

# ESRD Patient News

The Carlisle-Williams Foundation, Inc.

Volume 1, Issue 2

## Special points of interest:

- The value of meditation
- Good news in our efforts to lower blood pressure
- Less is more with treating some kidney diseases
- New advances in treatment

## Inside this issue:

Benefits of Meditation	2
Two Drugs No More Effective than One for APKD	3
Spare Tire may be Especially Bad for Blood Pressure	4
Gene Test may Spot Kidney Transplants more likely to Fail	4
Don't Take your Mental Health for Granted	5
Getting Healthier a Big Money-Saver for Diabetics	5
Women Less Likely to Get Dialysis than Men	6
New Venture Closes in on Nanotech for Kidney Disease	7
Payment and Treatment for Dialysis Patients: CMS Issues Final Ruling	8
More Americans Controlling their High Blood Pressure	9
Injected Substance used with CT Scans seems Safe for Kidneys	9

## Prior Authorization of non-Emergency Ambulance Transportation for Dialysis Patients Begins in NJ, PA, and SC

The Centers for Medicare & Medicaid Services (CMS) will begin implementing a prior authorization demonstration program for non-emergent ambulance transport of dialysis patients in New Jersey, Pennsylvania and South Carolina. CMS believes using a prior authorization process will help ensure services are provided in compliance with Medicare coverage rules, specifically that ambulance providers in those states must obtain documentation from physicians prior to the beginning of service. The requirement does not apply to hospital-based ambulances.

CMS is taking these actions in response to instances of fraud in those three states. For example, one Pennsylvania fraud scheme involved more than \$3.6 million in false claims submitted to Medicare. An ambulance operator conspired to defraud Medicare by recruiting patients who were able to walk and could travel safely by means other than ambulance and who, therefore, were not eligible for ambulance transportation under Medicare requirements. The ringleaders falsified reports to make it appear that the patients

needed to be transported by ambulance when the defendants knew the patients could be transported safely by other means and that many of them walked to the ambulance for transport. They often paid illegal kickbacks to the patients as part of the scheme.

The new requirement goes into effect with the fourth instance of repeated non-emergent transportation. CMS says it has notified medical societies in those states of the new requirements. However, ambulance operators say many nephrologists were not notified, and fear they may have difficulty in obtaining the paperwork from busy doctors in a timely fashion.

Prior authorization will not change coverage rules or create new clinical documentation requirements; it will require the

same information necessary to support Medicare payment, just earlier in the process. CMS says prior authorization allows providers and suppliers to address issues with claims prior to rendering services and avoids need for an appeal process.

In 2012, CMS launched a prior authorization process for certain power mobility devices in seven demonstration states (California, Florida, Illinois, Michigan, New York, North Carolina and Texas). Since implementing the demonstration, CMS says it has observed a decrease in expenditures for power mobility devices.

<http://dialysispatients.org/articles/prior-authorization-non-emergency-ambulance-transportation-begin-dialysis-patients-new>



*ESRD Patient News—a publication of The Carlisle-Williams Foundation, Inc.—informs our readers of issues important to management and understanding of their disease and to further the Foundation’s mission of providing hope and support to ESRD patients. We welcome and encourage feedback through email (JanieC@esrd-patient-support.org) or by using the “Contact Us” form on the website. Thank you!*

## The Benefits of Meditation

By Eric Metcalf | Medically reviewed by Lindsey Marcellin, MD, MPH

[http://www.everydayhealth.com/alternative-health/mind-body-connection/meditation-for-health-purposes.aspx?pos=2&xid=nl\\_EverydayHealthManagingDiabetes\\_20141027](http://www.everydayhealth.com/alternative-health/mind-body-connection/meditation-for-health-purposes.aspx?pos=2&xid=nl_EverydayHealthManagingDiabetes_20141027)

This is how Kimberly Montgomery, 52, a clinical psychologist from Indianapolis, describes the experience of meditation:

Picture yourself in a room in a huge castle. You find the door that allows you to walk out of the castle, and you do so. As you cross to the other side of the moat and keep walking, the massive castle dwindles in size behind you, and you can now see the forest around it, and then a distant village.

Your "castle" could be a rut or something oppressive you're trapped in, and the meditation gives you a sense of space, says Montgomery.

