

New study highlights risks of muscle-building supplement use among adolescents and young adults

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A recent study from the University of Toronto has revealed critical insights into the use of muscle-building supplements (such as whey

protein and creatine) among adolescents and young adults in Canada. The research, published today, provides a comprehensive analysis of the prevalence, influences, and associated risks of muscle-building supplement use, highlighting important implications for health care, public health, and policy-making professionals.

The work is [published](#) in the journal *Performance Enhancement & Health*.

Analyzing data of 912 participants from the Canadian Study of Adolescent Health Behaviors, a national study focused on the mental, social, and behavioral health of individuals 16 to 30 years old found that close to 60% of the respondents reported using protein bars and just over half reported using [whey protein](#) powders or protein shakes, which were the most commonly used muscle-building [supplement](#). Boys and men reported higher usage rates compared to girls, women, and transgender/gender expansive (TGE) participants.

"The boys and men in our study reported using an average of three muscle-building supplements in the past 12 months," says Kyle T. Ganson, Ph.D., MSW, the lead author on the study. "This figure truly exemplifies the pervasiveness of boys and men attempting to adhere to the muscular body ideal."

Nearly half of the participants cited [social media influencers](#) as the primary influence on their supplement use, while fitness communities and friends also played significant roles. Over two-thirds of the participants reported seeking information from online websites, with notable gender differences in the sources of information. Girls and women were more likely to consult [health care professionals](#), whereas boys and men predominantly used online forums like Reddit and YouTube.

"It is critical for health care, public health, and policymaking professionals to understand where young people are accessing information on muscle-building supplements to inform [harm reduction approaches](#)," says Ganson. "We know that in Canada, [regulations of muscle-building supplements are weak](#) and [social media companies do not restrict content](#) on muscle-building supplements, which may negatively impact young people's perceptions of the safety and efficacy of muscle-building supplements."

Only 9.8% of participants perceived their use of muscle-building supplements as problematic, with TGE individuals reporting a higher perception of problematic use compared to cisgender participants.

Alarmingly, the study found that nearly two-thirds of participants experienced at least one symptom while using muscle-building supplements, with common symptoms including fatigue, digestive issues, and cardiovascular problems. Despite these symptoms, a staggering 87.8% of those affected did not seek medical attention.

"While we did not specifically assess whether use of muscle-building supplements caused the symptoms experienced by users, it is clear that their physical health symptoms may be relevant for young people to be aware of prior to using muscle-building supplements, and health care professionals should be alerted to these concerning findings," says Ganson.

The findings underscore the need for health care providers to be knowledgeable about muscle-building supplements and to routinely assess their use among adolescents and [young adults](#).

"This is particularly important for TGE and sexual minority individuals, who reported higher symptom rates," says Ganson. "Public health programs should focus on harm reduction education, emphasizing the

potential risks of muscle-building supplements and promoting the use of reputable information sources."

Additionally, the study's authors advocate for stronger regulations on the sale and advertisement of muscle-building supplements, particularly on social media platforms.

More information: Kyle T. Ganson et al, Describing use of muscle-building supplements among adolescents and young adults in Canada, *Performance Enhancement & Health* (2024). [DOI: 10.1016/j.peh.2024.100284](https://doi.org/10.1016/j.peh.2024.100284)

Provided by University of Toronto

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