Rethinking Cholesterol
Updated guidelines focus on risk of heart attack or stroke

Remember when cholesterol was defined by a simple number? No more. Cholesterol is now defined as a combination of who you are and your lifestyle. As a result, more Americans could be taking medication to lower it. Jennifer Robinson, MD, University of Iowa professor of epidemiology and internal medicine, served on the expert national panel that reviewed the previous guidelines and came up with the new ones. She notes that the old guidelines focused mainly on lowering patients’ bad LDL cholesterol to a certain number. The new guidelines, announced by the American College of Cardiology (ACC) and the American Heart Association (AHA), focus on patients’ risks of heart attack and stroke.

THE GUIDELINES TARGET FOUR HIGH-RISK GROUPS:
• People who have had heart attacks, other heart diseases, strokes, or artery blockages
• People with genetically high cholesterol levels
• People with diabetes
• People at high risk for heart disease and stroke

For these high-risk groups, doctors are advising statins—medications that block the liver from making too much cholesterol. Robinson estimates that about 32 million Americans fit into one of these four groups, but only half of those with heart disease and diabetes are currently taking statins. “The new guidelines could increase doses for people requiring statins, as well as the overall number of people taking them,” she says. In addition to the new guidelines, the ACC and AHA developed an online cardiovascular risk calculator to help doctors determine if patients might benefit from statins. Age, sex, race, blood pressure, and smoking status are taken into account. Experts hope these changes will foster discussions between doctors and patients and lead to better health.

“We won’t necessarily be treating more people (with statins). We’ll be treating people more appropriately.”
—Jennifer Robinson, MD

For a video interview with Dr. Robinson and more on this story, visit uihealthcare.org/healthatiowa

New blood pressure guidelines, too
And they could mean fewer medications for some. Visit uihealthcare.org/healthatiowa

‘Astoundingly fortunate’
Math professor counts his blessings after major heart attack

Yes, it was a funny feeling in the chest. But a heart attack? It just didn’t add up for Jonathan Simon, a professor of mathematics (now retired) at the University of Iowa. The feeling had developed while he walked indoor laps one chilly day in January 2012. “Very unpleasant, a little like bronchitis,” he says.

Carelessly, Jon realized later, he walked more laps to see if his symptoms would improve. They didn’t. He decided to drive to UI QuickCare – Old Capitol Town Center in downtown Iowa City. The walk-in clinic serves people who feel ill but don’t need an emergency room or can’t get to their regular doctors.

On this day, the UI QuickCare team—which includes nurse practitioners and physician assistants—would save Jon’s life. His heart sounded OK, but a more extensive evaluation was needed at UI Hospitals and Clinics.

“So I sat down and called my wife,” Jon says. “As we talked, I began to feel dizzy. That’s the last thing I remember for the next five days.”

Jon had suffered a major heart attack in which one of the main coronary arteries was abruptly and completely blocked. He had gone into sudden cardiac arrest, a life-threatening condition. Fortunately, the UI QuickCare team responded immediately by shocking Jon’s arrested heart with a defibrillator. A Johnson County Ambulance crew took him to the hospital, where he awoke five days later—on his 68th birthday.

During that span, UI Heart and Vascular Center specialists had implanted a coronary stent to fix the blockage and used a temperature management system, which induced hypothermia and placed Jon in a temporary comatose state. This prevented brain damage.

“I’m truly grateful that the university’s medical teams did everything right and they did it quickly,” Jon says. “I feel astoundingly fortunate.”

