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Assessment of Cardiovascular Risk in First-Semester College Students

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Assessment of Cardiovascular Risk in First-Semester College Students

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Learning Objective (Upon completion, participant will be able to...): Describe the prevalence of cardiovascular disease risk factors in first-semester college students.

Track: Wellness and Public Health (primary), Medical Nutrition Therapy (secondary)

Learning Need Code: 5160 cardiovascular disease

Background: Concern about cardiovascular disease (CVD), specifically hypertension and hyperlipidemia, is limited among college students. This study's purpose was to evaluate the prevalence of CVD risk factors in first-semester college students.

Methods: College students (n=47, 83.0% female, 84.8% Caucasian, age 18.3±0.5 years, GPA 3.2±0.8) completed health-related assessments as part of a first-semester seminar course; none were previously treated for hypertension or had diabetes, while one smoked. Assessments occurred at the end of the fall semester. Body mass index (BMI), blood pressure (BP), total cholesterol (TC), and high-density lipoprotein cholesterol (HDL-C) were assessed.

Results: Mean BMI was 25.1±5.2 kg/m²; 19.1% and 21.3% of students were identified as overweight (25.0-29.9 kg/m²) and obese (≥30.0 kg/m²), respectively. Mean systolic BP (SBP) and diastolic BP (DBP) values were 122.2±13.2 and 81.3±13.0 mmHg, respectively; 14.9% and 48.9% of students had values in the elevated (SBP 120-129 mmHg and DBP <80 mmHg) and hypertensive (SBP ≥130 mmHg and/or DBP ≥80 mmHg) ranges. Mean TC was 175.3±30.3 mg/dL; 29.8% and 23.4% of students had borderline (170-199 mg/dL) and abnormal (≥200 mg/dL) levels, respectively. Mean HDL-C was 55.6±17.2 mg/dL; 12.8% and 21.3% of students had borderline (40-45 mg/dL) and abnormal (<40 mg/dL) levels, respectively.

Conclusions: These data suggest that a substantial proportion of first-semester college students are at risk for future development of CVD. Exploration of future educational interventions with the college student population to improve BMI, BP, TC, and HDL-C is warranted.

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Assessment of Cardiovascular Risk in First-Semester College Students

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BACKGROUND

Concern about cardiovascular disease (CVD), specifically hypertension and hyperlipidemia, is limited among college students.

PURPOSE

Evaluate the prevalence of CVD risk factors in first-semester college students.

METHODS AND RESULTS

Participants: 47 college students who completed health-related assessments as part of a first-semester seminar course

- 83.0% female (n=39)
- 84.8% Caucasian (n=40)
- 18.3 ± 0.5 years
- 3.2 ± 0.8 GPA

Assessments

Body Mass Index: 25.1±5.2 kg/m²

- Overweight (25.0-29.9 kg/m²)
- Obese (≥30.0 kg/m²)

Blood Pressure: 122.2±13.2 (systolic) and 81.3±13.0 mmHg (diastolic)

- Elevated (systolic BP 120-129 mmHg and diastolic BP <80 mmHg)
- Hypertensive (systolic BP ≥130 mmHg and/or diastolic BP ≥80 mmHg)

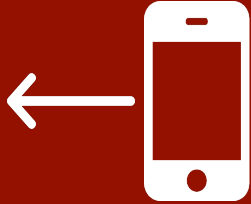
Total Cholesterol: 175.3±30.3 mg/dL

- Borderline (170-199 mg/dL)
- Abnormal (≥200 mg/dL)

High-Density Lipoprotein Cholesterol: 55.6±17.2 mg/dL

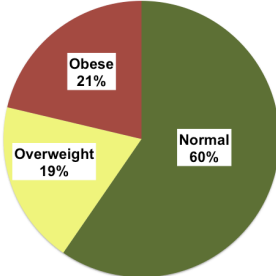
- Borderline (40-45 mg/dL)
- Abnormal (<40 mg/dL)

A substantial proportion of first-semester college students are at risk for developing heart disease.

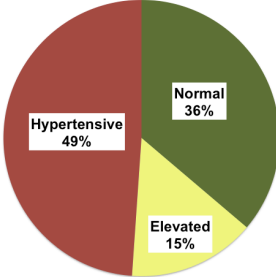


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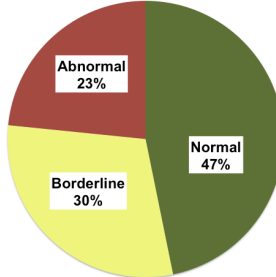
BODY MASS INDEX



BLOOD PRESSURE



TOTAL CHOLESTEROL



HIGH-DENSITY LIPOPROTEIN CHOLESTEROL