Like Montgomery, a growing number of Americans are seeking the benefits of this popular form of alternative medicine. In 2007, a national survey found that nearly 10 percent of adults — more than 20 million people — had meditated in the previous year. That number had grown by nearly 24 percent since 2002.

### **Meditation: The Types**

During meditation, people typically rest in a quiet location and focus their mind on a particular thought or activity. There are two common forms of meditation: transcendental meditation and mindfulness meditation.

In transcendental meditation,

or TM, the practitioner sits in a comfortable position and silently repeats a sound, or mantra. Eventually, the individual reaches a state in which the mind is free of thoughts, and is silent, peaceful, but conscious.

Types of mindfulness meditation include:

**Zen Buddhist meditation.** With this type of meditation, you breathe in a precise manner while counting your breaths or focusing on a particular thought. As you do this, you become aware of being in the present moment.

**Mindfulness-based stress reduction (MBSR).** This program has been used to address chronic pain and illnesses. Again, it requires you to focus on your breath as it enters and exits your body, and when distracting thoughts intrude, you return your attention to the breathing and let the thoughts pass by. Another aspect involves "scanning" different parts of your body with your mind to assess the sensations in the parts.

### **Meditation: Health Benefits**

According to the National Institutes of Health, people use meditation for emotional health, such as to address anxiety and stress, as well as for physical problems, including controlling pain and symptoms of chronic diseases. Research has found, for example, that meditation may:

Relieve depression associated with fibromyalgia. In one study, women with fibromyalgia who participated in eight weekly

MBSR sessions had significantly improved depressive symptoms compared to women who did not meditate.

Reduce distress associated with rheumatoid arthritis. In another study, women with rheumatoid arthritis either participated in an eight-week MBSR course followed by a four-month maintenance program or were put into a control group receiving the MBSR after the study. At six months, women in the meditation group had significantly improved psychological distress and well-being.

### **Meditation: Peace of Mind**

A few years ago, Montgomery had stopped meditating. But when her employer offered a discount on a meditation course, she decided it was time to go back. "I just knew that my life felt more stressful, and I looked back on my life at the times that I'd felt the best and I thought, 'I've got to get back to that.'"

She sometimes wakes up early in the morning to do 45 minutes of meditation before her family gets up. She's noticed emotional and physical benefits from the meditation related to her chronic back condition.

"I do feel that it helps some of the inflammation in my back," she says. "I have frustration about my back problems — it's hard to accept things that you can't do. I'd say meditation has helped me to accept my limits on what I can do, but be committed to having the best life I can with what I have instead of trying to change it."



**The Carlisle-Williams Foundation, Inc. provides free comfort bags for use during dialysis. They include items for education, entertainment, and warmth. To request one, simply fill out the request form on the website and click submit.**

## Two drugs are no more Effective than One to Treat APKD

Using two drugs was no more effective than a single drug in slowing disease progression in people with autosomal dominant polycystic kidney disease (ADPKD), according to two studies funded by the National Institutes of Health (NIH). One of the studies also showed that rigorous blood pressure treatment slowed growth of kidney cysts, a marker of ADPKD, but had little effect on kidney function compared to standard blood pressure treatment.

The results of the HALT-PKD Clinical Trials Network studies will be published online November 15 in two papers in the *New England Journal of Medicine* to coincide with presentation at the American Society of Nephrology annual meeting.

“Enlarged cysts in kidneys can lead to reduced kidney function and eventually kidney failure, where the only treatment is dialysis or transplantation,” said study author Michael Flessner, M.D., Ph.D., a program director at the NIH’s National Institute of Diabetes and Digestive and Kidney Diseases, which funded the trial. “The HALT-PKD findings show that people with polycystic kidney disease do not need to take both of the drugs studied to slow their rate of kidney cyst growth and decline in kidney function.”

The HALT-PKD trial enrolled volunteers to test whether a combination of commonly used FDA-approved drugs, lisinopril and telmisartan, could shrink kidney cysts and therefore slow progression of ADPKD, a genetic disorder characterized by growth of fluid-filled cysts in the kidneys. Within the trial, one study examined 558 people with early-stage ADPKD and relatively healthy kidneys. The other study treated 486 people with more advanced disease and decreased kidney function. In each study, half of participants were randomly assigned to receive lisinopril and telmisartan, while the other half received lisinopril plus a placebo. In both studies, adding the second drug did not change kidney function or rate of increase in kidney cyst size.

