

Peter O. Kwiterovich, Jr., MD (1940–2014)

Peter O. Kwiterovich, Jr., MD, was a pioneer in preventive cardiology, lipidology, and cardiovascular medicine. He was an internationally known expert on atherosclerotic vascular disease, and the founder and director of the Johns Hopkins University Lipid Clinic. George J. Dover, MD, pediatrician-in-chief at Hopkins, said it best when he stated that his work transformed our understanding of fat metabolism and lipid malfunction and the role they play in fueling premature heart disease.

His investigative and clinical work spanned nearly 50 years and defined what normal cholesterol values were for children. He also helped demonstrate the safety of statin therapy in adolescents with familial hypercholesterolemia. His research helped to delay or avert premature disability and death for many thousands of young adults.

As the son of a physician, he was exposed to science as a child. He was raised in Danville, Penn., and graduated from the College of Holy Cross in Worcester, Mass. His interest in genetics was nurtured at both Dartmouth Medical School and at the Johns Hopkins School of Medicine under the tutelage of late Victor A. McKusick, MD, also known as the father of modern human genetics.

He did his internship in pediatrics at Harvard's Children's Hospital and then worked for three years in the molecular disease branch of the National Heart, Lung, and Blood Institute. It was at the National Institutes of Health (NIH) that he developed a passion for understanding and treating inherited disorders of cholesterol metabolism. He completed his pediatrics residency at Hopkins in 1972.

Upon joining the Hopkins faculty that year, he received research funding from the NIH that allowed him to establish the Johns Hopkins University Lipid Clinic. During the 1980s, Dr. Kwiterovich and his colleague Allan Sniderman, MD, discovered that apolipoprotein B (apoB) was often a better predictor of atherosclerotic cardiovascular disease (ASCVD) risk than traditional lipid measurements.

Dr. Kwiterovich was an outstanding lecturer, teacher, and writer who would emphasize that atherosclerotic lesions begin in childhood and are directly related to traditional CVD risk factors. He emphasized that environmental factors (such as diet, overweight status, and exercise habits) as well as inherited dyslipidemias would influence the progression of such lesions. He emphasized a comprehensive integrated evaluation of all predisposing factors in the family members of those with premature vascular disease.

His research showed the safety and efficacy of resin and statin treatment in young adults with familial hypercholesterolemia and familial combined hyperlipidemia. He participated in several impactful studies that found that more than half of the children of individuals with premature ASCVD had prominent dyslipidemias.

For more than 20 years, he directed a lipid disorders training center — a continuing medical education program that involved a basic course and an advanced update course. Through these educational programs, he taught a generation of physicians and trainees that inherited lipoprotein disorders that often present in youth at high risk for future CVD include familial hypercholesterolemia (FH), caused by a defect in the LDL receptor, and familial combined hyperlipidemia and its metabolic cousin hyperapoB. The latter two are prototypes for the overproduction of very LDL in the liver.

He often noted that increased synthesis and secretion of very LDL are usually driven by an increased flux of free fatty acids from the adipose tissue to the liver, which is a metabolic abnormality often accompanied by insulin resistance, elevated triglycerides, low HDL-C, and increased numbers of small, dense LDL particles. That was precisely why he preached that lifestyle changes were the cornerstone of prevention for the entire family. In 1997, he was the lead author of the Dietary Intervention Study in Children.

Dr. Kwiterovich was a consummate mentor who taught thinking outside the box and provided an experimental approach that was both meticulous in its design and well thought-out. What was most impressive was his easygoing demeanor, generosity with his time, and humility.