For more on this story, visit uihealthcare.org/healthatiowa
Burlington mom survives rare form of dangerous preeclampsia

A Tale of Symptoms Ignored

Kelli Carlson’s first pregnancy was a doozy. “In the beginning, I was sick a lot and then I was OK for a while,” recalls the 26-year-old resident of Burlington, Iowa. In the third trimester, severe pain developed in her upper right chest and there were numerous headaches, yet it was still regarded as a normal pregnancy. By her 36-week appointment, however, Kelli was getting sicker with frequent severe headaches. Her unrecognized condition was preeclampsia, characterized by high blood pressure and excess protein in the urine. Untreated, preeclampsia can lead to dangerous seizures (eclampsia) and life-threatening liver, lung, and kidney failure. Kelli’s sickness—still undiagnosed—ultimately got so bad that she was virtually incapacitated. Doctors in Burlington performed an emergency C-section, which led to the birth of a normal, healthy son, Camden. Unfortunately, Kelli’s kidneys, liver, and pancreas were failing, and she was experiencing septic shock, a life-threatening whole-body infection. This led to an AirCare flight to University of Iowa Hospitals and Clinics, where Kelli spent the next 87 days. She underwent three life-saving surgeries and spent 47 days in surgical intensive care. Finally—joyously—she returned home to her husband and newborn son. Mark Santillan, MD, a maternal-fetal medicine specialist, was a member of the UI Women’s Health team that worked to save Kelli’s life. He says her maternal-fetal medicine specialist, was a member of the UI Women’s Health team that worked to save Kelli’s life. He says her unrecognized symptoms were “classic signs” of a rare form of severe preeclampsia. “We tell our patients to look for upper abdominal pain, blurry vision, and headaches that don’t go away with simple medicines like Tylenol,” Santillan says. “We always tell our patients to trust their symptoms and tell their OB (obstetrician) provider if they don’t feel right.”

Far more on this story, including a video, visit uihealthcare.org/healthatiowa

‘If you feel something’s wrong, something’s wrong. Get the attention you need. Even if it turns out that everything’s OK, at least you’ve made sure.’

— Kelli Carlson, preeclampsia survivor

FACTS

PREECLAMPSIA

• Appears during second half of pregnancy
• More likely in first pregnancies, multiple births, teens, and women over 35
• Chronic high blood pressure
• Kidney disorder
• Diabetes
• Prior preeclampsia
• Family history
• Angiotensinogen gene T235 (increases average risk 20 times)

RISK FACTORS

Through 15 years of chronic kidney disease, including two transplants, Tonia Sina Ellis has dealt with countless side effects. Most personal for her was the stigma of poor body image. This was difficult for a college theater instructor who teaches aspiring actors the art of portraying romantic scenes on stage. “I needed to see myself as a woman, as a beautiful person, which is hard to do when you have tubes coming out of you,” she says. So she started a blog. “I wanted to do something that shows beauty in a body that has so many malfunctions,” she says. Indeed, the blog’s professional photos document her efforts to accept her body’s transformations. Tonia’s first transplant occurred in 2005, thanks to a donated kidney from her mother. It turned out she had a rare disease called atypical hemolytic uremic syndrome (aHUS). Little is known about aHUS or how to treat it. Tonia’s online search for information about aHUS led her to University of Iowa Hospitals and Clinics, where researchers study the disease. In January 2013, she and Matthew met with nephrologist Carla Nester, MD, and transplant surgeons Zoe Stewart, MD, PhD, and Daniel Katz, MD. Matthew turned out to be a good donor match, so the transplant was performed on March 7, 2013. Afterward, Tonia used all of her strength to walk into Matthew’s room to thank him and marvel at his amazing generosity. She admits she would be lost without him. “Matthew knows how to get me out of my anxiety or my fear,” she says, adding, “I’ve been to a lot of hospitals and had a lot of trauma from those places. Iowa has the best combination of quality of care and professionalism of staff and does I’ve seen.”
Keeping dreams ALIVE