In the study of people with early ADPKD and healthy kidneys, researchers also tested if decreasing blood pressure below usual targets would slow progression of ADPKD and preserve kidney function. High blood pressure is a common and damaging effect of ADPKD. Half the participants were assigned to a standard blood pressure group (between 120-130 over 70-80), and half to a lower blood pressure group (between 95-110 over 60-75) but still within the normal range.

Participants in the lower blood pressure group received more rigorous treatment, taking more medication to maintain a lower blood pressure. The lower blood pressure group had a 14 percent decrease in kidney cyst size compared to those in the standard blood pressure group. However, kidney function – measured by estimated glomerular filtration rate (eGFR) – was about the same as the standard group at the end of the trial, yielding no clinical benefit. About 15 percent more of the people in the lower blood pressure group experienced lightheadedness and dizziness.

“The HALT-PKD studies were well performed and the largest of their kind,” said Robert Star, M.D., director of the Division of Kidney, Urologic, and Hematologic Diseases within NIDDK. “More research is needed to better understand how polycystic kidney disease destroys kidney function over time, and what combination of medications can most safely and effectively prevent or undo the damage caused by this devastating condition.”

ADPKD is the most common kind of polycystic kidney disease, representing 90 percent of the approximately 600,000 U.S. cases. PKD is the fourth leading cause of kidney failure.

<http://www.nih.gov/news/health/nov2014/niddk-17.htm>

“Knowing what's right doesn't mean much unless you do what's right.”

Theodore Roosevelt

**“Weight gain around the middle was key to rising risk for hypertension”**

## ‘Spare Tire’ May be Especially bad for your Blood Pressure

URL of this page: [http://www.nlm.nih.gov/medlineplus/news/fullstory\\_148156.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_148156.html)  
(\*this news item will not be available after 12/01/2014)

By Robert Preidt

Tuesday, September 2, 2014

(HealthDay News) -- When it comes to excess pounds and blood pressure, all fat may not be created equal, a new study finds.

The research found that belly fat -- the proverbial "spare tire" -- boosts a person's odds for high blood pressure more than overall body fat.

It's well known that obesity raises the risk of high blood pressure. But it wasn't clear how the location of fat in the body affects that risk, according to researchers at University of Texas Southwestern Medical Center in Dallas.

Reporting Sept. 1 in the *Journal of the American College of Cardiology*

gy, the researchers tracked more than 900 people for an average of seven years. The study participants were checked for fat located deep in the abdomen between the organs (so-called "visceral fat"), fat located all over the body, and fat located on the lower body.

"Generally speaking, visceral fat stores correlate with the 'apple shape' as opposed to the 'pear shape,' so having centrally located fat when you look in the mirror tends to correlate with higher levels of fat inside the abdomen," study senior author Dr. Aslan Turer, a cardiologist at the medical center, explained in a journal news release.

One in every four of the study participants developed high blood pressure by the end of the follow-up period. After factoring in

where fat was located in the body, the researchers found that only the abdominal fat was independently associated with high blood pressure. This link was present regardless of age, gender or race, the researchers noted.

The strongest connection between abdominal fat and high blood pressure was seen with fat located around the kidneys, which suggests "that the effects from fat around the kidneys are influencing the development of hypertension [high blood pressure]," Turer said.

This is a new finding that "could open new avenues for the prevention and management of hypertension," he added.

SOURCE: *Journal of the American College of Cardiology*, news release, Sept. 1, 2014  
HealthDay

**“Researchers suggest it could be way to spot trouble earlier”**

## Gene Test may Spot which Kidney Transplants more Likely to Fail

URL of this page: [http://www.nlm.nih.gov/medlineplus/news/fullstory\\_149394.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_149394.html)  
(\*this news item will not be available after 02/09/2015)

By Robert Preidt

Tuesday, November 11, 2014

(HealthDay News) -- A preliminary gene test may help identify kidney transplant patients at risk of organ rejection, researchers report.

Organ rejection occurs in 15 percent to 20 percent of kidney transplant patients, even when they are given drugs to suppress their immune system. Typically, an increase in serum

creatinine -- a sign of kidney function -- warns of impending kidney rejection. A kidney biopsy is then performed to confirm whether a new kidney is being rejected by the body, according to background information in the study. The study was published Nov. 11 in the journal *PLoS Medicine*. However, testing for elevated creatinine levels does not always provide early warning about rejection and is not specific enough to prevent some unnecessary kidney biopsies. So a noninvasive method of identifying rejection is needed, wrote the study authors, from the University of California, San Fran-

cisco, and the University of Cincinnati.

