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Heart Healthy for Life • Spring 2011

HeartBeats

EECP – A Win/Win for You and Your Heart

EECP (Enhanced External Counterpulsation) is an extremely effective treatment for patients living with angina or heart failure. The Dayton Heart Center's EECP team, led by Nancy Wombold, board certified EECP therapist, has given a new lease on life to thousands of patients over the years.

EECP is a non-invasive treatment that can help stimulate the opening or formation of blood vessels that are narrowed or blocked – which causes angina or heart failure. This stimulation helps carry the blood to your heart and improves your heart function.

What to expect
EECP treatments can be as simple as taking a rest. In fact many of our patients read, listen to music or even sleep during this simple sixty minute treatment. During treatment, you lie on a comfortable treatment

table with large blood pressure-like cuffs wrapped comfortably around your calves, thighs and abdomen. These cuffs inflate and deflate in sync with your own heartbeat, pumping healthy blood throughout your body and reducing the workload of your heart. During the heart's resting phase – when it normally receives its supply of blood directly from the heart – the cuffs inflate and push oxygen-rich blood toward your heart. This reduces the workload on your heart. Then, just before your next heartbeat, all the cuffs deflate at the same time, which again decreases the amount of work the heart has to do. So, in essence, your heart is getting a greater than normal supply of healthy blood without having to work very hard – a real win/win for your heart.

The treatment is fairly simple – you will

experience the same feeling of pressure that you feel when you have your blood pressure checked. Once you are accustomed to this pressure, the sessions pass comfortably. You may find that you are tired after the first few days of treatment. This is normal and you should find that your energy increases as your treatment schedule continues, usually about halfway through the treatment schedule.

The treatment series is five times per week, for seven weeks. This is a total of 35 treatments. Missed treatments are usually rescheduled so that you receive all 35 treatments. Many patients experience relief from their symptoms for up to three years; but if you find that your symptoms return you can repeat your EECP treatments.

Benefits of EECP Therapy

Approximately 80% of patients who



complete the 35-hour course of EECP therapy experience significant relief of their symptoms. Many report decreased or no angina, increased energy and an overall better quality of life. Many patients find that they are better able to tolerate exercise – which in turn is good for their heart. EECP strengthens the heart muscle, increases circulation and helps to create new blood vessels. EECP treatments improve blood flow to the skin, inhibit the development of atherosclerosis and reduce arterial stiffness –

all without invasive surgery or medication!

Risks of EECP are relatively minor – a few patients develop a mild skin irritation in the area under the treatment cuffs or experience muscle or joint discomfort. As mentioned earlier, some patients become fatigued after treatment, but this usually subsides after the first week. Rarely, patients develop shortness of breath requiring treatment.

Talk to your cardiologist at The Dayton Heart Center to determine if you can benefit from EECP therapy.

Got milk?

Vitamin D and Heart Health

Vitamin D of milk fame has long been known for its bone strengthening ability which is why it is routinely added to milk. But some studies show many Americans aren't getting enough of this vitamin and it may be affecting their heart health. Researchers found that adults with extremely low levels of the vitamin were almost twice as likely to have died or suffered a stroke as those with adequate amounts. They also had more coronary artery disease and were twice as likely to have developed heart failure.

These researchers found that vitamin D plays an important role



in regulating blood pressure, inflammation and glucose – all important to cardiovascular health. Yet, despite these benefits many people are getting less of the vitamin than they used to. This is due in part to less exposure to sunlight (an important source of Vitamin D) because of increased time spent indoors and increased use of sunscreens. Also,

older adults and people who are overweight can be less efficient at making vitamin D in response to sunlight.

We aren't suggesting that you toss out your sunscreen. There is a simple blood test that your doctor can do to

determine if you have a Vitamin D deficiency. Vitamin D supplements are inexpensive and sold over the counter, but you need to be careful – excessive amounts of vitamin D can be toxic.



Heart at Work

Natalie Diltz, PA - C is a recent graduate with a Master's degree from the Kettering College of Medical Art's Physician Assistant Program. Natalie's primary responsibilities include assisting the physicians on their daily hospital rounds and performing primary medical care and clinical duties under the direction of our physicians. She also provides patient education and coordination of discharge planning and support.

Natalie is newly married and shares a home with her husband Travis and her two year old Boxer, Bruno. In her free time Natalie enjoys outdoor activities including hiking and scuba diving.

Prior to joining our practice, she was on active duty at Wright-Patterson Air Force Base and the Bethel Township Fire Department. Natalie is still with the U.S. Air National Guard.

Welcome Natalie!

NEWS You Can Use

You may notice some changes at our Needmore Rd. building on your next visit to The Dayton Heart Center. Digestive Specialists, a full service digestive care practice will be moving into the first floor offices in September of this year.

Digestive Specialists was founded 40 years ago and has

grown to a practice with 13 physicians led by Dr. Ramesh Gandhi. In addition to the new offices, Digestive Specialists will offer state-of-the-art diagnostics at its Endoscopy Center which will also be located on the first floor. Digestive Specialists has six offices throughout the Dayton area. Its North Main Street



office will be relocating to our building.

