



# The Kidney Corner: *Ultrasound of the kidneys*

By Dr. Mark Saddler  
Durango Nephrology Associates



There are various ways to image the kidneys, ultrasound being the most common.

Ultrasound is a method of imaging that uses high-frequency sound waves to "bounce" off internal body structures. The returning sound waves are then reconstructed into images that can be used diagnostically. The pitch of these sound waves is too high for the human ear to hear (around 2 megahertz, the highest most human ears can hear is about 20 kilohertz).

Ultrasound machines may be portable, used at the bedside, and have become an invaluable tool for imaging fetuses in the womb, heart valves, internal organs and so forth. Ultrasound imaging is very safe and is not known to cause any harmful effects, even to the unborn fetus.

Ultrasound of the kidneys yields valuable information about the structure of the kidney, but little about its function. Some of my patients are surprised when I tell them that even though they have chronic kidney disease, their kidney ultrasound looks nearly normal.

However, ultrasound imaging

The collecting system becomes dilated by the obstruction, a condition called "hydronephrosis."

Of all causes of chronic kidney disease, this may be the most important to detect, because relief of the obstruction can result in improvement or even complete correction of the kidney function. The most common cause of urine obstruction in men is prostate enlargement.

Ultrasound can also detect tumors and kidney stones, though its accuracy for these conditions is not as high as CT scanning, so if a tumor or stone is suspected, a CT scan is often preferentially requested.

A refinement of ultrasound, called "Doppler," can be used to look at flow in arteries and veins. This has been used to detect narrowing of the kidney arteries, though the usefulness of ultrasound in looking for this disease is controversial.

Ultrasound is also used to image the kidneys for procedures, most notably kidney biopsy. In this procedure, a small piece of kidney tissue is removed using a needle. We now usually use ultrasound to guide the needle for this procedure. This has resulted in improved tissue and greater safety for patients undergoing this procedure.

may still be very useful in patients with chronic kidney disease. For one thing, it gives valuable clues about how long the kidney disease has been present. This is because longstanding kidney disease tends to cause scarring in the kidneys, which shows up on ultrasound as increased brightness, or "echogenicity."

A highly echogenic, or bright-looking, kidney has probably had problems for a long time, and this knowledge can be very valuable when setting up treatment for patients with chronic kidney disease.

Occasionally, ultrasound can demonstrate the underlying cause for kidney disease. For example, obstruction of the urine is usually easily detectable by ultrasound:

## United Blood Services blood drive dates and locations

<b>March 26</b> 12:30 p.m. – 5:30 p.m. Pine Valley Foursquare Church Fellowship Hall 1328 CR 50, Bayfield	<b>March 29</b> 10 a.m. – 3 p.m. Pagosa Springs High School Music Room 800 S. 8th St., Pagosa Springs	<b>March 30</b> 1:30 – 5 p.m. St. Columba Catholic Church Parish Hall 1830 East 2nd Ave., Durango
<b>March 27</b> 10 a.m. – 1 p.m. Sun Ray Park & Casino Stingrays Banquet Room 39 CR 5568, Farmington, N.M.	11 a.m. – 3 p.m. Jicarilla Apache Health Care Facility Rooms 308-309 12000 Stone Lake Rd. Jicarilla Service Unit 12000 Stone Lake Rd., Dulce, N.M.	<b>April 2</b> 1:30 – 5:30 p.m. Ignacio Community Vida Peabody Conference Rm. 14324 Hwy 172, Ignacio
10 a.m. – 4:30 p.m. Mercy Regional Medical Center Conference Rooms A & B 1010 Three Springs Blvd. Durango	3 – 7 p.m. First Baptist Church of Aztec Fellowship Hall 700 Navajo St., Aztec, N.M.	<b>April 4</b> 1:30 – 6 p.m. Riverview Elementary Gymnasium 2900 N. Mesa Ave., Durango

# New campaign aims to educate Colorado smokers

Media release  
Colorado Dept. of Health

The U.S. Centers for Disease Control and Prevention has launched a national education campaign depicting the harsh reality of illness and damage real people suffer as a result of smoking and exposure to secondhand smoke.