The researchers developed a blood test that analyzes 17 genes that identify which kidney transplant patients are at risk of rejection. They then developed and assessed the test using hundreds of patients in the United States, Mexico and Spain.

The test was highly accurate in pinpointing patients at risk of rejection, the study authors said in a journal news release.

This "is a simple, robust, and clinically applicable blood test," said the researchers.

They added, however, that they

## Don't Take your Mental Health for Granted

End stage renal disease (ESRD) or kidney failure is the end of your kidney function, not your life. As a result, the DPC Education Center entered into an exciting new collaboration with the American Psychological Association (APA). We recently held our first joint webinar and Regional Meeting in Detroit. [Click here](#) to view the recorded webinar.

The diagnosis of stage 5 kidney disease or ESRD can be devastating. Grieving the loss of your kidney function is normal as long as it does not interfere

with living your life to the fullest.

Typically, the doctors focus on the physical aspects of your chronic illness. Ordering treatment plans, and medications to deal with the symptoms that are evident by lab results.

The biggest hurdle to surviving ESRD is the mental road block that some people never get past. They skip treatments and do not follow dietary or fluid restrictions and their hearts and vascular systems eventually wear out.

Remember in most cases, you

are reacting normally to an abnormal change in your life. Some things you can do to help relieve your stress are: recognize that your feelings are valid, talk to others (social workers can refer you to counselors who specialize in dealing with chronic illnesses), accept help from others, get plenty of rest, physical activity also helps and follow your dietitians advice on a proper diet.

For more information visit the Dialysis Patients Center at [www.dpc.org](http://www.dpc.org).

## Getting Healthier a Big Money-saver for People with Diabetes

[http://www.nlm.nih.gov/medlineplus/news/fullstory\\_147988.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_147988.html) (\*this news item will not be available after 11/19/2014) By Robert Preidt Thursday, August 21, 2014

(HealthDay News) -- Not only is eating better and exercising healthy for people with diabetes, it can save them hundreds of health-care dollars a year, a new study finds.

The study, led by Mark Espeland, a professor of public health sciences at Wake Forest Baptist Medical Center in Winston-Salem, N.C., included more than 5,100 overweight and obese type 2 diabetes patients.

Participants ranged in age from 45 to 76, and were randomly assigned to either an intensive "lifestyle change program" focused on diet and exercise, or to a standard diabetes support and education program.

The patients in the lifestyle group had higher levels of physical activity and maintained a lower body weight, resulting in better diabetes control, blood pressure, sleep, physical function and fewer

symptoms of depression, the team reported.

There were financial savings, too. Over 10 years of follow-up, the patients in the lifestyle intervention group had 11 percent fewer hospitalizations and 15 percent shorter hospital stays. They also used fewer prescription medications than those in the diabetes support and education programs.

Those benefits led to an average savings of \$5,280 in health-care costs per person over 10 years, or about \$528 a year, according to the study published online Aug. 21 in the journal *Diabetes Care*.

The cost savings for people in the lifestyle intervention group were similar regardless of age, initial weight, gender or race, Espeland said.

"Type 2 diabetes is a chronic disease that is affecting more and more adults, increasing their health-care needs and costs," he added in a Wake Forest news release. "This study shows that by losing weight and being physically

active, individuals can reduce these costs."

Two experts weren't surprised by the cost savings.

"It makes perfect sense that an intensive lifestyle intervention, focusing on weight loss and physical activity, would help control diabetes and reduce the cost of medications and complications related to type 2 diabetes," said Nina Eng, chief clinical dietitian at Plainview Hospital in Plainview, NY.

Dr. Gerald Bernstein is director of the diabetes management program at Mount Sinai Beth Israel in New York City. He said that once diabetes develops, costs soar. Patients must obtain medications plus blood sugar testing equipment and strips, and they often have diabetes-linked complications that involve hospitalizations and/or surgery.

