Dr. Jacob Green is Board Certified in Cardiovascular Disease, Interventional Cardiology, Nuclear Cardiology and Internal Medicine. He received his Doctor of Medicine degree from The University of Arizona, and thereafter completed his Internal Medicine, Cardiology, and Interventional Cardiology training at Emory University in Atlanta, Georgia.

Dr. Green specializes in coronary and peripheral arterial disease diagnosis and treatment including minimally invasive techniques such as angioplasty and stenting. He has particular interest and specialized training in catheter-based treatment of valvular and structural heart disease including aortic stenosis (AS), patent foramen ovale (PFO) and atrial septal defects (ASD). He has published extensively in peer-reviewed journals and continues to participate and lead in cutting edge research. He consults at the Baywood, Dobson, and Gilbert offices.

Transcatheter Aortic Valve Replacement

What should I do now that I am diagnosed with aortic stenosis? I am short of breath, with dizziness and fatigue even after light exercises, but my doctor thinks the risk of open heart surgery is too high for me.

Aortic stenosis is typically diagnosed after review of your overall medical history and clinical symptoms, your family history, and physical exam followed by an echocardiogram (ultrasound of the heart) to evaluate cardiac structure and valvular function. Aortic stenosis occurs when there is significant narrowing of the aortic valve, the outlet through which blood leaves the heart. Also, often the echocardiogram can also reveal a weakened heart.

Some individuals are born with structural abnormalities of the aortic valve, but degenerative deterioration is more common, particularly among the elderly. Thickening and calcification of valve leaflets develops over time, which may hinder the valve from opening properly and create narrowing of the opening. As it narrows, the heart strains to push blood out, and blood supply to the rest of the body becomes impaired.

Since aortic stenosis is a mechanical heart problem for which medication has proven ineffective, it must be corrected by replacing the aortic valve. This typically requires open heart surgery to insert a prosthetic aortic valve, but many patients are not surgical candidates due to advanced age and coexisting illnesses. As it is a progressive condition, prognosis for such individuals is dismal. Fortunately, advances in technology have led to innovative new treatments.

Patients at exceptionally high risk for complications from surgical valve replacement may be candidates for transcatheter valve replacement. Pioneered in 2002, this minimally invasive approach gained FDA approval in 2011, after years of clinical research.
Those who have been evaluated by qualified cardiologists and cardiac surgeons and are at exceptionally high predicted risk for a poor outcome or are deemed ineligible for traditional surgical valve replacement may qualify for transcatheter valve replacement.

The procedure requires only a small surgical incision in the groin and uses a catheter inserted in the femoral artery to deliver the valve to the heart. Patients receive general anesthesia, but the heart is not stopped and they are not placed on a bypass machine. Some individuals do not have large enough arteries in the groin and pelvis through which the valve would need to be delivered. Those individuals may be candidates for a minimally invasive valve replacement procedure where the same type of valve is directly delivered through the tip of the heart, accessed through a small surgical incision beneath the left breast.

Recovery usually takes only a few days in the hospital, and patients are up and walking the next day.

Surgical valve replacement remains the gold standard in treating aortic stenosis. Transcatheter valve replacement is not considered superior to surgical valve replacement, but rather equivalent in treating patients who are at higher than average risk for surgery or in those who have been deemed extremely high risk and are felt to be “inoperable” by traditional means.

This procedure is available at only a handful of select institutions in the United States and is performed by a limited number of Interventional Cardiologists. Tri-City Cardiology was among the earliest group approved to perform this procedure after the procedure received FDA approval in late 2011. Since that time, Dr. Green has successfully implanted these valves in a number of TriCity Cardiology patients, correcting their valve problem and improving their quality of life and longevity tremendously.
because he or she has heard that they cause diabetes, cancer and cognitive impairment. Complicating things further, many patients have heard that high cholesterol has nothing to do with heart attack, and that the statin medications represent a successful collusion between cardiologists and the pharmaceutical industry to make billions of dollars. How can this be?

**The evidence supporting statins reduces the risk of heart attack, stroke and cardiovascular death.**

Many large clinical trials have compared the effects of statin therapy with placebo therapy in patients at increased risk for cardiovascular disease. An effort was recently made to examine the data accumulated from a total of 174,149 subjects included within 27 individual trials where statin therapy was compared to placebo therapy, or a higher dose of statin therapy was compared with a lower dose of statin therapy. Overall, statin therapy reduced the risk of heart disease, stroke and cardiovascular death by 20%. Among persons with a relatively low risk of heart disease, the benefit of statin therapy was similar to the benefit of statin therapy among persons with a high risk of vascular disease. To put a number to it, among persons at low risk for vascular disease (<2% risk per year), 1 out of every 100 persons treated with statin therapy for 5 years will have been protected from a major vascular event such as heart attack, stroke, or cardiovascular death.

