induced enhancement of aggressive behavior that promotes a greater quantity and quality of weight training.[illegible]

In spite of the controversial and sometimes contradictory results of the studies in this area, it can be concluded that the use of anabolic-androgenic steroids, especially by experienced weight trainers, can often increase strength gains beyond those seen with training and diet alone. This positive effect on strength is usually small and obviously is not exhibited by all individuals. The explanation for this variability in steroid effects is unclear. When small increments in strength occur, they can be important in athletic competition.

Aerobic Capacity. The effect of anabolic-androgenic steroids on aerobic capacity has also been questioned. The potential of these drugs

to increase total blood volume and hemoglobin[illegible] might suggest a positive effect of steroids on aerobic capacity. However, only three studies indicated positive effects,[illegible] and there has been no substantiation of these results in subsequent studies.[illegible] Thus, the majority of evidence shows no positive effect of anabolic-androgenic steroids on aerobic capacity over aerobic training alone.

ADVERSE EFFECTS

Anabolic-androgenic steroids have been associated with many undesirable or adverse effects in laboratory studies and therapeutic trials. The effects of major concern are those on the liver, cardiovascular, and reproductive systems, and on the psychological status of individuals who are using the anabolic-androgenic steroids.

Adverse Effects on the Liver. Impaired excretory function of the liver, resulting in jaundice, has been associated with anabolic-androgenic steroids in a number of therapeutic trials.[illegible] The possible cause-and-effect nature of this association is strengthened by the observation of jaundice remission after discontinuance of the drug.[illegible] In studies of athletes using anabolic-androgenic steroids ([illegible] athletes tested),[illegible] no evidence of cholestasis has been found.

Structural changes in the liver following anabolic steroid treatment have been found in animals[illegible] and in humans.[illegible] Conclusions concerning the clinical significance of these changes on a short- or long-term basis have not been drawn. Investigations in athletes for these changes have not been performed, but there is no reason to believe that the athlete using anabolic-androgenic steroids is immune from these effects of the drugs.

The most serious liver complications associated with anabolic-androgenic steroids are peliosis hepatis (blood filled cysts in the liver of unknown etiology) and liver tumors. Cases of peliosis hepatis have been reported in individuals treated with anabolic androgenic steroids for various conditions.[illegible] Rupture of the cysts or liver failure resulting from the condition was fatal in some individuals.[illegible] In other case reports the condition was an incidental finding at autopsy.[illegible] The possible cause-and-effect nature of the association between peliosis hepatis and the use of anabolic-androgenic steroids is strengthened by the observation of improvement in the condition after discontinuance of drug therapy in some cases.[illegible] There are no reported cases of this condition in athletes using anabolic-androgenic steroids, but investigations specific for this disorder have not been performed in athletes.

Liver tumors have been associated with the use of anabolic-androgenic steroids in individuals receiving these drugs as a part of their treatment regimen.[illegible] These tumors are generally benign,[illegible] but there have been malignant lesions associated with individuals using these drugs.[illegible] The possible cause-and-effect nature of this association between the use of the drug and tumor development is

strengthened by a report of tumor regression after cessation of drug treatment.[illegible] The 17-alpha-alkylated compounds are the specific family of anabolic steroids indicted in the development of liver tumors.[illegible] There is one reported case of a 26-year old male body builder who died of liver cancer after having abused a variety of anabolic steroids for at least four years.[illegible] The testing necessary for discovery of these tumors is not commonly performed, and it is possible that other tumors associated with steroid use by athletes have gone undetected.

Blood tests of liver function have been reported to be unchanged with steroid use in some training studies[illegible] and abnormal in other training studies[illegible] and in tests performed on athletes known to be using anabolic-androgenic steroids.[illegible] However, the lesions of peliosis hepatis and liver tumors do not always result in blood test abnormalities,[illegible] and some authors state that liver radioisotope scans, ultrasound, or computed tomography scans are needed for diagnosis.[illegible]

In summary, liver function tests have been shown to be adversely affected by anabolic-androgenic steroids, especially the 17-alpha-alkylated compounds. The short- and long-term consequences of these changes, though potentially hazardous, have yet to be reported in athletes using these drugs.

