



### **Carl (Chip) Lavie, Jr., M.D., FACC, FACP, FCCP**

Dr. Lavie graduated from Louisiana State University Medical School in 1983 and completed internal medicine residency at Ochsner and fellowship in cardiovascular diseases at Mayo, where he joined the faculty in 1989. Dr. Lavie is Professor of Medicine and Medical Director, Cardiac Rehabilitation and Preventive Cardiology; Director, Exercise Testing Laboratory; and Staff Cardiologist, Echocardiographic Laboratory at the John Ochsner Heart and Vascular Institute in New Orleans, Ochsner Clinical School-The University of Queensland School of Medicine and he previously served for 10 years as Associate Director of the Internal Medicine Training program. He served as a Consultant in the Department of Preventive Medicine at the Pennington Biomedical Research Center in Baton Rouge, Louisiana from January 2012-October 2014.

Dr. Lavie's research interests include cardiac rehabilitation and prevention, lipids, hypertension, obesity, and exercise, as well as noninvasive testing, encompassing echocardiography, exercise testing, and nuclear cardiology. He is the author of over 800 medical publications including two cardiology textbooks, and 40 book chapters. Dr. Lavie serves as a frequent lecturer, reviewer for several medical journals, and is Associate Editor and Cardiovascular Section Editor of the Mayo Clinic Proceedings and is Editor in Chief of Progress in Cardiovascular Diseases and serves on the Editorial Boards of the Journal of the American College of Cardiology, American Journal of Cardiology, Journal of Cardiopulmonary Rehabilitation Prevention, and over 20 other Journals. From 2011 till now, he has served as Chairman of the Document Oversight Committee for AACVPR. For the years 2003 and 2004 he served as Chairman of Vascular, Hypertension and Prevention for the American College of Cardiology and he has been an elite reviewer for JACC for 7 of the last 8 years, also receiving the Simon Dack Award as a life-time, hall of fame, reviewer. In 2013, he gave Key-Note lectures for both the American College of Sports Medicine and the Cardiac Rehabilitation one for the AACVPR, where he received the 2013 Research Award. From a personal stand-point, he is an avid sports fan and competitive runner, with personal records in the 5K, 10K, Half-Marathon and Marathon of 18:30, 38:30, 1:24:30, and 3:10, respectively. He is the author of "The Obesity Paradox", released April, 2014.

### **Fitness is More Important than Fatness in Diabetes**

Type 2 diabetes mellitus (T2DM) has reached epidemic proportions worldwide and is associated with increased risk for cardiovascular diseases (CVD) and premature mortality. Nonpharmacologic therapy with diet and physical activity (PA) has been shown to prevent progression to T2DM in patients at high risk. Regular PA substantially reduces the risk of T2DM and a high level of PA associated with substantial reduction in T2DM risk. In addition, there is strong evidence suggesting a steep inverse relationship between both PA and cardiorespiratory fitness (CRF) and mortality in patients with T2DM. Of particular concern is the dramatic steep increase in mortality among patients with low CRF. An important point is that obese individuals who are at least moderately fit have a lower mortality than those who are normal weight but unfit. Importantly, substantial data suggests that CRF is more important than weight in patients with T2DM. A primary goal of public health strategies is to promote PA and to move patients out of the least fit, high-risk cohort by increasing PA among the least active. Increasing PA is important throughout the entire healthcare system, particularly in patients with T2DM.

#### **Learning objectives:**

1. Review the importance of physical activity (PA) and, especially, cardiorespiratory fitness (CRF), in the pathogenesis and prognosis in type 2 diabetes mellitus (T2DM);
2. Review data suggesting that CRF is more important than weight in patients with T2DM;
3. Discuss the importance of promoting PA throughout the healthcare system as a way to improve CRF and reduce cardiovascular risk, which is particularly important in patients with T2DM.