Assessment of Cardiovascular Risk in a Pharmaceutical Sciences Laboratory Course [MAS]

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The current study assessed blood lipid levels in pharmacy students by 4 methods. The measurements were made by a commercial laboratory, by the O-T-C product Advanced Care ™, by the Cholestech ™ LDX Auto-Analyzer System, and by Sigma Kits #352-20 and #352-5 for total cholesterol and HDL fraction, respectively. The possibility that the lipid profiles of male and female pharmacy students might differ from each other and from the general population was also explored. All methods of determining blood total cholesterol and other lipid fractions were comparable and observed differences were attributed to gender. Male pharmacy students (N= 88) had total cholesterol levels of 185.84 ± 1.17 mg/dL which did not differ from those of female students (N= 84) which were 185.60 ± 0.73 mg/dL. Female pharmacy students (N= 77) had higher HDL-C levels (59.64 ± 0.78 mg/dL) than did males (44.47 ± 0.46 mg/dL). Because female students had greater HDL-C levels than their male peers, they also had lower cardiovascular risk ratios defined as the ratio of total cholesterol to HDL-C. Female students (N= 54) also had lower blood triglyceride levels (120.05 ± 6.74 mg/dL) than those (163.6 ± 3.00 mg/dL) of males (N= 55). Our conclusions are that the methods of measuring blood lipids are comparable, that female pharmacy students have a better cardiovascular lipid profile than their male counterparts, and that both groups have a better cardiovascular lipid profile than the general U. S. population.