New Blood Pressure Guidelines May Relax Treatment Goals for Some Patients

However, controlling blood pressure remains a serious issue, and its importance is often underappreciated.

The Eighth Joint National Committee (JNC8) guidelines on the management of adult hypertension (high blood pressure) contain some significant changes from previous guidelines, which were released a decade ago in 2003 by the JNC7. One change is the recommendation that adults age 60 and older aim for a blood pressure reading no higher than 150/90 mm Hg, rather than the previous target of 140/90 mm Hg. The goal for adults with diabetes or chronic kidney disease was raised as well, from 130/80 mm Hg to 140/90 mm Hg.

The new guidelines can be found in the Feb. 5, 2014 issue of the Journal of the American Medical Association.

Not all physicians agree with the new recommendations, including some who served on JNC8. The main concern is that raising the BP target might reverse decades of declining heart attack and stroke rates. Some physicians may stick with the old guidelines issued by JNC7. Others are considering following guidelines issued by the American Society of Hypertension and International Society of Hypertension, which appeared at the same time as JNC8 but make different recommendations. Still others are waiting until the American Heart Association and American College of Cardiology issue their own guidelines on blood pressure control early next year.

While physicians across the country consider their alternatives, Weill Cornell internist Meredith Lash-Dardia, MD, is taking a practical approach.

Continued on page 7
Fibromyalgia symptoms may respond to vitamin D supplementation

People who suffer from the chronic pain and fatigue of fibromyalgia may benefit from taking vitamin D supplements, according to a study published in the February 2014 issue of the journal *PAIN*. Since there is no known cure for fibromyalgia, treatment focuses on relieving symptoms, which often include ongoing pain in several areas of the body. Researchers assigned 30 women with fibromyalgia and low levels of calcifediol, a marker of vitamin D, to either a treatment or a control group. The treatment group, who took supplements of cholecalciferol (vitamin D3) for 25 weeks, reported experiencing less pain and morning fatigue than the control group, who took placebos. The researchers suggested that vitamin D levels be monitored regularly in fibromyalgia patients, and noted that a larger study is needed to confirm their results. Although vitamin D supplements are not harmful if taken in recommended doses, you should check with your physician before beginning any supplement regimen.

Promising bone-building drug in the pipeline

The experimental drug romosozumab may enhance bone density and help prevent fractures, according to findings published online Jan. 1, 2014, in the *New England Journal of Medicine*. Researchers compared the effects of romosozumab to a placebo and two drugs currently used to treat osteoporosis in a group of more than 400 women between the ages of 55 and 85 over a 12-month period. The study participants had osteopenia, or low bone mass, but not the more advanced condition of osteoporosis. Women treated with romosozumab had increased bone densities in their spines of an average of 11.3 percent, while the two drugs currently used to treat osteoporosis, Forteo and Fosamax, produced increases of 7.1 and 4.1 percent. Most drugs currently used to treat osteoporosis stop the progression of bone loss, but they do not rebuild bones. Romosozumab is believed to be unique in its ability to both stimulate bone production and prevent bone breakdown, or resorption.

Cardiovascular disease linked with higher risk of cognitive decline

Postmenopausal women with cardiovascular disease are more likely to experience a decline in cognitive function as they grow older, according to research that appeared in the *Journal of the American Heart Association* in December 2013. The researchers performed neurocognitive testing on more than 6,400 American women between the ages of 65 and 79 and found that those with heart disease, such as angina, or vascular disease, such as peripheral arterial disease, were 29 percent more likely to show a decline in cognitive function during the average 8.4-year follow-up than women without these types of diseases. Specific conditions associated with a higher risk of cognitive decline included heart attack, bypass surgery, and carotid endarterectomy (removal of a blockage in a neck artery). In addition, high blood pressure and diabetes were linked with a higher risk of cognitive decline. This research suggests that measures taken to protect the health of your heart and blood vessels is likely to benefit your brain as well, and stresses the importance of adopting lifestyle measures, such as getting regular exercise, eating a healthy diet, and maintaining a healthy weight, for both brain and heart health.

EXERCISE continued from page 1

also gives you the chance to try machines or exercises you may not be familiar with. When my patients ask me, I liken it to going to a new restaurant: Try a few different things on the menu until you find what you like best, and what fits your body type and your health goals.

