



Cardiovascular Disease

Areas of focus for VA research on cardiovascular disease include evaluating and developing new treatments, probing the genetic and lifestyle causes of cardiovascular disease, and developing new rehabilitation methods, especially for stroke. Studies range from biomedical lab experiments on animal models of heart disease to large, multisite clinical trials involving thousands of patients.

Examples of VA Research Advances

Prosthetic graft for bypass surgery – A team led by VA physician-researcher Dr. Melina Kibbe in Chicago is developing a prosthetic vascular graft that releases nitric oxide, a body chemical that promotes healthy blood vessels and improves healing after vascular surgery. Synthetic prosthetic grafts are used by surgeons when a patient’s own veins are not available to reroute blood flow in bypass operations. If the device being developed in Dr. Kibbe’s lab proves successful in humans, it would be used in place of a standard prosthetic graft and could help boost patient outcomes after procedures such as bypass surgery or balloon angioplasty and stenting. The lab is also exploring other therapies that release nitric oxide, such as gels and wraps that could be applied to arteries.

Self-monitoring of anti-clot drug has benefits – A VA trial involving nearly 3,000 Veterans has provided evidence to help guide doctors in managing patients taking the drug warfarin to prevent blood clots. The drug usually requires frequent blood tests and close monitoring by a physician to get the dose just right. But easy-to-use blood analyzers now allow patients to monitor their own clotting rate at home. The study found no difference in outcomes such as stroke or bleeding between patients who monitored themselves at home and those who visited the clinic. Moreover, self-testing appeared to boost patients’ satisfaction with warfarin therapy.

Grape compound may help heart – A VA scientist and colleagues found that even low doses of the natural antioxidant resveratrol—found in grape skins—preserved the heart and musculoskeletal system in middle-aged mice.

Facts About Cardiovascular Disease

Cardiovascular disease, which includes coronary heart disease (chest pain or acute heart attack), congestive heart failure, high blood pressure, stroke, and congenital heart defects, is America’s number one killer and the leading cause of hospitalization in the VA health care system. A stroke involves the sudden death of brain cells due to a lack of oxygen, caused when blood flow to the brain is impaired by the blockage or rupture of an artery. Each year, more than 15,000 Veterans are hospitalized for stroke. The after-effects range from mild or moderate loss of function to severe disability. In recent years, research has demonstrated that therapy can help restore lost function to stroke survivors even after many years.

