# **Toxic-Free Children's Act (SB 151):**

## Protecting Alaska's children from exposure to toxic chemicals

Alaska's Toxic-Free Children's Act (SB 151) joins other states' lead to protect children from exposures to toxic chemicals. Under current federal law, chemicals such as tris flame retardants are virtually unregulated for their safety. Other harmful flame retardants such as PCBs and PBDEs—which are found in dangerously high levels in Alaska and Arctic Indigenous peoples<sup>1,2,3,4</sup>—are banned or are in the process of being phased out. PCBs and PBDEs are being replaced with other cancer-causing chemicals such as tris. These flame retardant chemicals continue to be used in children's products despite the fact that they are highly toxic to children and do not provide proven fire safety benefits.<sup>5</sup>



# The Toxic-Free Children's Act will list chemicals of high concern for children:

The legislation will require the Alaska Department of Environment Conservation and the Alaska Department of Health and Social Services to develop a list of priority chemicals that pose unnecessary risks to children's health. The list will lead to the phase out of these toxic chemicals in children's products.

# The Act will phase out toxic tris flame retardants in children's products:

This legislation will end the use of toxic tris flame retardants in children's products sold in Alaska. Tris flame retardants include TDCPP (chlorinated Tris), TCEP, and TCPP.

### Tris flame retardants have documented health risks

**TDCPP** and **TCEP** are on California's list of known cancer-causing chemicals.<sup>6</sup> Laboratory studies show that both chemicals are associated with increased incidences of tumors.<sup>7,8</sup> The National Research Council reports that exposure to TDCPP is linked with cancer in laboratory studies.<sup>9</sup> Documented health effects of TDCPP include reproductive harm (i.e. reduced semen quality) and hormone disruption (altered hormone levels),<sup>10,11</sup> and DNA mutations.<sup>12</sup> Laboratory studies also demonstrate that TDCPP is a potent neurotoxicant.<sup>13,14</sup> TDCPP was widely used in children's pajamas in the 1970s until it was eliminated from that use due to its adverse health effects. Studies in fish indicate that early life exposure to TDCPP results in abnormal development.<sup>15</sup> The European Union listed TCEP as a Substance of Very High Concern in 2010 due its reproductive toxicity and potential to impair fertility.<sup>16</sup> New York and Vermont have passed laws phasing out the use of TCDPP and TCEP in children's products.

## Tris flame retardants have documented health risks (cont.)

**TCPP** has been used as a replacement flame retardant for chlorinated tris since the 1960s and is chemically similar to the other tris chemicals. There is very little research on TCPP and no research has shown its safety in children's products. Laboratory studies indicate that TCPP is a possible carcinogen, disrupts red blood cells, and irritates the skin.<sup>17</sup> TCPP is found widely in indoor dust and in the environment.

## Alaska children's health is already vulnerable:

#### Alaska Birth Defects Registry

- Birth defects in Alaska are twice as high as in the United States as a whole
- Alaska Native infants have twice the risk of birth defects as white infants born in Alaska

# Alaska's Department of Public Health recommends women:

 Avoid contact with known or suspected environmental teratogens – agents that can cause birth defects



"...even independent of differences in cigarette smoking, alcohol consumption and maternal age which is a well-known risk factor for birth defects—Alaska Natives still have an increased risk ... that we don't really know how to explain."<sup>18</sup>

- Dr. Bradford Gessner, Maternal & Child Health Epidemiology Unit

## The Toxic-Free Children's Act is good for business because it

- Provides important safety information to businesses and consumers.
- Helps Alaskan businesses meet the increasing consumer demand for safer products.
- Encourages innovation and the development of safer alternatives.
- Creates market pressure on the chemical industry to provide safe chemicals to product manufacturers and, in turn, safe products to retailers and consumers.

# Alaska Professional Fire Fighters Association, Alaska Fire Chiefs Association, and the Alaska Nurses Association support the Alaska Toxic-Free Children's Act.

Please visit our website for references and for more information <u>http://bit.ly/ToxicFreeChildren</u>

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### References

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<sup>2</sup> Preamble of the Stockholm Convention on Persistent Organic Pollutants.

<sup>3</sup> Carpenter DO, DeCaprio AP, O'Hehir D, Akhtar F, Johnson G, Scrudato RJ, Apatiki L, Kava J, Gologergen J, Miller PK, Eckstein LH. 2005. Polychlorinated biphenyls in serum of the Siberian Yupik People from St. Lawrence Island, Alaska. Int J Circumpolar Health 64:322-335.

<sup>4</sup> Miller, PK et al. 2013. Community-based participatory research projects and policy engagement to protect environmental health on St. Lawrence Island, AK. International Journal of Circumpolar Health 72:967-977.

<sup>5</sup> DiGangi, J. et al. 2010. San Antonio Statement on Brominated and Chlorinated Flame Retardants. Environmental Health Perspectives 118(12):A516-518.

<sup>6</sup> State of California Office of Environmental Health Hazard Assessment Proposition 65 List: Accessed at: <u>http://oehha.ca.gov/prop65/prop65\_list/Newlist.html</u>.

<sup>7</sup> Stapleton, HM., S. Klosterhaus, et al. (2009). "Detection of Organophosphate Flame Retardants in Furniture Foam and U.S. House Dust." Environmental Science & Technology 43(19): 7490-7495.

<sup>8</sup> Matthews, HB et al. 1993. Toxicity and carcinogenicity of chronic exposure to tris(2-chloroethyl)phosphate. Fundamental and Applied Toxicology 20:477-485.

<sup>9</sup> Betts, KS. 2013. Exposure to TDCPP appears to be widespread. Environmental Health Perspectives 121(5):A150.

<sup>10</sup> Meeker, JD and HM Stapleton. 2010. House dust concentrations of organophosphate flame retardants in relation to hormone levels and semen quality parameters. Environmental Health Perspectives 118(3):318-323.

<sup>11</sup> Stapleton, HM et al. 2011. Identification of flame retardants in polyurethane foam collected from baby products. Environmental Science and Technology 45:5323-5331.

<sup>12</sup> Gold, MD et al. 1978. Another flame retardant, tris-(1,3-dichloro-2-propyl)-phosphate and its expected metabolites are mutagens. Science 200(4343):785-787.

<sup>13</sup> Betts, KS. 2013. Exposure to TDCPP appears to be widespread. Environmental Health Perspectives 121(5):A150.

<sup>14</sup> Stapleton, HM et al. 2011. Identification of flame retardants in polyurethane foam collected from baby products. Environmental Science and Technology 45:5323-5331.

<sup>15</sup> McGee, SP et al. 2012. Early zebrafish embryogenesis is susceptible to developmental TDCPP exposure. Environmental Health Perspectives 120(11):1585-1591.

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<sup>17</sup> Safe Kids Campaign Report of the Green Science Policy Institute 2011. Accessed at:

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