I encourage my patients to pair up with “exercise buddies” so that they don’t get bored or stop their exercise routine. If you’re not an exerciser, look for ways to start slowly, and get some guidance from a physical therapist, exercise physiologist, or other certified health care provider until you’re comfortable with it. If you’re already an exerciser, try something new and challenging, so you work a variety of muscles and don’t get bored with your routine. It’s the very best thing to do for your long-term health.
Chronic Lower Back Pain Often Responds to Non-Invasive Treatments

Physical therapy and exercise, medications, and complementary therapies often provide relief.

There is a greater than 70 percent chance that you will have lower back pain in your lifetime, so it’s smart to be prepared and to know what action to take if and when it occurs.

The two most common causes of pain in the lower back include osteoarthritis (OA) and spinal stenosis (narrowing of the spinal canal).

“Intervertebral discs are the flexible segments of the spine that function as shock absorbers and cushion the spine during motion. As we age, these discs begin to dehydrate—lose water,” explains Jaspal Ricky Singh, MD, assistant professor of clinical rehabilitation medicine and co-director of the Weill Cornell Spine Center. “Women tend to get back pain when these discs lose height or water content, and if they develop arthritis in the small joints of the back, known as facet joints. Arthritis in these joints typically causes pain with standing, walking, and sometimes lying down, while sitting and leaning forward often provide relief.”

Doctors who treat lower back pain

Many back pain issues can be addressed by primary care physicians, according to Dr. Singh. However, problems that require a specialist, such as ongoing pain that does not respond to standard treatments, should be referred to a spine or pain physician. Pain management doctors specialize in the diagnosis and management of pain conditions, especially those related to the lower back and neck. Psychiatrists, neurologists, and anesthesiologists all can be specialists in pain management.

To test or not to test?

Most lower back pain episodes get better in about six weeks with or without treatment. However, for pain that does not subside or is accompanied by other symptoms, imaging tests may be necessary.

“Depending on the history and physical examination,” says Dr. Singh, “imaging may be necessary to rule out any potentially harmful conditions and to visualize the patient’s anatomy. Initially, x-rays can be useful in looking at the bony structure, and to determine if OA is present in the spine.”

Dr. Singh adds that if a patient has neurologic deficits, such as weakness, balance issues, or loss of bladder/bowel control, magnetic resonance imaging (MRI) is useful in evaluating the spinal cord and soft tissues.

MRIs may show arthritis or degeneration that does not cause pain. “In a group of 100 women over the age of 50,” says Dr. Singh, “I would expect to see about 30 to 40 percent with spinal arthritis, yet they do not complain of pain. In the end, we treat patients and their symptoms, not pictures (images).”

Non-invasive treatments

Dr. Singh is a firm believer in physical therapy and exercise as the first line of treatment for patients with lower back pain. Having a strong core, which includes the abdominals, the obliques, and the lumbar extensors of the back, is imperative for a healthy spine. If these muscles are strong, the discs, facet joints, and other structures will bear less weight and therefore undergo less wear and tear.

Pain medications for low back pain may include acetaminophen (Tylenol), ibuprofen (Advil, Motrin), or naproxen (Aleve). Narcotics may be used for short periods with close medical supervision, and low doses of antidepressants, such as amitriptyline (Elavil), have been shown to relieve back pain.

“In some patients,” says Dr. Singh, “acupuncture, chiropractic, and even spinal injections might be used if the initial treatment program does not provide significant relief.”

Short of surgery, pain management specialists offer several interventions. These include epidural steroid injections, facet and sacroiliac joint injections, and ablation (radio frequency) of nerves.

Surgical procedures

Surgical intervention in cases where the pain does not radiate into the legs is not as effective as once believed, and some insurance companies won’t cover it. There are more than 50 surgical options, but back surgery typically has two purposes: decompression for patients who have a disc or bone pressing on a nerve, and fusion surgery, which stabilizes and strengthens a weak area in the spine.

The best option

The best option is prevention; you can do a lot to delay or avoid lower back pain.

“Smoking has been shown to increase the prevalence of back pain due to the obstruction of nutrient-providing blood vessels,” says Dr. Singh. “In addition, obesity plays a role. Every extra pound of weight in the abdomen places an additional five to 10 pounds of pressure on the lumbar spine.”

“In summary,” he concludes, “maintaining an active lifestyle, losing weight, and smoking abstinence all promote a healthy life and a healthy spine.”
What PET Scans and Other Imaging Tests Reveal about Brain Health

PET scans provide information about brain function, but they are not a mainstream diagnostic tool.

Of the rapidly advancing technologies doctors can use to view the brain, PET (positron emission tomography) scans are seen as especially promising for the early detection of Alzheimer’s disease (AD). However, the high costs of PET scans and uncertainties about their role in dementia assessment are among the many issues taken into account when considering the use of this powerful brain imaging technique.