Therefore, "it is not surprising that reducing weight will lower the cost of medical care for an individual if they have diabetes,"

***"Sticking with a fitness and nutrition plan can save more than \$500 a year in health-care costs, study finds."***

## Women Less Likely to Get Kidney Dialysis Than Men, Study Finds

URL of this page: [http://www.nlm.nih.gov/medlineplus/news/fullstory\\_149156.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_149156.html)  
(\*this news item will not be available after 01/26/2015) By Randy Dotinga

(HealthDay News) -- New research finds that women aren't treated with dialysis as often as men when they have end-stage kidney disease, and the gap seems to have little to do with biological differences between the genders.

The study, led by Dr. Manfred Hecking from Arbor Research Collaborative for Health in Ann Arbor, Mich., examined the use of hemodialysis -- a process in which

the blood is purified -- in more than 200,000 adults in 12 countries.

While men and women survived at about the same rate, 59 percent of men were on dialysis while only 41 percent of women were. Men were also more likely to get kidney transplants, the investigators reported in the October edition of PLOS Medicine.

It's not clear why the gap exists, the researchers said in a journal news release. Factors may include differences in patient care and

awareness of kidney disease, they suggested.

"The finding that fewer women than men were being treated with dialysis for end-stage renal [kidney] disease merits detailed further study, as the large discrepancies in sex-specific hemodialysis prevalence by country and age group are likely explained by factors beyond biology," Hecking and colleagues concluded in the report.

SOURCE: PLOS Medicine, news release, Oct. 28, 2014. HealthDay Copyright (c) 2014 HealthDay. All rights reserved.

“...the disparity doesn't seem to be related to biological differences...”

## Recipe—Mini Turkey Meatloaves

### Nutrition facts

Amount per Serving (2 mini loaves)

Calories: 240

Protein: 34.0 g

Total Fat: 6.0 g

Saturated Fat: 1.0 g

Cholesterol: 85 mg

Total Carbohydrate: 12.0 g

Dietary Fiber: 2.5 g

Sodium: 465 mg

### Take note—Contains Egg

Prepared in a standard 12-cup muffin tray, these mini meatloaves are automatically portion-controlled for you, making them a perfect entrée for people watching their weight.

Prep time 20 mins

Total Time 45 mins

This recipe makes 4 serving(s)

### Ingredients:

- 1 onion, finely chopped
- 1 red bell pepper, finely chopped
- 2 carrots, peeled and finely chopped (or grated)
- 1.25 pounds ground turkey (at least 90% lean)
- 2 egg whites
- 1/4 cup ketchup
- 1 teaspoon dried thyme

- 1/2 teaspoon dried sage

- 1/2 teaspoon Kosher salt

1/2 teaspoon ground black pepper

### Preparation:

Preheat the oven to 425°F. Liberally coat a muffin tray with oil spray and set aside.

Coat a large skillet with oil spray and sauté the onions, peppers, and carrots over medium heat until soft, 8 to 10 minutes. Remove the skillet from the heat and allow the vegetables to cool to room temperature.

In a large bowl, add the ground turkey, egg whites, cooled vegetables, ketchup, thyme, sage, salt, and pepper. Using your hands, mush the ingredients together until they are fully incorporated. Divide the meat mixture between 8 muffin cups, smoothing the tops of each mini-meatloaf to make it level. Bake for 20 to 25 minutes.

*Note: The meatloaves will generate some mushy goo on the top; simply wipe it off and discard after the meatloaves have cooled slightly.*

Cooked mini meatloaves may be individually wrapped and frozen for up to 2 months.

*Makes 8 mini meatloaves*

<http://www.joybauer.com/healthy-recipes/mini-turkey-meatloaves.aspx?>

utm\_source=Food+Cures&utm\_campaign=8139cca239-LI\_FC\_Quick\_Dinner8\_26\_2014&utm\_medium=email&utm\_term=0\_35b319312a-8139cca239-134925305



## New Venture Closes in on Nanotechnology Solution to Arterial, Heart and Kidney Diseases

PRLog - Oct. 8, 2014 - ASH-LAND, Mass. -- NuVascular Technologies, Inc. has recently been spun-out from BioSurfaces, Inc. to commercialize the next generation of medical devices manufactured using cutting-edge nanotechnology that would improve the lives of millions who suffer from serious conditions such as arterial, heart and kidney disease.

This platform technology was developed over a 10-year period as a result of \$6.6 million in funding obtained from National Institutes of Health. The newly formed NuVascular Technologies, currently in discussions with the FDA, holds an exclusive license for this technology and has a management team with a wealth of experience in the health, research and academic fields.

