

Risk of Atherosclerosis Is Low in Down Syndrome

BY ROBERT FINN
San Francisco Bureau

DENVER — Adults with Down syndrome seem to be protected against atherosclerosis, despite having elevated risk factors, Christopher C. Draheim, Ph.D., and Donald R. Dengel, Ph.D., reported in a poster presentation at the annual meeting of the American College of Sports Medicine.

Such adults have significantly elevated

total body fat, higher levels of triglycerides and C-reactive protein, and lower levels of moderate to vigorous physical activity, but they also have significantly lower intima media thickness (IMT) than do age-, gender-, and race-matched controls without Down syndrome or mental retardation, the researchers noted.

Dr. Draheim, of Oregon State University, Corvallis, and Dr. Dengel, of the University of Minnesota, Minneapolis, compared 52 community-dwelling adults with

Down syndrome and mild to moderate mental retardation, aged 35-60 years, with 52 controls. They used a high-resolution ultrasound scanner and electronic wall-tracking software to measure IMT on the far wall of the left common carotid artery.

The investigators obtained fasting blood chemistries from all of the participants, they measured total body fat with dual-energy x-ray absorptiometry, and they administered a questionnaire to assess the participants' regular physical activity habits.

As expected, a number of risk factors predicted IMT in the control group. Six of these factors—fasting plasma insulin, age, the amount of fruit and vegetables consumed, LDL cholesterol, and smoking status—accounted for 70% of the variance in IMT. In contrast, only two factors—male gender and the level of moderate to vigorous physical activity—predicted IMT in the adults with Down syndrome. Those factors accounted for only 33% of the variance in IMT.

The results confirm earlier study findings that suggest people with Down syndrome who reside in large institutional settings have less atherosclerotic plaque than do others with and without mental retardation. However, most adults with Down syndrome now live in community settings and are more likely to be exposed to a lifestyle in which low levels of physical activity and high-fat and high-cholesterol diets are more prevalent, and that may put them at a higher risk of cardiovascular disease.

However, adults with Down syndrome typically have low blood pressure, which is associated with a lower risk of cardiovascular disease. The average blood pressure in participants in the study was 116/59 mm Hg, which was significantly lower than the 125/73 mm Hg in the control group.

"The significant reduction in the IMT values of adults with Down syndrome, along with differing predictors of IMT in persons with DS, indicate that [they] possess a unique atherogenic model that differs from individuals without DS," the investigators wrote. Additional research is needed to determine which mechanisms protect people with Down syndrome from atherosclerosis, they noted. ■

Apnea Prevalence As High as 70% In Heart Patients

SALT LAKE CITY — The prevalence of obstructive sleep apnea in patients with coronary heart disease may be higher than previously thought, according to data presented at the annual meeting of the Associated Professional Sleep Societies.

In a study of 132 patients with a history of myocardial infarction or angiographically verified coronary artery disease, the prevalence of obstructive sleep apnea was 70%, Robert M. Carney, Ph.D., reported in a poster presentation. The results of some previous studies have suggested prevalence rates in the 50% range in this population.

Patients in the current study underwent 2 nights of polysomnography. Obstructive sleep apnea was defined as at least five episodes of obstructive apnea or hypopnea per hour, said Dr. Carney, professor of psychiatry and director of the Behavioral Medicine Center at Washington University, St. Louis. The finding underscores the importance of screening heart disease patients for obstructive sleep apnea, which has been shown to increase the risk of myocardial infarction in this population, he concluded.

—Sharon Worcester

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1. McCullough P et al. *Circulation*. 2002; 106:416-422.