Norman Relkin, MD, PhD, Director of the Weill Cornell Memory Disorders Program, states that PET scans are not performed routinely in every dementia assessment. However, PET scans may provide helpful information when symptoms start at an unexpectedly early age or follow an unusual course. For example, an otherwise healthy person in their 40s displaying possible symptoms of AD might be an appropriate candidate for PET, because less than two percent of people who develop AD do so before 65 years of age. But, even in such cases, PET would be considered only if other standard tests do not reveal the cause for the cognitive decline.

Imaging advances

A newer type of PET scan that was approved in 2012 is designed to find beta-amyloid plaques in the brain—an important indicator of AD. Amyloid PET by itself can’t be used to definitively diagnose AD, but advances may soon make it possible to use PET scans to see abnormal tau protein in the brain as well—another indicator of AD.

“We’re close to having the right combination of PET markers so an AD diagnosis can be made with a level of certainty we’ve only dreamed about in the past,” Dr Relkin comments.

Dr. Relkin says advances in neuroimaging, as well as biomarkers in the blood and spinal fluid, are helping doctors better determine who is likely to develop AD before symptoms become advanced. “It used to be the case that we had to wait for the dementia process to be fairly far along before we could diagnose AD,” Dr Relkin points out. “These new imaging techniques and biomarkers are making earlier diagnosis a reality.”

How PET works

In positron emission tomography, a radioactive substance called a tracer is used. The tracer is injected into a vein and travels to organs via the bloodstream. If the tracer binds to certain areas in the body, it shows up on an image that a physician can use to help make a diagnosis.

PET scans can show the function of the brain or its chemical makeup. This differs from a computed tomography (CT) scan or magnetic resonance imaging (MRI), which show the structure of organs and blood flow to and from organs.

“The type of scan that’s appropriate depends on what problems are suspected,” Dr. Relkin says. “With CT or MRI, we’re looking for more concrete things: Was there a stroke? Is there a tumor present? With PET, we’re asking, how is the brain functioning? Or, what abnormal substances have accumulated within it?”

Types of PET scans

There are primarily two types of PET scans used to study the brain in dementia evaluations. A fluorodeoxyglucose (FDG) PET scan reveals how active the different parts of the brain are based on how much sugar (glucose) those areas use for their fuel. Research suggests that AD is associated with reduced use of glucose by cells in the parts of the brain involved in memory, speech, and higher reasoning. An amyloid PET scan highlights the presence of beta-amyloid proteins clumping together in the brain, which is a recognized feature of AD.

PET risks, limitations

Despite the information that can be gleaned from a PET scan, it is not a test that should be administered to everyone. Because it uses a radioactive tracer, patients and physicians should be mindful that a PET scan contributes to an individual’s accumulated radioactive exposure.

Dr. Relkin also points out that PET scans cannot yet confirm with 100 percent certainty whether a person will or won’t develop AD. A PET scan may show the presence of amyloid clumps, but research has shown that not everyone with those protein deposits goes on to develop dementia. Likewise, a negative PET scan doesn’t guarantee that a person won’t develop AD later in life.
Popular Exercise Programs: Pick the One That's Best for You

Select activities that you enjoy and that address strength, endurance, balance, and mobility.

Weight training, aerobics, stability balls, Zumba? The problem for middle-aged and older women is not the availability of exercise programs; it’s finding the right one.

“Before starting any vigorous exercise program, make sure you don’t have health issues that would make it dangerous,” says Polly de Mille, RN, RCEP, CSCS, USAT, an exercise physiologist at the Weill Cornell-affiliated Hospital for Special Surgery. “It would be wise to have medical clearance if you have risk factors such as heart disease, hypertension, or high cholesterol, as well as a history of smoking or sedentary lifestyle.”

She suggests starting at a level that is appropriate for your age and physical condition. “Sooner or later, bodies become less forgiving than they used to be. Don’t get into something you can’t handle. When you start, wear the right workout clothes (loose, but not too loose) and shoes that support repetitive weight-bearing activities. Set yourself up for success and safety.”

Aim for a well-rounded program
A complete program should include exercises that build or maintain strength, balance, endurance, and mobility/flexibility. A person can have good strength, but poor cardiovascular health; great flexibility, but weak muscles; reasonable overall conditioning, but poor balance. The goal, then, is to find the combination of physical activities that improves all four areas.