The ads show the toll smoking-related illnesses take on real people and their loved ones. Viewers in Colorado will see the ads from March 19 to June 4. The "Tips from Former Smokers" campaign features compelling stories of former smokers living with smoking-related diseases and disabilities. The ads focus on smoking-related lung and throat cancer, heart attack, stroke, Buerger's disease and asthma. Smokers who quit also pass along tips about what helped them succeed.

"Though they may be tough to watch, the ads show real people living with real, painful consequences from smoking," said CDC Director Dr. Thomas R. Frieden. "There is sound

evidence that supports the use of these types of hard-hitting images and messages to encourage smokers to quit, keep children from ever beginning to smoke and drastically reduce the harm caused by tobacco."

"We identified tobacco as one of Colorado's 10 winnable battles because it is the leading cause of preventable death in our state," said Dr. Chris Urbina, executive director and chief medical officer of the Colorado Department of Public Health and Environment. "This campaign educates the public on the serious and long-term dangers of smoking and secondhand smoke for individuals and their families."

Despite the known dangers of tobacco use, nearly one in five adults in the U.S. and one in six adults in Colorado smoke. Forty percent of Coloradans report unwanted exposure to secondhand smoke, and more than 30 percent of children are exposed to tobacco smoke at home. More than 4,300 Coloradans each year lose their lives to smoking-related

diseases, and for every one person who dies, another 20 live with a smoking-related illness.

Still, nearly 70 percent of smokers say they want to quit, and half try to quit each year.

Many of the ads are tagged with 1-800-QUIT-NOW, a toll-free number that directs callers to the Colorado QuitLine to access free support for quitting. The Colorado QuitLine is a free telephone coaching service that connects people who want to quit smoking to an experienced quit coach. The quit coach works with the smoker to set up a personal quit plan and provides tips and support to increase the chances of quitting tobacco for the long term.

Along with individualized coaching, the telephone service offers a free supply of nicotine patches. The telephone coaching service is available seven days a week, in English and Spanish. Online quit support is also available at [www.smokefree.gov](http://www.smokefree.gov).

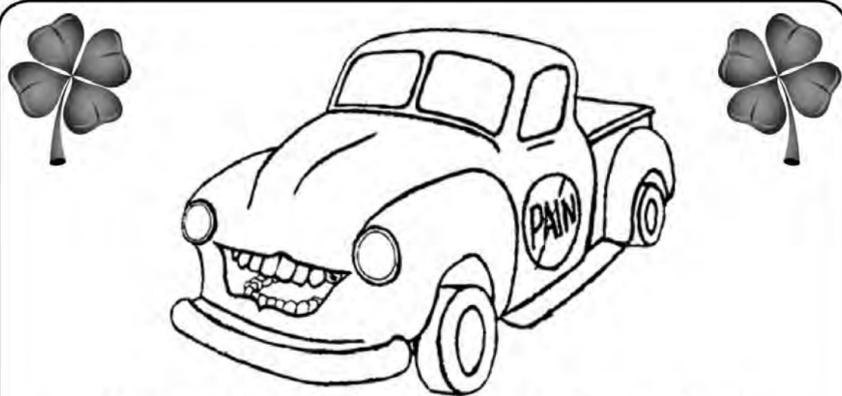
For more information on the "Tips from Former Smokers" campaign, visit [www.cdc.gov/quitting/tips](http://www.cdc.gov/quitting/tips).

## AmeriCorps on the trail



photo courtesy Lynelle Stricherz/Ignacio School District

In honor of AmeriCorps week March 10 – 18, the 16 local volunteers sponsored by Southern Ute Community Action Programs took a day to help with work on the Bobcat Trail that connects Ignacio High School to the mesa to the west on Wednesday, March 14.



Off Piedra Road – Look for "Smiles" the Red Truck

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For existing patients — bring us a new patient (friend, family or coworker) for exam and x-rays and BOTH of you get a FREE Sonicare

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Pagosa Smiles.com  
731-DOCS (3627)

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Saving Lives Through Education

4/15/12  
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Time: 12:30 to 5:00

Ignacio Library  
Community Room



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Instructors: Don Folsom  
Phone: 970-563-8246 x3301  
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**The life you save may be your own.**

Sign up now for this defensive driving educational course and become a better driver. You may use this course for getting your learner's permit under the graduated licensing law. You can satisfy a court ordered advanced driving course requirement. You may ask your insurance company for a discount after completing this course. You learn how to take control when driving.