Adverse Effects on the Cardiovascular System. The steroid-induced changes that may affect the development of cardiovascular disease include hyperinsulinism and altered glucose tolerance,[111] decreased high-density lipoprotein cholesterol levels,[illegible] and elevated blood pressure.[illegible] These effects are variable for different individuals in various clinical situations. Triglycerides are lowered by anabolic-androgenic steroids in certain individuals[illegible] and are increased in others.[illegible] Histological examinations of myofibrils and mitochondria from cardiac tissue obtained from laboratory animals have shown that administration of anabolic steroids leads to pathological alterations in those structures.[illegible] The cardiovascular effects of the anabolic-androgenic steroids, though potentially hazardous, need further research before any conclusions can be made.

Adverse Effects on the Male Reproductive System. The effects of the anabolic-androgenic steroids on the male reproductive system are oligospermia (small number of sperm) and azoospermia (lack of sperm in the semen), decreased testicular size, abnormal appearance of testicular biopsy material, and reductions in testosterone and gonadotropic hormones. These effects have been shown in training studies,[illegible] studies of normal volunteers,[illegible] therapeutic trials,[illegible] and studies of athletes who were using anabolic-androgenic steroids.[illegible] In view of the changes shown in the pituitary-gonadal axis, the dysfunction accounting for these abnormalities is believed to be steroid-induced suppression of gonadotrophin production.[illegible] The changes in these hormones are ordinarily reversible after cessation of drug treatment, but the long-term effects of altering the hypothalamic-pituitary-gonadal axis remain unknown. However, there is a report of residual abnormalities in testicular morphology of healthy men 6 months after discontinuing steroid use.[illegible] It has been

reported that the metabolism of androgens to estrogenic compounds may lead to gynecomastia in males.[23, 58, 96, 112]

Adverse Effects on the Female Reproductive System. The effects of androgenic steroids on the female reproductive system include reduction in circulating levels of luteinizing hormone, follicle-stimulating hormone, estrogens, and progesterone; inhibition of folliculogenesis and ovulation; and menstrual cycle changes including prolongation of the follicular phase, shortening of the luteal phase, and amenorrhea.[20, 81, 91]

Adverse Effects on Psychological Status. In both sexes, psychological effects of anabolic-androgenic steroids include increases or decreases in libido, mood swings, and aggressive behavior,[illegible] which is related to plasma testosterone levels.[23, 88] Administration of steroids causes changes in the electroencephalogram similar to those seen with psycho-stimulant drugs.[47, 48] The possible ramifications of uncontrollably aggressive and possible hostile behavior should be considered prior to the use of anabolic-androgenic steroids.

Other Adverse Effects. Other side effects associated with the anabolic-androgenic steroids include: ataxia;[2] premature epiphysial closure in youths;[33, 58, 84, 109, 110] virilization in youths and women, including hirsutism,[45] clitoromegaly,[81, 112] and irreversible deepening of the voice;[illegible] acne; temporal hair recession; and alopecia.[illegible] These adverse reactions can occur with the use of anabolic-androgenic steroids and are believed to be dependent on the type of steroid, dosage and duration of drug use.[illegible] There is no method for predicting which individuals are more likely to develop these adverse effects, some of which are potentially hazardous.

THE ETHICAL ISSUE

Equitable competition and fair play are the foundation of athletic competition. If competition is to remain on this foundation, rules are necessary. The International Olympic Committee (IOC) has defined "doping" as "the administration of or the use of a competing athlete of any substance foreign to the body or of any physiological substance taken in abnormal quantity or taken by an abnormal route of entry into the body, with the sole intention of increasing in an artificial and unfair manner his performance in competition." Accordingly, the medically unjustified use of anabolic steroids with the intention of gaining an athletic advantage is clearly unethical. Anabolic-androgenic steroids are listed as banned substances by the IOC in accordance with the rules against doping. The American College of Sports Medicine supports the position that the eradication of anabolic-androgenic steroid use by athletes is in the best interest of sport and endorses the development of effective procedures for drug detection and of policies that exclude from competition those athletes who refuse to abide by the rules.