Co-founders Eugene J. Anton, a serial entrepreneur with a history of success in the biotechnology space, and Matthew D. Phaneuf, an established biomaterials scientist with a track record of award-winning research and an inventor of the technology, are developing medical solutions that mimic the natural scaffold onto which tissue grows while also incorporating targeted drug delivery. Using the latest in nanotechnology,

NuVascular Technologies' groundbreaking electrospinning process will help treat different aspects of arterial, heart and kidney diseases with the goal of dramatically reducing complications.

"These diseases affect millions in the United States and around the world. We've seen the heartbreaking impact that heart, vascular, and kidney diseases have on the patients and their families," Anton said. "At NuVascular Technologies, our goal is to provide a better treatment for these ailments and help patients live better and longer lives."

Approximately 200 million people worldwide are affected by arterial disease. In the United States, 26 million people are at risk for end-stage renal disease, and 5.1 million are affected by heart failure.

"The numbers are staggering. With so many people afflicted with these diseases, there needs to be better options available," Phaneuf said. "The progress made at NuVascular Technologies will help to reduce complications associated with these devices and speed up the healing process, allowing these people to return to a better quality of life."

The NuVascular Technologies'

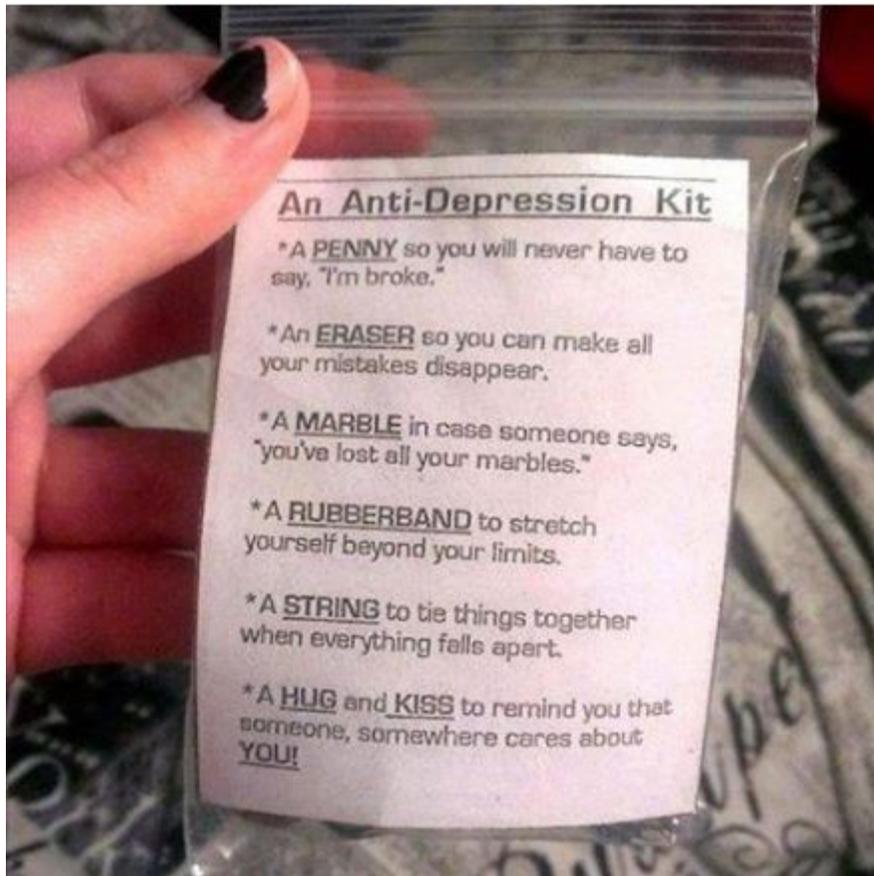
approach is a vast improvement over the current industry standard of thicker woven and knitted biomaterials, which never fully heal within the body resulting in possible complications. With NuVascular Technologies' devices, drugs and other bioactives are incorporated directly into the electrospun fibers, drastically improving healing and reducing complications. This "first-in-class" drug-loading allows for a release rate and duration that can be tailored for specific devices and is a vast improvement to mainstream approaches, which either do not have the capacity to locally deliver drugs or use binding agents that can cause complications. These breakthrough technologies far exceed the benefits of other treatments in the market.

