## FACTS: Restricting the Sale of Weight-Loss and Muscle-Building Supplements

Kids today are growing up in a digital world that bombards them with unrealistic and biased body and beauty ideals. The body and beauty ideals that are pushed online can lead to very real offline threats to the health of our youth – such as eating disorders and health dangers of underregulated weight-loss and muscle-building supplement use. Our kids need a new front line of defense to their health that stays ahead of these threats by tackling both *cause* and *effect* through state legislation.

## Restricting Sale of Weight-Loss and Muscle-Building Supplements

## **Problem**

- **Not recommended by AAP or screened by FDA**. The American Academy of Pediatrics strongly cautions against teens using weight-loss or muscle-building supplements.<sup>1,2</sup> The Food and Drug Administration does not screen supplements sold over the counter (OTC) for safety or efficacy.<sup>3</sup>
- **Laced with dangerous substances**. Weight-loss and muscle-building supplements have been found to be laced with pesticides, heavy metals, anabolic steroids, and prescription pharmaceuticals that can cause strokes, cancer, and severe liver injury, which sometimes require transplants or cause death. 4,5,6,7
- Leads to steroid use and eating disorders. Weight-loss and muscle-building supplements are gateways to eating disorders and anabolic steroid abuse. Young men who take creatine and other similar substances are three times more likely to start using anabolic steroids in just a few years.<sup>8</sup> Adolescent and young adult women who use diet pills have six times the risk of being diagnosed with an eating disorder within the next three years compared to non-users.<sup>9</sup>
- **Used by young children.** In a youth-led survey of their peers in Massachusetts, nearly 75% of weight-loss and muscle-building supplement users started when they were under the age of 18 and 30% of users started at age 14 or younger. 10
- Targets youth with unrealistic images and unproven promises. The weight-loss and muscle-building supplements industries target young people. Using celebrity endorsers, YouTubers, and other social media influencers who often digitally alter images they promise "quick fixes" for the body dissatisfaction brought on by unrealistic images.
- **Affects all kids**. Latinx teens are actually 40% more likely to use OTC diet pills than white teens. <sup>11</sup> Research also suggests that girls and boys as young as middle school from Black and Brown communities are more likely to experience eating disordered behaviors, including vomiting and use of diet pills and laxatives to control weight, compared to their white peers. <sup>12</sup>

## Our state can address this <u>effect</u> of unrealistic body ideals by keeping these products out of kids' hands.

- ✓ Getting weight-loss and muscle-building supplements out of our kids' hands is crucial to preventing mental health issues and physical health risks from underregulated products.
- ✓ A commonsense step is restricting the sale of weight-loss and muscle-building supplements to adults ages 18 or older and moving these products from open shelves to behind the counter.
- ✓ The American Academy of Pediatrics has strongly cautioned against children and teens using these products. Restricting access puts our state's public health approach in line with physician recommendations.
- ✔ Bills that prevent the sale of these products to children are gaining traction and have been filed in California, Massachusetts, New York, and Illinois legislatures.

- <sup>8</sup> Hildebrandt, T., Harty, S., and Langenbucher, J.W. Fitness Supplements as a Gateway Substance for Anabolic-Androgenic Steroid Use. Psychol Addict Behav. 2012 Dec; 26(4): 10.1037/a0027877. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3838896/
- <sup>9</sup> Levinson, JA, Sarda V, Sonneville K, Calzo JP, Ambwani S, Austin SB. Diet Pill and Laxative Use for Weight Control and Subsequent Incident Eating Disorder in US Young Women: 2001–2016. Am J Public Health 2019; e1-e3
- <sup>10</sup> Massachusetts Youth Survey on Weight Loss and Muscle Building Supplement Use, Reported Use and Experiences Conducted by youth leaders with the Multi-Service Eating Disorders Association (MEDA), March May 2020. <a href="https://www.medainc.org/wpcontent/uploads/2020/05/Youth-Survey-Results 5.18.20.pdf">https://www.medainc.org/wpcontent/uploads/2020/05/Youth-Survey-Results 5.18.20.pdf</a>
- <sup>11</sup> Vitagliano J, Beccia A, Mattei J, Cory H, Austin SB. Disproportionate risk of over-the-counter diet pill use among Latinx youth: Results of a national study (Under review).
- <sup>12</sup> Austin SB, Spadano-Gasbarro J, Greaney ML, Richmond TK, Feldman HA, Osganian SK, Hunt AT, Mezgebu S, Peterson KE. Disordered Weight Control Behaviors in Early Adolescent Boys and Girls of Color: An Under-Recognized Factor in the Epidemic of Childhood Overweight. Journal of Adolescent Health 2011; 48(1): 109-112.

<sup>&</sup>lt;sup>1</sup> Golden NH, Schneider M, Wood C. Preventing Obesity and Eating Disorders in Adolescents. Pediatrics. 2016:138(3). 8.

<sup>&</sup>lt;sup>2</sup> LaBotz M, Griesemer BA, AAP COUNCIL ON SPORTS MEDICINE AND FITNESS. Use of Performance-Enhancing Substances. Pediatrics. 2016;138(1). <a href="https://pediatrics.aappublications.org/content/pediatrics/138/1/e20161300.full.pdf">https://pediatrics.aappublications.org/content/pediatrics/138/1/e20161300.full.pdf</a>

<sup>&</sup>lt;sup>3</sup> Pomeranz JL, Barbosa G, Killian C, Austin SB. The Dangerous Mix of Adolescents and Dietary Supplements for Weight Loss and Muscle Building. Journal of Public Health Management and Practice. 2015;21(5):496-503.

<sup>&</sup>lt;sup>4</sup> Abdel-Rahman A, Anyangwe N, Carlacci L, et al. The Safety and Regulation of Natural Products Used as Foods and Food Ingredients. Toxicological Sciences. 2011;123(2):333-348.

<sup>&</sup>lt;sup>5</sup> Fong TL, Klontz KC, Canas-Coto A, et al. Hepatotoxicity Due to Hydroxycut: A Case Series. American Journal of Gastroenterology. 2009;105(7):1561-1566.

<sup>&</sup>lt;sup>6</sup> Grundlingh J, Dargan PI, El-Zanfaly M, Wood DM. 2,4-Dinitrophenol (DNP): A Weight Loss Agent with Significant Acute Toxicity and Risk of Death. Journal of Medical Toxicology. 2011;7(3):205-212.

<sup>&</sup>lt;sup>7</sup> Guyda HJ. Use of Dietary Supplements and Hormones in Adolescents: A Cautionary Tale. Pediatric Child Health. 2005;10(10):587-590