The "win at all cost" attitude that has pervaded society places the athlete in a precarious situation. Testimonial evidence suggests that some athletes would risk serious harm and even death if they could obtain a

drug that would ensure their winning an Olympic gold medal. However, the use of anabolic-androgenic steroids by athletes is contrary to the ethical principles of athletic competition and is deplored.

REFERENCES

1. Aakvaag, A., O. Bentdal, K. Quigstad, P. Walstad, H. Ronningen, and F. Fonnum. Testosterone and testosterone binding globulin (TeBG) in young men during prolonged stress. Int. J. Androl. 1:22-31, 1978.
2. Agrawal, B. L. Ataxia caused by fluoxymesterone therapy in breast cancer. Arch. Intern. Med. 141:953-959, 1981.
3. Albrecht, H. and E. Albrecht. Ergometric, rheographic, reflexographic and electrographic tests at altitude and effects of drugs on human physical performance. Fed. Proc. 28:1262-1267, 1969.
4. American College of Sports Medicine. Position statement on the use and abuse of anabolic-androgenic steroids in sports. Med. Sci. Sports 9(4):xi-xiii, 1977.
5. Appell, H. J., B. Heller-Umpfenbach, M. Feraudi, and H. Weicker. Ultrastructural and morphometric investigations on the effects of training and administration of anabolic steroids on the myocardium of guinea pigs. Int. J. Sports Med. 4:268-274, 1983.
6. Ariel, G. and W. Saville. Anabolic steroids: the physiological effects of placebos. Med. Sci. Sports 4:124-126, 1972.
7. Arnold, G. L. and M. M. Kaplan. Peliosis hepatis due to oxymetholone—a clinically benign disorder. Am. J. Gastroenterol. 71:213-216, 1979.
8. Asano, A., H. Wakasa, S. Kaise, T. Nishimaki, and R. Kasukawa. Peliosis hepatis. Report on two autopsy cases with a review of literature. Acta Pathol. Jpn. 32:861-877, 1982.
9. Bagheri, S. and J. Boyer. Peliosis hepatis associated with androgenic-anabolic steroid therapy—a severe form of hepatic injury. Ann. Intern. Med. 81:610-618, 1974.
10. Bank, J. I., D. Lykkebo, and I. Hagerstrand. Peliosis hepatis in a child. Acta Ped. Scand. 67:105-107, 1978.
11. Behrendt, H. Effect of anabolic steroid on rat heart muscle cells. I. Intermediate filaments. Cell Tissue Res. 180:305-315, 1977.
12. Behrendt, H. and H. Boffin. Myocardial cell lesions caused by anabolic hormone. Cell Tissue Res. 181:423-426, 1977.
13. Benjamin, D. C. and B. Shunk. A fatal case of peliosis of the liver and spleen. Am. J. Dis. Child. 132:207-208, 1978.
14. Brooks, R. V. Anabolic steroids and athletes. Phys. Sportsmed. 8(3):161-163, 1980.
15. Buchwald, D., S. Argyres, R. E. Easterling, et al. Effects of Nandrolone Decanoate on the anemia of chronic hemodialysis patients. Nephron 18:232-238, 1977.
16. Carter, C. H. The anabolic steroid, Stanozolol, its evaluation in debilitated children. Clin. Pediatr. 4:671-680, 1965.
17. Casner, S. W., R. G. Early, and B. R. Carlson. Anabolic steroid effects on body composition in normal young men. J. Sports Med. Phys. Fitness 11:98-103, 1971.
18. Chan, L., S. K., T. Chung, R. S. Morrison, C. Myers, and M. S. Greenberg. Hypertriglyceridemia in hemodialysis patients during oral dromostanolone therapy for anemia. Am. J. Clin. Nutr. 27:901-904, 1974.
19. Clerico, A., M. Ferdeghini, C. Palombo, et al. Effects of anabolic treatment on the serum levels of gonadotropins, testosterone, prolactin, thyroid hormones and myoglobin of male athletes under physical training. J. Nuclear Med. Allied Sci. 25:79-88, 1981.
20. Cox, D. W., W. L. Heinrichs, C. A. Paulsen, et al. Perturbations of the human menstrual cycle by oxymetholone. Am. J. Obstet. Gynecol. 121:121-126, 1975.
21. Crist, D. M., P. J. Stackpole, and G. T. Peake. Effects of androgenic-anabolic steroids on neuromuscular power and body composition. J. Appl. Physiol. 54:366-370, 1983.