UI spine surgeon helps teen gymnast return to competition

Macall Campbell has been a gymnast for as long as she can remember. She competed locally for years until, in the eighth grade, she was eligible for regionals and, eventually, nationals. That same year, though, she noticed a twinge of back pain. The pain worsened and became more noticeable. A bone in the spine had slipped out of position onto the bone below it, a condition called spondylolisthesis. Macall's mother, Cindy, recalls a chiropractor giving her some rehab techniques, cautioning her to take it easy, and telling her she might someday require surgery. Macall continued competing, making it all the way to nationals in San Diego, Calif. Upon arrival, her back pain was so intense she couldn't even practice. She withdrew from competition and headed for the emergency room. Macall's vertebra had slipped even more; surgery was necessary. Macall and Cindy returned home to Grimes, Iowa, then began searching for a specialist with whom they felt comfortable. Three different surgeons all said the same thing: Surgery was possible, but no more gymnastics. Finally, the Campbells learned about Stuart Weinstein, MD, a pediatric orthopedic surgeon at University of Iowa Children's Hospital. Protection from pertussis (whooping cough) appears to fade over time, however. Therefore, children between ages 7 and 10 should get a Tdap (tetanus, diphtheria, and pertussis) booster if they are behind on their DTap (diphtheria, tetanus, and pertussis) immunizations, which typically are given to children five times, beginning at 2 months old through age 6. Adults who recently received the Td (the usual adult tetanus) vaccine and who have close contact with an infant should still get Tdap in order to protect the infant. Studies indicate it is safe for adults to get the two immunizations close together if, for some reason, Tdap was not given at the first visit, Marks says. Currently, only one dose of Tdap vaccine is recommended for adolescents (age 11-18) or adults.

For more information on this story, visit uihealthcare.org/healthatiowa

Vaccines for pregnant women

The first rule of pregnancy is “keep yourself healthy.” This means making sure vaccinations are up to date, says Rachel Maassen, MD, an obstetrician-gynecologist at University of Iowa Hospitals and Clinics in Iowa City and UI Health Care—Iowa River Landing in Coralville.

“For example, the vaccine for measles, mumps, rubella (MMR) should be received a month or more before pregnancy because you can’t get the rubella shot after you’re pregnant.”

More on pertussis

Pertussis vaccines are safe and effective, says Jessie Marks, MD, a pediatrician at University of Iowa Children's Hospital. Protection from pertussis (whooping cough) appears to fade over time, however. Therefore, children between ages 7 and 10 should get a Tdap (tetanus, diphtheria, and pertussis) booster if they are behind on their DTap (diphtheria, tetanus, and pertussis) immunizations, which typically are given to children five times, beginning at 2 months old through age 6. Adults who recently received the Td (the usual adult tetanus) vaccine and who have close contact with an infant should still get Tdap in order to protect the infant. Studies indicate it is safe for adults to get the two immunizations close together if, for some reason, Tdap was not given at the first visit, Marks says. Currently, only one dose of Tdap vaccine is recommended for adolescents (age 11-18) or adults.

For women who are already pregnant, two vaccinations are essential:

• Flu
• Tdap (tetanus, diphtheria, and pertussis)

“Everyone should be vaccinated against the flu,” Maassen says, “but it’s especially important for pregnant women because they are immunocompromised.” Tdap is a relatively new vaccine emphasized for pregnant women. Pertussis (whooping cough) earns special attention as one of the most common vaccine-preventable diseases. Whooping cough spreads easily through personal contact, coughing, and sneezing. The disease can produce severe bouts of coughing and cause babies to stop breathing. “To protect themselves and their babies, women should receive the Tdap vaccine during each pregnancy, ideally at 27 through 36 weeks,” Maassen says. “All family members and caregivers of infants—babysitters and grandparents included—should also get the vaccine.” Babies don’t receive their first tetanus–diphtheria-acellular pertussis vaccine until 2 months old and aren’t fully immunized until 6 months old.

Macall Campbell is back in competition after successful spine surgery.
Here’s important news for aspiring teen drivers in Iowa: A new state graduated driver’s license law strengthens the licensing rules for young, inexperienced drivers. Longer instruction time behind the wheel is now required for teen drivers (age 14-16) with a provisional license or an instructional or school permit. The new law also seeks to reduce distractions caused by multiple passengers in vehicles driven by novices. “While the new law isn’t perfect, those of us in injury prevention are pleased because motor vehicle crashes kill more teens than anything else,” says Pam Hoogerwerf, coordinator of community outreach and injury prevention at University of Iowa Children’s Hospital. Hoogerwerf says the law increases the time for holding a permit to one year (from six months), giving novice drivers the opportunity to experience all types of weather. That change, and limiting to one the number of unrelated minor passengers who can ride with an unsupervised driver during the first six months of being issued an intermediate license, will help with distraction issues. “States with these types of laws have seen significantly fewer crashes by teenage drivers,” she says. To enhance awareness, the Kohl’s Keeping Kids Safe program at UI Children’s Hospital is educating teen drivers and parents on this important issue.