Contact Jade Terry  
\*\*\*@hkamarcom.com

<http://www.prlog.org/12380818-new-venture-closes-in-on-nanotechnology-solution-to-arterial-heart-and-kidney-diseases.html>

**NuVascular Technologies, Inc. utilizes patented electrospinning process to create new medical devices to help millions**





If you would like information on stress management workshops or support groups in your area, please contact us through the contact form on our website or email [JanieC@esrd-patient-support.org](mailto:JanieC@esrd-patient-support.org).

## Payment and Treatment for Dialysis Patients: CMS Issues Final Rulings

Posted on [November 3, 2014](#)

On Friday, October 31, the Centers for Medicare & Medicaid Services (CMS) issued final regulations regarding payments to dialysis facilities and quality measures dialysis facilities must meet in 2017 and 2018 to avoid facing a penalty.

In summary, CMS will increase the base amount that facilities get paid by \$0.41, but rural facilities will see a small cut in their payments as a result of overall payment changes designed to better align payment with the updated costs of providing the care. CMS will also make changes to the quality measurements outlined in the [Quality Incentive Program \(QIP\)](#). The goal of the new measures in the QIP is to encourage dialysis facilities to communicate and coordinate with the patient's entire healthcare team, and to improve upon the level of attention and care the staff gives to patients.

The entire article can be read by going to this link. <http://nkfadvocacy.wordpress.com/2014/11/03/payment-and-treatment-for-dialysis-patients-cms-issues-final-rulings/#more-1088>

## More Americans Controlling their High Blood Pressure

URL of this page: [http://www.nlm.nih.gov/medlineplus/news/fullstory\\_149489.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_149489.html)  
(\*this news item will not be available after 02/15/2015)

By Robert Preidt

Monday, November 17, 2014

HealthDay News) -- A growing number of Americans with high blood pressure are keeping their condition under control, a new U.S. government study reports.

Researchers examined national data on more than 9,200 people with high blood pressure -- a reading of at least 140/90 millimeters of mercury (mm Hg) -- who were surveyed between 2003 and 2012.

The results showed that the number of people who achieved optimal blood pressure (less than 120/80 mm Hg) rose from 13 percent to 27 percent in that time

frame. And the percentage who achieved pre-hypertensive levels of blood pressure (between 120/80 mm Hg and 139/89 mm Hg) rose from 19 percent to 33 percent.

The findings were to be presented Sunday at the American Heart Association (AHA) annual meeting in Chicago and were published simultaneously in the AHA journal *Hypertension*.

"This is definitely good news," according to Sung Sug Yoon from the National Center for Health Statistics at the U.S. Centers for Disease Control and Prevention, where the study was conducted.

The increasing number of Americans with high blood pressure who are keeping their condition

under control has reduced the numbers of heart attacks and strokes, and hospitalizations and deaths due to heart disease, the researchers noted in an AHA news release.

However, they added, 48 percent of those with high blood pressure still do not have it under control, which is well above the goal of 38 percent in the federal government's Healthy People 2020 initiative.

According to government reports, one in three American adults has high blood pressure, which increases the risk for heart disease and stroke.

SOURCE: American Heart Association, news release, Nov. 16, 2014

*"Government researchers report the numbers are looking better, but national goal not yet reached."*

## Injected Substance used with CT Scans seems Safe for Kidneys: Study

By Robert Preidt TUESDAY, Sept. 9, 2014 (HealthDay News) --

An injected iodine-based substance often used to enhance the images produced by CT scans is safe for most patients, a new study reveals.

The so-called contrast material is used in at least half of the 80 million or more CT scans performed in the United States each year, according to study author Dr. Robert McDonald, a radiology resident at the Mayo Clinic in Rochester, Minn.

Some studies have linked iodine-based contrast CTs to kidney damage, a condition known as contrast-induced nephropathy. However, some of that research

dates back to the 1950s, according to the new study.

To get a better idea of what the current risk might be, McDonald and colleagues analyzed data on almost 11,000 patients who underwent contrast-enhanced CT exams, comparing them to about the same number of patients who underwent non-contrast CT exams.

The investigators found no significant difference between the two groups' rates of acute kidney injury -- about 5 percent in each group -- or in their rates of emergency kidney dialysis in patients, or death within 30 days after their procedures.