UNDERGROUND STEROID HANDBOOK

FOR MEN AND WOMEN

Distributed out of Canada (Mail order only) All correspondence
sent to PO box in Canada. Written by self-proclaimed professionals.
The rest of this handbook describes drugs, dosages and side effects
... medical doctor

HOW AND WHERE TO GET THEM

THIS KILLS ME!

Well, it would be nice to get them from a doctor. A knowledgable, kind, honest, humanitarian-type doctor who would give you a fair price on injectables, let you take them home with you so you could save time and gasoline by injecting them yourself, and would write you refillable prescriptions for your orals. He would be concerned with the progress you are making while on the drugs. We happen to go to such a doctor. Unfortunately, this is the exception. Most doctors have formed an opinion on steroids, which means that they don't like them. Lucky for us though there is a large number of what we call the 'businessman doctor'. These guys are out to hustle a buck.

We'd recommend that you first look for the young ones just out of medical school. Young doctors have a different morality than the older ones. Many do the standard recreational drugs and are open minded about steroids. Also, doctors just starting up a practice usually need instant money. Steroid users are regular, cash paying customers who take up little of a doctor's time. This is financially attractive to him as it frees him to make more money with other patients. Some of the most successful doctors on the West Coast who specialize in steroids have between 1000 to 1500 steroid patients. As you can imagine, this is a very lucrative sideline. You should ask the doctor if he has an interest in building up a steroid clientele as you should be able to pitch him a lot of business. Don't be indiscriminate though; don't send him a deluge of crazies, animals and loudmouths. We've seen that happen before, and what results is suddenly the doctor will not see anyone for steroids. So be careful; don't spoil it for yourself.

Your second choice is the quack doctor. Ask around your area about doctors who routinely and indiscriminately prescribe diet pills, quaaludes, valiums, etc. He is an excellent candidate for a steroid clientele. Call him and ask him if he is interested in helping you as a bodybuilder through steroid therapy. Of course, when you are talking to a doctor (or his receptionist) on the phone, you are going to be nervous. We were when we were young and inexperienced. Do what telephone salespeople do, write out your 'pitch' on paper and practice reading it aloud. When you call up, have that pitch there in front of you. For example: "Hello, I'd like to be a new patient. Should I talk to you or the doctor? (someone will ask what is wrong or why you want to come in) Well, I'm a pretty serious bodybuilder (for example) and think that the doctor would be receptive to this kind of therapy." Usually, the nurse or receptionist will be fairly honest with you as she knows what the doctor likes to do and what he doesn't. She may have to have you call back later so that she can ask the doctor. Don't get panicky, call back. If you get a no, don't get discouraged, and don't be afraid to ask the person on the line for a recommendation of a doctor who does prescribe steroids. All doctors throw each other business. Keep calling until you get a yes. When you get one, discuss prices.

Reading this book will give you an idea of what you want. Tell him what you want, especially the amounts. Many doctors will, for example, agree to give you an injection of 50mgs of Deca every week, which is too low a dosage to do you any good (unless you are a special case; most people, even women are not), or a doctor will write you a non-refillable prescription so that you have to pay for an office visit to get another one. This is a very common practice. So barter. Try to get five refills on that prescription. If you don't get satisfaction, try someone else. A lot of times a doctor will have you come in and talk with him about it all. You'll have to use your own judgment here. A lot of doctors will sucker you in and have you pay an office visit and test fees only to say,"Oh, two tablets of Dianabol should suffice." Don't waste your time, you've already wasted your money. If you walk on this one, remember to bring along those blood test results with you as another doctor can use them. Just don't be intimidated by doctors. You are paying him, not vice-versa.