Patients visiting Digestive Specialists will be directed to park

at the front of the building, so this should not have any effect on your ability to find parking. Construction on these

offices began in March and is scheduled to be completed in August.

Protecting Athletes from Sudden Cardiac Arrest

We have all read about them in the news: young, strong athletes in top physical condition who die. Sudden cardiac arrest is the leading cause of death in young athletes and according to the publication *Circulation*, approximately 5,000 young people die suddenly each year. Sudden cardiac arrest occurs without warning, when the heart's electrical system stops working, so no blood is pumped throughout the body.

Could those deaths be prevented? It's hard to know, but more rigorous routine screening may be in order. There is no national screening standard for high school and college athletes in the U.S., although the American College of Cardiology and the American Heart Association (AHA) recommend that



Sudden cardiac arrest is the leading cause of death in young athletes.

schools conduct pre-participation screening (PPS) that consists of a physical examination and a medical history. This exam will allow physicians to determine whether or not additional testing might be necessary, such as an EKG or an echo. Generally these additional tests are not necessary or cost-effective for every athlete (they can result in false positive readings), but in certain

cases these tests are warranted.

It is also very important to have an AED (automated external defibrillator) at schools or any place that large groups of people gather. These devices can be expensive (around \$1,500) and many schools don't have these funds in their budget. Despite the cost these machines can literally be a lifesaver; so work with your school or athletic booster club to make a

plan to put an AED in place at your school or other gathering place.

Finally, make sure there is an overall emergency response plan. It doesn't help to have an AED if no one knows how or when the equipment should be used. These devices must also be readily available – not locked away in the nurse's office. The first three to five minutes can be crucial to survival.

Cardiovascular Effects of Weight Training

Research has shown that moderate intensity weight training with a high aerobic component has proven to be an effective means of controlling hypertension and promoting cardiovascular health.

An American Heart Association panel concluded that the biggest benefit may be the creation of greater lean body mass, which burns calories more efficiently and keeps weight in check. Strength training also improves the efficiency of the body's use of sugar, decreasing the odds of developing diabetes, a major risk in heart disease. The report confirms that moderate intensity weightlifting can reduce blood pressure in normal and borderline hypertensive individuals, which lowers the risk of stroke and coronary heart disease.

You should try to start with at least 2 days of strength training with light comfortable weights. As you progress, you can adjust the weight by no more than 5-10 lbs. Expect your body to take anywhere from 4-6 weeks to become completely accustomed to a new workout.



Clinical Research Department Impacts the Future of Medicine

Researchers are always looking for better solutions for treating disease. Before any new procedure, device, or drug can be used as a treatment it must be tested for effectiveness and safety. The medicines that you are using today were first tested as part of a clinical research study.

The Dayton Heart Center has had a clinical research department since 1999 when it was founded by Dr. Gary Fishbein. Since its inception the clinical research lab has helped in the development of promising new treatments and medications that directly benefit patients at The Dayton Heart Center. Our experienced staff has participated in over 50 worldwide studies.

The clinical research department, under the direction of Sharon Donahue, RN, BSN actively looks for studies that would directly benefit patients of The Dayton Heart Center. Recent studies

that our research department has conducted include new drugs for hypertension, cholesterol and new blood thinners. We also have tested drugs to combat coronary artery disease, peripheral vascular disease and new stents for the cath lab. The advantage for our patients is the ability to gain access to these cutting edge drugs and devices much sooner than the general public because approval of new medical innovations can be lengthy process.

The TDHC Clinical Research department generally participates in “stage three” clinical trials. These trials are much safer and much less invasive than the earlier stages in clinical development. At this point in the approval process the items being studied have generally proved to be safe – they just need large numbers of participants to prove that they are better or more effective than current treatments.



Frequently Asked Questions

How can I participate?

Because we use an electronic patient record system it's fairly simple for our staff members to identify good candidates for a study. You also can talk with your physician or contact Sharon Donahue at 937-276-8509 if you are interested in finding out if any of our current studies would be right for you.

Why should I participate?

Participating in clinical research studies literally helps you improve medicine for all patients and improve your own health care at the same time. Study participants receive:

- Access to new research procedures, drugs, or devices before they are widely available
- One-on-one medical care and direct access to medical staff for any issue, even those unrelated to the study
- Free treatments, medicines, screenings and doctor visits

How long does a study run?

It depends on the research study. These studies can vary from a few months to many years. You will be told the expected length of the research study before you start.

Can I leave a research study at any time?

You can leave a study at any time. Leaving a clinical trial before it is over will not result in any penalty to you.

What about insurance?

Your insurance carrier will not know about your participation in a research study – your participation is confidential. All of your medical care will be free and you will not need to use your insurance.

What about safety?

The research study follows a plan called a protocol. This plan details what researchers will do in the study. This includes the tests and procedures that will be done to watch your overall health and well being as well as your heart health. For example, you may receive blood tests or receive phone calls from the study nurse to ask how you are feeling.