UI safety experts support graduated licensing system

David Shepek’s heart has been through a lot. The 58-year-old survived a heart attack that resulted in heart failure 12 years ago, and he has been a University of Iowa Heart and Vascular Center patient ever since. His heart may be in bad shape, but that’s just what a UI research team needs. Heart attacks damage the heart muscle, resulting in enlargement. When this occurs, the heart cannot pump blood as effectively, leading to heart failure symptoms such as shortness of breath, lack of appetite, swelling, and fatigue. Since January 2013, UI Heart and Vascular Center researchers have participated in the Parachute IV Clinical Trial. This multicenter clinical research trial uses an implant called the Parachute® Ventricular Partitioning Device to restore both the shape and function of a heart damaged by a heart attack so the remaining healthy heart tissue can work more efficiently. The Parachute® device is being tested.

The trial has more than 70 participants nationwide but needs hundreds more.

“Parachute is a proactive thing, not a reactive thing,” says Shepek. “We’re making moves that are going to be beneficial down the road.”

For more information, visit uichildrens.org/GDL

Recent studies indicate that passenger restrictions reduce the injury risk associated with young, inexperienced drivers.

For more information, contact the UI Heart and Vascular Center Cardiomyopathy Treatment Program at 319-356-1028, or visit uihealthcare.org/congestiveheartfailure

CLINICAL TRIAL IS TESTING ‘PARACHUTE’ DEVICE TO HELP SAVE BAD HEARTS

‘Rip cord’ for the heart?

New law affects teen drivers

For more information, visit uichildrens.org/GDL

‘Rip cord’ for the heart?

For more information, contact the UI Heart and Vascular Center Cardiomyopathy Treatment Program at 319-356-1028, or visit uihealthcare.org/congestiveheartfailure

TEEN DRIVING RISKS

• Teen drivers have a 40 percent increased risk of being involved in a crash when they have one friend in the car
• Of the 71 fatalities involving young drivers in Iowa (age 15-20), 29 (41 percent) were the drivers themselves and 19 (27 percent) were passengers in the vehicles driven by the young drivers (2008)
• 1 in 5 ninth- through 11th-graders has been involved in at least one crash as a passenger in the past year

David Shepek’s heart has been through a lot. The 58-year-old survived a heart attack that resulted in heart failure 12 years ago, and he has been a University of Iowa Heart and Vascular Center patient ever since. His heart may be in bad shape, but that’s just what a UI research team needs. Heart attacks damage the heart muscle, resulting in enlargement. When this occurs, the heart cannot pump blood as effectively, leading to heart failure symptoms such as shortness of breath, lack of appetite, swelling, and fatigue. Since January 2013, UI Heart and Vascular Center researchers have participated in the Parachute IV Clinical Trial. This multicenter clinical research trial uses an implant called the Parachute® Ventricular Partitioning Device to restore both the shape and function of a heart damaged by a heart attack so the remaining healthy heart tissue can work more efficiently. The Parachute® device is being tested.

The trial has more than 70 participants nationwide but needs hundreds more.

“Parachute is a proactive thing, not a reactive thing,” says Shepek. “We’re making moves that are going to be beneficial down the road.”

For more information, visit uichildrens.org/GDL

Recent studies indicate that passenger restrictions reduce the injury risk associated with young, inexperienced drivers.