Another thing about quack doctors. Don't really trust them with your health. Massive amounts of steroids are effective for performance but could make you slightly unhealthy (especially if you are physically sub-normal). Most all doctors will have you sign a release form before you start taking steroids. This form protects the doctors from lawsuits. Don't be afraid to sign this form. If you don't, you'll be given piddly small amounts of steroids that won't harm you nor help you either.

There are very few doctors that know correct dosages to prescribe. They'll stick their noses into the Physician's Desk Reference and see what the manufacturer of the drug recommends giving to sick and ailing people. No manufacturer has ever recommended dosages for healthy athletes. You could give your doctor this book. A lot of information here is obtained from the top steroid doctors in the country.

If you are lucky enough to have a doctor in your area specializing in sports medicine, he's usually willing to prescribe steroids to you. His recommended dosages will depend on how up-to-date and practical he is on his research. A lot of doctors just don't read enough or keep track of the results of the dosage to strength/weight ratios. The amounts also can depend on whether the doctor likes you or not. Doctors can play favorites for a lot of reasons. If he doesn't like you, we'll about guarantee that your dosages will be low and the prices high. It's happened to us a few times. Doctors are businessmen but don't automatically treat them like shysters.

Sports doctors who are well known and readily accessible for steroid therapy sometimes will have high prices. That is why we listed them last in preference. We don't term them as a best buy. However, if your tests show you to be sub-normal in steroid stress areas, he may be the best man for the job.

So, what if you can't find a doctor or the doctor you find has high prices or won't give you the dosages you want? We can't tell you to buy from an illegal source, but that is just what many athletes do. This is what we have done in the past. Sometimes these sources have the best prices.

You could call him a 'gym pusher', a shady name, but these people are usually honest (relatively) and straightforward. What they do is technically illegal and so is buying the drugs from them. There are worse drugs you could use than steroids. Usually, Black Market prices are higher than drugstore/doctor prices. This is because the seller assumes that you are saving office visit and blood test costs and his higher prices balance this out. He's right. What can we say? Legally, so we won't be sued, all we can state is that we have bought from these sources in the past and will continue to do so if there are good buys available or if the drug is just not legally available in America. We have found these sources by asking around in the gym (we aren't the

bashful type; how else would we ha.e found out?). When we were younger and nervous, we would call him up on the phone because we were more relaxed that way than face to face. We always kept a list of what he said he had and the prices of them. We had our own Physician's Desk Reference (which has color photos of the tablets) so we knew what we were getting. If it was some weird product packaged poorly, we usually didn't buy it. We learned not to waste the seller's time by asking lots of questions about what works and how much to take. Most sellers don't want to tell you this as everybody asks the same questions year after year. Sometimes we come across someone selling some new mystery product from Mars (or France, the same place) that may just be cold cream with Ben Gay in it. We never dismiss him completely as some day he just may have the best prices on something reputable. A lot of times these guys will sell you something by saying it works the best just because the stuff really isn't and is not moving. We've been suckered a few times, mostly with Winstrol and Testosterone Propionate. No hard feelings, who else is going to buy the stuff except dumb people like us, and we deserved it. Really, we've had a doctor prescribe us Halotestin because he knew the pharmacy didn't have Dianabol. So the pharmacist was able to unload that dog on us. You don't have to be a criminal to be unscrupulous.

We've known a lot of people who got steroids form veterinarians specializing in horse and dog racing. They just walked up to them at the track and made a business proposal. We'll admit that takes a lot c nerv:. Some vets have suitcases full of injectables with them all the time at the track.

A lot of Europea.. bodybuilders have financed their vacations to Southern California by bringing in non-USA approved drugs and selling them. Also, we have bought drugs in Mexico (Primobolin Depot, Winstrol and Dianabol) and smuggled them in over the border. That makes us very bad boys in the eyes of US Customs as this is an illegal thing to do (but a real easy one too). Mexico used to have lower prices on the stuff, but this is not true now. South America, however, has dirt cheap prices on Primobolan, usually about $.50 a vial.

