

# During first year of university, poor diet and weight gain greater in male students

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In students' first year of university, poor diet is linked to unhealthy weight gain with males affected more than females. The research publishing July 3 in the open access journal *PLOS ONE* by Kayleigh Beaudry and colleagues at Brock University, Canada also suggests that sex-specific strategies and interventions could improve dietary habits during the move to university.

Around the world, rates of overweight and obesity are rising. A critical time for [weight gain](#) is late adolescence, when young people are settling into life routines and adopting lifestyle habits that can sustain into adulthood. Diet quality has been shown to decrease in the first year of university, which is associated with adverse health consequences.

Food frequency questionnaires along with height, weight, waist and hip circumference and [body composition](#) were collected at the beginning and end of the first year of university from 229 female and 72 male first year Canadian university students. The researchers found that [diet quality](#) decreased over the year and alcohol intake increased, especially in males. Males, in particular, had significantly increased their consumption of donuts, fried chicken, beer and liquor, alongside a decrease in healthy food options such as vegetables. Both male and female students gained a significant amount of body weight and BMI, with males gaining more than females. Mean weight increase was 3.8kg for males and 1.8kg for females, with BMI increasing by mean 1.2kg/m<sup>2</sup> for males and 0.7kg/m<sup>2</sup> for females, and waist circumference increasing by mean 2.7cm in males and 1.1cm in females.

Two limitations of the study are the use of self-reporting questionnaires (which may not accurately reflect what students actually ate) and a possible sampling bias with a self-selecting sample (since students chose to participate). The researchers believe future work should focus on mitigating negative dietary changes through [nutrition education](#) and the development of sex-specific interventions to improve [dietary habits](#) during the transition to university life.

The authors add: "Results from our study demonstrate that young male and female students undergo unfavorable and differential changes to their dietary intakes during the transition to university life. These changes reflect a poorer quality diet accompanied by increases in body weight, BMI, waist to hip ratio and body fat. Sex-specific changes were

evident for nutrition indicating that males' diets were lower in quality, and body composition changes indicated that males experienced more adverse changes by gaining more body weight, waist circumference, fat and lean mass than females."

**More information:** Beaudry KM, Ludwa IA, Thomas AM, Ward WE, Falk B, Josse AR (2019) First-year university is associated with greater body weight, body composition and adverse dietary changes in males than females. *PLoS ONE* 14(7): e0218554.

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