For more information, contact the UI Heart and Vascular Center Cardiomyopathy Treatment Program at 319-356-1028, or visit uihealthcare.org/congestiveheartfailure

TEEN DRIVING RISKS

• Teen drivers have a 40 percent increased risk of being involved in a crash when they have one friend in the car
• Of the 71 fatalities involving young drivers in Iowa (age 15-20), 29 (41 percent) were the drivers themselves and 19 (27 percent) were passengers in the vehicles driven by the young drivers (2008)
• 1 in 5 ninth- through 11th-graders has been involved in at least one crash as a passenger in the past year

David Shepek’s heart has been through a lot. The 58-year-old survived a heart attack that resulted in heart failure 12 years ago, and he has been a University of Iowa Heart and Vascular Center patient ever since. His heart may be in bad shape, but that’s just what a UI research team needs. Heart attacks damage the heart muscle, resulting in enlargement. When this occurs, the heart cannot pump blood as effectively, leading to heart failure symptoms such as shortness of breath, lack of appetite, swelling, and fatigue. Since January 2013, UI Heart and Vascular Center researchers have participated in the Parachute IV Clinical Trial. This multicenter clinical research trial uses an implant called the Parachute® Ventricular Partitioning Device to restore both the shape and function of a heart damaged by a heart attack so the remaining healthy heart tissue can work more efficiently. The Parachute® device is being tested.

The trial has more than 70 participants nationwide but needs hundreds more.

“Parachute is a proactive thing, not a reactive thing,” says Shepek. “We’re making moves that are going to be beneficial down the road.”

For more information, visit uichildrens.org/GDL

Recent studies indicate that passenger restrictions reduce the injury risk associated with young, inexperienced drivers.

For more information, contact the UI Heart and Vascular Center Cardiomyopathy Treatment Program at 319-356-1028, or visit uihealthcare.org/congestiveheartfailure

TEEN DRIVING RISKS

• Teen drivers have a 40 percent increased risk of being involved in a crash when they have one friend in the car
• Of the 71 fatalities involving young drivers in Iowa (age 15-20), 29 (41 percent) were the drivers themselves and 19 (27 percent) were passengers in the vehicles driven by the young drivers (2008)
• 1 in 5 ninth- through 11th-graders has been involved in at least one crash as a passenger in the past year
Let’s start with a simple fact: Virtually everyone benefits from healthful eating and activity. Research shows that even if you exceed your ideal weight, being active lowers your risk of death and many diseases. Furthermore, many healthful foods like fruits and vegetables have been shown to reduce your risk of diseases like cancer. We’ve heard this sage advice before, yet lots of smart people still struggle to maintain a healthy weight. Time pressures, stress, lack of cooking skills, and jobs involving a lot of sitting sometimes create poor eating habits and promote inactivity. If only there was a magic shortcut to set things straight! There isn’t, of course, but that doesn’t mean it’s impossible to live healthier. I suggest starting with changes that are easier to make. Whatever your plan, include both diet and physical activity. Research shows that the people who actually maintain their weight loss are those who include exercise in their routines. When it comes to food, think natural. Eat lots of fruits and vegetables. The nutrition from nature’s garden far exceeds what you get elsewhere, including multivitamin pills. Whole grains, for instance, contain fiber that helps your gut move and lowers your cholesterol.

As for exercise, try something you enjoy. I like to focus on “physical activity” rather than “exercise” anyway. For many people, walking is a great place to start. Get a pedometer and start counting your steps. The goal is 10,000 steps a day, five days a week, but start by finding out where or how you are now and adding 500 steps. It doesn’t matter where you get your steps: around the house; down the street; parking farther away; playing with your children; walking with a friend; exercising in a group; gardening; hiking; biking; or dance class. Whatever you enjoy. There are also benefits to exercises that build muscles such as using weights or doing exercises that use your own body as a weight. My primary focus is actually on being active and eating healthful foods rather than weight. People who give up on the former just because they are not losing a lot of weight are missing out on health benefits and feeling better. To work on weight once you are eating well and being active, it’s all about portion sizes or burning more calories. The people most successful at weight loss track what they are eating and the exercise they are doing. Give it a try… and have fun doing it!