We've known a few people who used a lot of steroids for free during clinical research projects at medical schools. We've put our names in at a few schools in our area volunteering to be the test subjects as the blood and gland monitoring during the research can point out how much steroid an individual takes with what results.

To finish out this section, we'll admit that we've not been too direct in some areas of how to find the drugs. Legally, we cannot advocate you to engage in criminal acts. Buying from anyone but a pharmacist or doctor is illegal, and there is a danger here. Many bodybuilders have taken just massive dosages of steroids bought through illegal means. Most are still alive and healthy today (and bigger for it) but some have run into trouble because they did not have the smarts to monitor body disfunctions. These are the people you hear about and have given steroids their bad reputations. Just don't be stupid. Find out what your body can handle.

with AS 11.71.120(a), is different from its corresponding classification under federal law, the requirements of (a) and (b) of this section are determined by the classification of the substance under federal law. (§ 4 ch 45 SLA 1982)

Cross references. — For penalty for failure to make, keep, or furnish order forms required under this chapter, see AS 11.71.050(a)(4).

Editor's notes. — AS 11.71.120(a), referred to in subsection (c), does not authorize adoption of regulations classifying controlled substances. AS 11.71.120(a) does, however, authorize recommendations for legislation to classify controlled substances.

Sec. 17.30.080. Unlawful administration, prescription and dispensation of controlled substances. A controlled substance classified under federal law or in a schedule set out in AS 11.71.140 — 11.71.190 or by regulations adopted in accordance with AS 11.71.120(a) may not be administered, prescribed, dispensed, or distributed other than for a medical purpose. (§ 4 ch 45 SLA 1982)

Editor's notes. — See editor's note to AS 17.30.070.

Article 2. Enforcement Forfeiture and Review Provisions.

Section
100. Cooperative arrangements
110. Items subject to forfeiture
112. Proceedings resulting in forfeiture
114. Seizure and custody of property
116. Procedure for forfeiture action
118. Petition for release of seized items

Section
120. Petition for sale of seized item
122. State disposal of forfeited property
124. Remittance to claimant
126. Forfeiture of controlled substances
130. Judicial review

Collateral references. — 25 Am. Jur. 2d, Drugs, Narcotics, and Poisons, §§ 27, 40 et seq.

Sec. 17.30.100. Cooperative arrangements. (a) The commissioner of public safety shall cooperate with other state and federal agencies in the discharge of their responsibilities pertaining to illicit traffic in controlled substances and in suppressing the abuse of controlled substances. Under this section, the powers of the commissioner of public safety include but are not limited to the following:

(1) arranging for the exchange of information among government officials concerning illicit traffic in and abuse of controlled substances;

(2) coordinating training programs pertaining to controlled substances at both local and state levels; and

Penalties for sale of anabolic steroids by state:

Alabama:	Schedule V of controlled substances, felony
Arizona:	Felony
Arkansas:	3yrs distrib. to adult, 6 yrs distrib to minor, (most recent & typical of legislation under consideration).
California:	Schedule III controlled substance, felony
Colorado:	Class 4 Felony for illegal distribution
Florida:	Schedule IV of controlled substance, felony
Indiana:	Class C Felony
Louisiana:	5 years, 5000 fine
New Mexico:	4th deg. felony delivery to Adults, 3rd for delivery to Juvenile
N. Carolina:	Schedule III controlled substances, felony
Ohio:	License revocation of physicians, pharmacists, etc. for illegal distribution. Other legislation pending.
Texas:	Third degree Felony
Virginia:	Class 1 Misdemeanor (weakest piece of legislation passed, in stark contrast to other legislation, still 1 year penalty)

6-0518J
Chenoweth
4/22/89

Original sponsors: Menard, Larson, C.Davis, et al.

