

# BriefTrends: Prevalence of no Muscle Strengthening Exercise by Weight Status in U.S. High School Students - Youth Risk Behavior Survey, 2019

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**Abstract** This BriefTrends examines the prevalence (%) of no muscle strengthening exercise in U.S. high school students in 2019 both overall and across different weight status categories.

**Keywords:** muscle strengthening exercise, YRBS, public health, adolescent health

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## 1. Purpose

Briefly present the prevalence of no muscle strengthening exercise reported by U.S. high school students by weight status and by sex for 2019.

## 2. Data Source

The 2019 High School Youth Risk Behavior Survey (YRBS).

## 3. Population

All U.S. public and private high school students grades 9 thru 12.

## 4. Variables

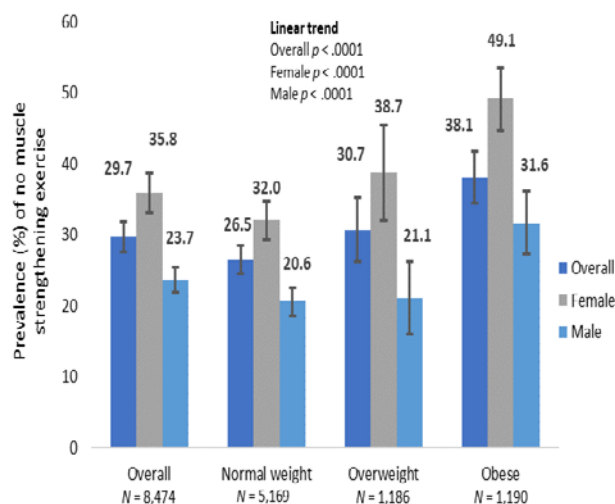
1) Muscle strengthening exercise status (Status of 'No' for those reporting 0 days to the question: During the past 7 days, on how many days did you do exercises to strengthen or tone your muscles, such as pushups, sit-ups, or weight lifting?, otherwise 'Yes'.), 2) Weight status ('Normal weight': < 85<sup>th</sup> BMI percentile for age and sex, 'Overweight': ≥ 85<sup>th</sup> BMI percentile for age and sex and < 95<sup>th</sup> BMI percentile for age and sex, 'Obese': ≥ 95<sup>th</sup> BMI percentile for age and sex), and 3) sex.

## 5. Analysis

Prevalence (%) estimates of no muscle strengthening exercise, overall and by weight status and by sex, 95%

confidence intervals (CIs) for prevalence estimates, and linear contrasts for trend in log odds across weight status groups. SAS Survey Procedures were used for estimates, CIs, and tests, version 9.4.

## 6. Findings



**Figure 1.** Prevalence of no muscle strengthening exercise reported by U.S. high school students, overall and by weight status and sex, YRBS 2019. Note. *N* represents respective overall sample size. Prevalence estimates (%) are weighted and shown above each bar. Estimates are for those reporting 0 days to the question: During the past 7 days, on how many days did you do exercises to strengthen or tone your muscles, such as pushups, sit-ups, or weight lifting? Weight status categories defined as follows: Normal weight: < 85<sup>th</sup> BMI percentile for age and sex, Overweight: ≥ 85<sup>th</sup> BMI percentile for age and sex and < 95<sup>th</sup> BMI percentile for age and sex, Obese: ≥ 95<sup>th</sup> BMI percentile for age and sex. Error bars represent the 95% confidence intervals for the prevalence estimates. Linear trend *p*-values are for linear trend test of log odds across weight status levels

The prevalence of no muscle strengthening activity reported by high school students in 2019 overall was 29.7% (95% CI: 27.6-31.9). Significant sex differences were seen overall with female (35.8% 95% CI: 32.9-38.8) prevalence of no muscle strengthening exercise greater than the male prevalence (23.7% 95% CI: 21.9-25.5).

Sex differences remained within each weight status group. Finally, significant linear trend tests ( $p < .0001$ ) indicate greater prevalence of no muscle strengthening exercise for overweight and obese students, overall and within each sex group.

## References

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