Pan seared rainbow trout (1 serving)

**Ingredients**
- 1 whole rainbow trout (6 oz) butterflied, deboned, and cleaned
- 1 Tbs extra virgin olive oil
- ½ lemon, juiced
- Pinch of kosher salt

**Directions**
Add oil to non-stick skillet and heat to medium-high heat. Place trout in skillet, skin side down. Cook for two minutes. Turn fish over, finish cooking one more minute. Remove trout from pan; add remaining ingredients to pan for a few seconds to heat through. Pour heated mixture over fish to serve.

Celery root salad (4 servings)

**Ingredients**
- 1 large celery root (1.25 lb.), shredded
- 3 Tbs fresh squeezed lemon juice
- 1 qt. water
- 3 Tbs low fat mayonnaise
- 3 Tbs Dijon mustard
- 1 shallot, minced (¼ Cup)
- 1 Tbs tarragon vinegar
- 1 tsp sugar
- 2 tsp parsley, chopped
- 6 sprigs fresh thyme, whole
- 4 tomatoes, chopped
- 6 garlic cloves, whole
- 1 Tbs white wine vinegar
- 1 shallot, minced (¼ Cup)

**Directions**
Peel, clean, and shred celery root. Combine water and lemon juice in bowl. Place celery root in water. Mix mayonnaise, mustard, vinegar, parsley, and shallot together in bowl. Add celery root and toss. Serve on bed of lettuce.

Stewed chicken (4 servings)

**Ingredients**
- 4 boneless, skinless chicken breasts
- 1½ Tbs extra virgin olive oil
- ½ Cup onion, chopped
- 1 14-ounce can artichoke hearts, drained and chopped slightly
- ½ Cup onion, chopped
- 6 sprigs fresh thyme, whole
- 1 tsp garlic powder
- 2 tsp sugar
- ¾ tsp salt
- ¼ tsp black pepper
- 1 tsp paprika

**Directions**
In hot pan, add olive oil. When oil is hot, add chicken; brown on both sides. When chicken is browned, add rest of ingredients. Cover pan and cook on low heat for 20-25 minutes.

Rainbow trout

**Ingredients**
- ½ lemon, juiced
- 1 Tbs parsley, chopped
- 1 Tbs capers
- 2 tsp capers
- 1 Tbs parsley, chopped
- 1 shallot, minced (¼ Cup)

**Directions**
Put the juice and parsley into a small bowl. Mix well and get the nutritional information at uihealthcare.org/healthatiowa

**Watch CHEF HIB** make all our recipes on video and get the nutritional information at uihealthcare.org/healthatiowa

Enjoy these culinary delights from Chef Hilbert Stoelk and the food and nutrition services staff at UI hospitals and clinics.

Ask an Expert

**AH, THE GOOD LIFE! SUGARY SODAS, AROMATIC PIZZAS, COMFY TV COUCHES. WHO CAN RESIST? YOU CAN, THAT’S WHO!**

HELENA LAROCHE, MD, is an assistant professor of internal medicine

**EASY STARTS**

- Move the candy dish off your desk
- Put the junk food at the far back of the cupboard or out of the house altogether
- Eat from smaller plates
- Leave the rest of the food in the kitchen so you have to get up to get it
- Stay away from all-you-can-eat buffets (or at least sit far away from the buffet with your back to the food)
Multivitamin

CASE CLOSED?

Are multivitamins worthless?
Find out more at uihealthcare.org/healthatiowa.

Stroke care in Iowa just got better

Learn how a National Institutes of Health award to the University of Iowa is improving stroke care in Iowa by creating a new level of collaboration among stroke research centers nationwide. Visit uihealthcare.org/healthatiowa.

Affordable health insurance is here

No matter what your income or employment status, you now have access to quality, government-qualified health plans. You may be eligible for help in paying for insurance or the cost of health services. Call the UI Health Care Enrollment Center at 319-356-2208 (toll free 855-844-8442) or go online to the new Health Insurance Marketplace, a one-stop shop with plans to fit your budget and coverage needs. Visit uihealthcare.org/enroll to learn more.