

Comparison of Cholesterol and Glucose Levels between College-Aged Males and Females

William S. Dubiel, Samantha M. Orkin, Christie E. Erickson, Christopher M. Bopp.

Pennsylvania State University, Center for Fitness and Wellness, Department of Kinesiology, University Park, PA

Dyslipidemia and diabetes are becoming more prevalent in America and at younger ages. According to ACSM guidelines, LDL levels ≥ 130 mg/dL or HDL levels <40 mg/dL suggest dyslipidemia. A blood glucose level ≥ 100 mg/dL is considered pre-diabetic. **PURPOSE:** To determine rates of dyslipidemia and pre-diabetes among a cohort of college-aged males and females. **METHODS:** Whole blood (40 μ L) was collected via fingerstick. Blood was then injected into a lipid profile plus glucose cassette for analysis with a Cholestech LDX system (Alere, Inc., Waltham, MA). **RESULTS:** This cohort consisted of 145 male (average age 22.3 years) and 124 female participants (average age 22.0 years). For males, average lipid values were: total cholesterol, 162.1 mg/dL, LDL level, 91.6 mg/dL, HDL was 50.4 mg/dL, triglycerides 103.9 mg/dL, and blood glucose was 90.2 mg/dL. Of the males, 38 (26%) of those participants were considered dyslipidemic and 20 (14%) were pre-diabetic. Overall, 53 (36%) of male participants were either dyslipidemic or pre-diabetic. For females, average lipid values were: total cholesterol, was 165.1 mg/dL, LDL 77.0 mg/dL, HDL was 63.8 mg/dL, and triglycerides were 110.7 mg/dL. Blood glucose averaged 89.5 mg/dL. Of the females, 21 (17%) of those participants were considered dyslipidemic and 13 (11%) were pre-diabetic. Overall, 34 (27%) of female participants were either dyslipidemic or pre-diabetic. **CONCLUSION:** Though the average levels of cholesterol and glucose are normal, it is important to note that 36% of the male participants and 27% of the female participants are considered to have either dyslipidemia or pre-diabetes. Rates of dyslipidemia in our sample are higher than those reported by the CDC for 20-39 year old adults (11.7%).