The study groups included

people with reduced kidney function and high-risk conditions -- such as heart failure and diabetes -- that are believed to predispose patients to kidney injury, according to the study published online Sept. 9 in the journal *Radiology*.

"These results challenge long-held assumptions regarding the presumed [kidney-toxic] risk of intravenous contrast material," McDonald said in a journal news release. "We hope that our findings will help refine the safety profile of these contrast agents."

SOURCE: *Radiology*, news release, Sept. 9, 2014. HealthDay Copyright (c) 2014 HealthDay. All rights reserved. URL of this page: [http://www.nlm.nih.gov/medlineplus/news/fullstory\\_148284.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_148284.html) (\*this news item will not be available after 12/08/2014).

*"Don't believe everything you think."*

## Good News in Disease Treatment

### Milestone Reached in Work to Build Replacement Kidneys in the Lab

WINSTON-SALEM, N.C. – Sept. 9, 2014 – Regenerative medicine researchers at [Wake Forest Baptist Medical Center](#) have addressed a major challenge in the quest to build replacement kidneys in the lab. Working with human-sized pig kidneys, the scientists developed the most successful method to date to keep blood vessels in the new organs open and flowing with blood. The work is reported in journal [Technology](#).

“Until now, lab-built kidneys have been rodent-sized and have functioned for only one or two hours after transplantation because blood clots developed,” said Anthony Atala, M.D., director and professor at the [Wake Forest Institute for Regenerative Medicine](#) and a senior author on the study. “In our proof-of-concept study, the vessels in a human-sized pig kidney remained open during a four-hour testing period. We are now conducting a longer-term study to determine how long flow can be maintained.”

If proven successful, the new method to more effectively coat the vessels with cells (endothelial) that keep blood flowing smoothly, could potentially be applied to other complex organs that scientists are working to engineer, including the liver and pancreas.

The current research is part of a long-term project to use pig kidneys to make support structures known as “scaffolds” that could potentially be used to build replacement kidneys for human patients with end-stage renal disease. Scientists first remove all animal cells from the organ – leaving only the organ structure or “skeleton.” A patient’s own cells would then be placed in the scaffold, making an organ that the patient theoretically would not reject.

The cell removal process leaves behind an intact network of blood vessels that can potentially supply the new organ with oxygen. However, scientists working to repopulate kidney scaffolds with cells have had problems coating the vessels and severe clotting has generally occurred within a few hours after transplantation.

The Wake Forest Baptist scientists took a two-pronged approach to address this problem. First, they evaluated four different methods of introducing new cells into the main vessels of the kidney scaffold. They found that a combination of infusing cells with a syringe, followed by a period of pumping cells through the vessels at increasing flow rates, was most effective.

Next, the research team coated the scaffold’s vessels with an antibody designed to make them more “sticky” and to bind endothelial cells. Laboratory and imaging studies -- as well as tests of blood flow in the lab – showed that cell coverage of the vessels was sufficient to support blood flow through the entire kidney scaffold.

The final test of the dual-approach was implanting the scaffolds in pigs weighing 90 to 110 pounds. During a four-hour testing period, the vessels remained open.

“Our cell seeding method, combined with the antibody, improves the attachment of cells to the vessel wall and prevents the cells from being detached when blood flow is initiated,” said In Kap Ko, Ph.D., lead author and instructor in regenerative medicine at Wake Forest Baptist.

The scientists said a long-term examination is necessary to sufficiently conclude that blood clotting is prevented when endothelial cells are attached to the vessels.

The scientists said if the new method is proven successful in the long-term, the research brings them an important step closer to the day when replacement kidneys can be built in the lab.

“The results are a promising indicator that it is possible to produce a fully functional vascular system that can deliver nutrients and oxygen to engineered kidneys, as well as other engineered organs,” said Ko.

Using pig kidneys as scaffolds for human patients has several advantages, including that the organs are similar in size and that pig heart valves – removed of cells – have safely been used in patients for more than three decades.

This study was supported, in part, by Telemedicine and Advanced Technology Research Center at the U.S. Army Medical Research and Materiel Command.

Co-researchers were Mehran Abolbashi, M.D., Jennifer Huling, B.S., Cheil Kim, M.D., Ph.D., Sayed-Hadi Mirmalek-Sani, Ph.D., Mahmoud-