All clinical research studies are regulated by the federal government. An institutional review board made up of doctors, ethicists and community members also review all clinical research. If the institutional review board thinks the planned study is not safe, they will not allow it to start. Also, as mentioned earlier, the clinical research studies that The Dayton Heart Center participates in are usually past the initial stages – meaning they just need large numbers to prove the hypothesis. Studies at this stage are quite safe.

Carotid Stenting: A Minimally Invasive Technique for Stroke Prevention

By Dr. Amit Goyal, MD



Your carotid arteries are located on each side of your neck and supply blood to your brain. When plaque builds up and reduces blood flow in your carotid arteries, you have carotid artery disease. Carotid artery disease is serious; when enough plaque builds up, clots can form on the plaque and block the blood flow to your brain or travel from the carotid artery into the brain. If this happens, you could have warning symptoms such as a TIA (a reversible stroke.) Some patients are not as lucky and the first sign they have is a permanent stroke resulting in major disability or even death.

Years ago, the only way to treat carotid artery disease was to perform a surgical procedure called carotid endarterectomy which surgically removes the built-up plaque. This was the standard of

care for many years, although it was not without significant risks. The procedure involves general anesthesia and clamping the carotid artery to prevent bleeding, which has the potential for brain injuries. Today, there is another option – a far less invasive procedure that involves the use of carotid artery stents.

Here's how it works: your physician inserts a thin plastic tube through a tiny incision in the leg. A filter is placed beyond the blockage to trap any plaque that may dislodge during the rest of the procedure. Then a balloon is inserted through the tube and is inflated which widens the artery. The balloon is deflated and removed. To prevent the newly widened artery from closing again, a wire mesh tube called a "stent" is put in place to hold the artery open

and further expand the artery. The filter and plastic tube are then removed. There are many advantages to this procedure including:

- Uses local, not general anesthesia which reduces the risk of heart attacks and other complications
- No visible incisions and less pain
- Shorter recovery time
- Flow of blood to the brain is not interrupted
- No risk of injury to nerves in the neck

Currently, carotid stenting has been approved for patients with neurologic symptoms who are at high risk for surgery. There are multiple factors that determine whether a patient is high risk for surgery or not. However, CMS (Centers for Medicare and Medicaid Services – which determine the standards of care for many insurance companies beyond Medicare)

is considering widening the group of individuals who are appropriate for this treatment. Recently, the Food and Drug Administration (FDA) Circulatory System Devices Panel voted in favor of expanding the use of these stents, stating that the benefits for symptomatic patients – even those with standard risks – outweigh the risks. Many doctors including me, feel that the results are at least as good if not superior for most patients – especially those who have higher risk levels – and there are numerous studies completed and ongoing currently to support this opinion.

Perhaps the most frequently cited obstacle to approving these stents is the learning curve in using these devices. Endarterectomy has been the standard of care for so long and many physicians are

quite familiar with the procedure. However, here at The Dayton Heart Center we have been successfully using carotid stents for the last 6 years since their initial approval for symptomatic high risk patients. We have also been involved in the studies, which are going to be instrumental in expanding the indications for carotid stenting to asymptomatic high risk patients in the future.

We are committed to staying abreast of the latest advances to ensure that our patients receive the most effective treatments. If you would like to know more about this type of stent or any type of stent, please ask your physician.

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Heart
Healthy

RECIPE

**Nutritional Analysis
(per serving)**

Calories: 146 (14% from fat)
Fat: 2.3g (sat 0.3g, mono
1.3g, poly 0.6g)
Protein: 5g
Carbohydrate: 27.6g
Fiber: 4.3g
Cholesterol: 0.0mg
Iron: 1.2mg
Sodium: 235mg
Calcium: 29mg

Recipe Source:

Cooking Light, January 2008

Barley and Wild Rice Salad

Serves 8 (serving size: about 2/3 cup)

In addition to fiber, whole grains like wild and brown rice offer plenty of vitamins B6, E, and folate to maintain heart health.

1 3/4 cups fat-free, less-sodium chicken broth
1/2 cup uncooked brown and wild rice mix
1/2 cup uncooked pearl barley
3/4 cup rinsed and drained canned chickpeas
(garbanzo beans)
1/3 cup golden raisins
1/4 cup sliced green onions
2 tablespoons red wine vinegar

1 1/2 teaspoons extra virgin olive oil
1 teaspoon Dijon mustard
1/4 teaspoon salt
1/4 teaspoon freshly ground black pepper
2 tablespoons chopped fresh basil
2 tablespoons slivered almonds, toasted

Combine first 3 ingredients in a medium saucepan; bring to a boil. Cover, reduce heat, and simmer 40 minutes or until liquid is absorbed. Remove from heat, and let stand, covered, 5 minutes. Spoon rice mixture into a medium bowl. Add chickpeas, raisins, and green onions.

Combine vinegar and next 4 ingredients (through pepper) in a small bowl; stir with a whisk. Pour over barley mixture; toss well. Cover; chill 2 hours. Stir in basil and almonds.