**Why would a cardiologist give a patient a medication that causes diabetes?**

Every treatment decision in medicine is weighing the potential risk of a treatment against that treatment’s potential benefit. Sometimes this is easy, for example, antibiotics to treat pneumonia. It is not that antibiotics are without risk, but clearly using them is much less risky than not treating the pneumonia. With regard to statins and diabetes, the risk of diabetes-caused cardiovascular disease in a person treated with statin therapy is 50-times less than the benefit of statins in prevention of cardiovascular disease.

**What about cancer?**

Although it has been suggested, there is no evidence that statins cause cancer. In the analysis described above of 174,149 persons in 27 individual trials, there was no evidence that statin therapy increased risk for cancer or death from cancer.

**What about my brain?**

There have been a few studies suggesting that statin therapy results in impaired cognition, defined as the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses. However, the majority of studies of statin therapy suggest that statin therapy improves cognitive function.

**But what about the argument that the cholesterol hypothesis is a myth?**

The ‘cholesterol hypothesis’ states that elevated blood levels of cholesterol contribute to atherosclerosis, the buildup of cholesterol in the arteries, and therefore heart attack, stroke and cardiovascular death. Much has been written lately arguing that the cholesterol hypothesis is wrong. In addition, some evidence suggests that the benefit of statin therapy on lessening risk of heart disease is independent of cholesterol lowering. So why would a patient take cholesterol-lowering statin therapy to prevent heart disease if cholesterol may not be why statins prevent heart disease? Why? Because they work. In fact, no medication is as effective at preventing heart disease as statin therapy.

**The bottom line.**

If a cardiologist prescribes a patient statin therapy, it is because he or she believes it will help to protect the patient from heart attack, stroke and cardiovascular death. If the patient fits the profile of one of the populations in whom statin therapy was studied, the cardiologist’s belief is justified. Whether statin therapy prevents heart disease due to cholesterol lowering or another reason should not influence the patient’s decision to take the medication or not.

In the prevention of heart disease, the most important thing a patient can do to protect himself or herself from heart disease is to avoid smoking, exercise regularly, eat a healthy diet and maintain a normal weight. The cardiologist’s job is to manage, often with medical therapy, those risk factors that the patient could not address on his or her own. Statin therapy, when used in appropriate patients, is the most potent medical therapy that prevents heart disease.
Heather M. Duquette-Wolf is a Registered Dietician and Certified Specialist in Sports Dietetics. She received her degree in Food Science and Nutrition from Plattsburgh State University of New York. She completed her post graduate work in nutrition at Yavapai County Medical Center in Arizona. She is the owner of HMD Nutrition, has developed and taught nutrition courses for a therapeutic college, is a nutrition consultant for the Internal Revenue Service as well as Glendale and Phoenix Fire Departments. She continues to consult and lecture for private, corporate and medical communities. Heather consults at the Baywood, Dobson, and Gilbert offices.

**Nutrition Tip:**

By eliminating or reducing flour products, you will typically lose weight, lower cholesterol, reduce inflammation and balance blood sugars. Most flour products are so processed that they spike your blood sugars instantly! Try getting your carbohydrates from whole foods, such as, vegetables, beans, lentils or small amounts of fruit.

**Recipe:**

**Hearty Salad**

2 cups of Spinach  
½ stalk celery  
¼ cucumber  
¼ large carrot  
2 mini peppers (red, yellow or orange)  
¼ cup of black beans  
¼ avocado  
5 olives  
5 pecans (any nut)  
80-100 calories of a light salad dressing
Ken Frandsen is currently the CEO of Tri-City Cardiology, COO of Cardiovascular Management of Phoenix, and is active on the Executive Leadership Team of the local American Heart Association. Ken graduated from New Mexico State University with a Bachelors of Accountancy and obtained an MBA in e-commerce from the University of Phoenix. Ken is a member of the American College of Cardiology, Medical Group Management Association, and MedAxiom. Ken is a CPA and is an active member of the American Institute of CPA’s and the Arizona Society of CPA’s. Prior to Tri-City Cardiology Ken was with McKesson Specialty Pharmaceuticals.

The Affordable Care Act and How it Impacts Arizona

The Affordable Care Act changes many rules around health insurance coverage that have a significant impact on Arizonians. These changes prohibit members from being dropped from coverage due to illness, billing members into bankruptcy because of an annual or lifetime limit, and discriminating against anyone with a pre-existing condition. Arizonians will not have to worry about losing coverage if they’re laid off or change jobs. And insurance companies will have to cover more preventive care like mammograms and other cancer screenings.