1 IN THE HOUSE

2 CS FOR HOUSE BILL NO. 176 ( )

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 SIXTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act adding anabolic steroids and their related
7 materials and substances to schedule VA of the sched-
8 ule of controlled substances under the Criminal Code,
9 and prescribing penalties for their possession."

10 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

11 * Section 1. AS 11.71.050(a) is amended to read:

12 (a) Except as authorized in AS 17.30, a person commits the crime
13 of misconduct involving a controlled substance in the fifth degree if
14 the person

15 (1) manufactures or delivers, or possesses with the intent
16 to manufacture or deliver, one or more preparations, compounds, mix-
17 tures, or substances of an aggregate weight of one-half ounce or more
18 containing a schedule VIA controlled substance;

19 (2) manufactures or delivers, or possesses with the intent
20 to manufacture or deliver, one or more preparations, compounds, mix-
21 tures, or substances of an aggregate weight of less than one-half
22 ounce containing a schedule VIA controlled substance, for remunera-
23 tion;

24 (3) possesses

25 (A) less than 25 tablets, ampules, or syrettes con-
26 taining a schedule IIIA or IVA controlled substance;

27 (B) one or more preparations, compounds, mixtures, or
28 substances of an aggregate weight of less than three grams con-
29 taining a schedule IIIA or IVA controlled substance;

(C) less than 50 tablets, ampules, or syrettes containing a schedule VA controlled substance, except a schedule VA controlled substance listed in AS 11.71.180(d);

(D) one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than six grams containing a schedule VA controlled substance, except a schedule VA controlled substance listed in AS 11.71.180(d); or

(E) one or more preparations, compounds, mixtures, or substances of an aggregate weight of one-half pound or more containing a schedule VIA controlled substance; or

(4) fails to make, keep, or furnish any record, notification, order form, statement, invoice, or information required under AS 17.30.

* Sec. 2. AS 11.71.070(a) is amended to read:

(a) Except as authorized in AS 17.30, a person commits the offense of misconduct involving a controlled substance in the seventh degree if the person

(1) manufactures or delivers, or possesses with the intent to manufacture or deliver, one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than one-half ounce of a schedule VIA controlled substance; [OR]

(2) possesses one or more preparations, compounds, mixtures, or substances of an aggregate weight of less than one ounce containing a schedule VIA controlled substance on a public street or sidewalk or on the premises of a public carrier or business establishment or in any other public place; or

(3) possesses

(A) less than 50 tablets, ampules, or syrettes containing a schedule VA controlled substance listed in

CORRECTION

THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY

02-576(2/77)

1 (C) less than 50 tablets, ampules, or syrettes con-
2 taining a schedule VA controlled substance, except a schedule VA
3 controlled substance listed in AS 11.71.180(d);
4 (D) one or more preparations, compounds, mixtures, or
5 substances of an aggregate weight of less than six grams contain-
6 ing a schedule VA controlled substance, except a schedule VA
7 controlled substance listed in AS 11.71.180(d); or
8 (E) one or more preparations, compounds, mixtures, or
9 substances of an aggregate weight of one-half pound or more
10 containing a schedule VIA controlled substance; or
11 (4) fails to make, keep, or furnish any record, notifica-
12 tion, order form, statement, invoice, or information required under
13 AS 17.30.
14 * Sec. ?. AS 11.71.070(a) is amended to read:
15 (a) Except as authorized in AS 17.30, a person commits the
16 offense of misconduct involving a controlled substance in the seventh
17 degree if the person
18 (1) manufactures or delivers, or possesses with the intent
19 to manufacture or deliver, one or more preparations, compounds, mix-
20 tures, or substances of an aggregate weight of less than one-half
21 ounce of a schedule VIA controlled substance; [OR]
22 (2) possesses one or more preparations, compounds, mix-
23 tures, or substances of an aggregate weight of less than one ounce
24 containing a schedule VIA controlled substance on a public street or
25 sidewalk or on the premises of a public carrier or business establish-
26 ment or in any other public place; or
27 (3) possesses
28 (A) less than 50 tablets, ampules, or syrettes con-
29 taining a schedule VA controlled substance listed in