Expanding health insurance coverage

The Affordable Care Act will expand health insurance coverage by establishing a Health Insurance Marketplace in Arizona that increases access to the Medicaid program. When key parts of the health care law take effect in 2014, there’ll be a new way for individuals, families and small businesses to get health insurance. Beginning Oct. 1, 2013, individuals in every state will be able to shop for health insurance and compare plans throughout the Marketplace. The Affordable Care Act also fills in gaps in coverage for Americans whose incomes fall below the federal poverty level (FPL) by giving states the option to expand Medicaid to individuals under 65 years of age with income below 133 percent of the federal poverty level (approximately $14,000 for an individual and $29,000 for a family of four) beginning in January 2014.

Providing new coverage options for young adults

Health plans are now required to allow parents to keep their children under age 26 without job-based coverage on their family coverage, and, thanks to this provision, 3.1 million young people have gained coverage nationwide. As of December 2011, 69,000 young adults in Arizona gained insurance coverage as a result of the health care law.

Covering preventive services with no deductible or co-pay

The health care law requires many insurance plans to provide coverage without cost sharing to enrollees for a variety of preventive health services, such as colonoscopy screening for colon cancer, Pap smears and mammograms for women, well-child visits, and flu shots for all children and adults. The law also makes proven preventive services free for most people on Medicare. With no deductibles or co-pays, cost is no longer a barrier for seniors and people with disabilities who want to stay healthy by detecting and treating health problems early.
Removing lifetime limits on health benefits

The law bans insurance companies from imposing lifetime dollar limits on health benefits – freeing cancer patients and individuals suffering from other chronic diseases from having to worry about going without treatment because of their lifetime limits. The law also restricts the use of annual limits and bans them completely in 2014.

Seniors and the Affordable Care Act

The Affordable Care Act strengthens Medicare and helps seniors take charge of their health. The law provides important benefits such as free preventive services, free annual wellness visits, and a 50% discount on prescription drugs for Medicare recipients in the coverage gap known as the “donut hole.” You can also work with your doctor to create a personalized prevention plan.

Top Things for Seniors to Know

- Under the new health care law, your existing guaranteed Medicare-covered benefits won’t be reduced or taken away. Neither will your ability to choose your own doctor.

- Millions of people with Medicare received cost relief during the law’s first year. If you had Medicare prescription drug coverage and had to pay for your drugs in the coverage gap known as the “donut hole,” you should have received a one-time, tax free $250 rebate from Medicare to help pay for your prescriptions.

- If you have high prescription drug costs that put you in the “donut hole,” you now get a 50% discount on covered brand-name drugs while you’re in the “donut hole.” Between today and 2020, you’ll get continuous Medicare coverage for your prescription drugs. The “donut hole” will be closed completely by 2020.

- Medicare covers certain preventive services without charging you the Part B coinsurance or deductible. You will also be offered a free annual wellness exam.

We hope this information was helpful and informative. For more detailed information please visit the following website [www.healthcare.gov/law/information-for-you/az.html](http://www.healthcare.gov/law/information-for-you/az.html). This is a federal government website managed by the U.S. Department of Health & Human Services.
Established in 1980, Tri-City Cardiology has become widely known for its progressive and innovative approach in the specialty area of Cardiology. Our Vision at Tri-City Cardiology is to be among the best providers of cardiovascular care in the entire country.

Our practice consists of 21 board certified physicians coming from some of the top medical universities and fellowship programs in the country. Our sub-specialty programs include Echocardiography, Nuclear Cardiology, Peripheral Vascular, and Interventional Cardiology; and each is led by a board certified cardiologist. Our Electrophysiologists are board certified in Clinical Cardiac Electrophysiology. The physicians at Tri-City have been frequently recognized as “Top Doctors” in the Phoenix Magazine, an honor ranking them among the best physicians in the Phoenix Metro area.

Customer Service Focus:
- Patient Satisfaction is a top priority with every patient.
- We utilize Press Ganey to compile patient satisfaction scores.
- We rank in the top percentiles for Patient Satisfaction.

Quality Care Focus:
- PQRS and Meaningful Use Participant with Medicare
- Heart Stroke Recognition Program through the NCQA
- American College of Cardiology PINNACLE Registry Quality Reporting
- Accredited with Banner Heart Hospital for Heart Failure
- Accredited Nuclear, Echo, and Vascular Labs with ICANL, ICAEL, and ICAVL
Four Convenient East Valley Locations:

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2680 S. Val Vista Dr., Bldg 15, Ste 185, Gilbert AZ 85295 • 37100 N. Gantzel Rd., Ste 113, San Tan Valley, AZ 85140

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The physicians and staff at Tri-City Cardiology Consultants look forward to providing patients and their families with very good care and service.