✔ Core exercises strengthen all of the muscles circling the trunk, particularly the deeper muscles that stabilize the spine, according to de Mille. “Core exercises should be a part of every program. If your core isn’t strong, you probably have a greater risk of injury.

Core strength is an essential part of moving with proper alignment.”

Stability balls (large, semi-soft, and inflatable, also called balance balls or exercise balls) are a great way to develop core strength. There are scores of individual exercises, as well as entire programs, based on the use of stability balls.

✔ Aerobic exercise includes a wide variety of programs, such as Jazzercise step aerobics, and Zumba. They are set to music and are great for cardiovascular fitness, flexibility, and calorie-burning.

“These programs, when supervised correctly, are fun, and can be modified so that everyone can work at her own pace,” says de Mille.

Brisk walking, jogging, running, cycling, swimming, and water exercises are other examples of aerobic activities. Thirty minutes is the standard, but most people should gradually build up to that length of time.

✔ Resistance training involves lifting weights, performing modified push-ups or sit-ups or other body-weight exercises, or using elastic bands or other equipment that provides resistance.

One popular resistance and flexibility device is the kettlebell—a cannonball-shaped weight with a handle. It’s a perfectly acceptable type of weight, but it is important to get instruction in proper kettlebell lifting techniques.

Yoga, tai chi, and Pilates are all good for core strength and flexibility, but do not provide effective cardio workouts. They should be considered as a piece of a well-rounded program, not the entire program.

The bone density issue
For all women age 50 and older, exercise should address bone density. “Bones get stronger in two ways,” de Mille says. “One involves ground reaction forces, like walking, jogging, or running; the other is the pull of muscles on bones, which is strength training. Swimming, cycling, or Pilates alone are not weight-bearing, so they will not benefit bone density as much as weight-bearing exercise or strength training.”

Groups versus at-home programs
Exercise groups can be motivating, enjoyable, and an affordable way to get individual instruction. But, for some people, going somewhere to exercise is a deterrent. If you prefer to exercise at home on your own, get a certified professional to show you how to conduct the exercises safely and with proper technique.

The pay-off
“Exercise affects every system of the body. Some benefits are immediate, and others are long-term,” says de Mille. “You can expect to see blood glucose levels, energy, and mood improve right away. Improvement in flexibility and mobility will take a little longer. Gains in strength and bone density may take several weeks or months.”

Keep trying programs until you find one that resonates with you, that you enjoy, and that you will stick with. It’s never too late to start. 🏋
Ensure Accurate Readings with In-Home Blood Pressure Monitors

Follow these steps and suggestions for reliable results.

The American Heart Association recommends that, if you have hypertension, you regularly monitor your blood pressure (BP) with a home monitor. Research shows people who use home monitors regularly tend to keep their blood pressure under control more effectively.

“Studies consistently show that readings taken at home are better indicators of risk, and, therefore, a better guide to the need for treatment, than are office readings. I encourage most of my patients to check their blood pressure at home,” says Samuel Mann, MD, professor of clinical medicine at Weill Cornell Medical College and author of the book, Hypertension and You (Rowman Littlefield, 2012).

Benefits of in-home readings

Taking BP measurements at home can help you determine whether or not you have “white coat hypertension,” which is when your BP is elevated at the doctor’s office but not elsewhere.

“Many patients and doctors wrongly believe that the ‘white coat’ phenomenon occurs only if you feel very nervous when a doctor is checking BP, but that is incorrect; it also may occur even if you do not feel nervous,” notes Dr. Mann. If you and your doctor discover that your BP is lower when measured at home, it can result in a reduction of medication and medication costs. Monitoring BP at home also means fewer visits to your doctor.

Ensuring accuracy

Many patients doubt the accuracy of in-home monitors themselves, but Dr. Mann says that the problem is usually not the monitors, but how they are used.

First, choose the right monitor. Dr. Mann says to use a monitor with an arm cuff, rather than a wrist or finger cuff, as these have been shown to be less reliable than arm cuffs.

Dr. Mann also recommends using an automatic, rather than a manual, monitor. “With a manual monitor, the act of pumping the bulb, deflating the cuff at the proper rate, listening for the sounds, and the effort involved can affect your BP while you are measuring it.”

Choose a reliable brand of monitor; Dr. Mann recommends the brand Omron for most of his patients. (See What You Should Know for more information on brands of monitors.) Check the accuracy of your monitor at your doctor’s office once every year or two.

Also, be sure you are using the correct size cuff; incorrect cuff size will produce inaccurate readings.

Check your BP in one arm, not both; most right-handed people find it easier to put the cuff on their left arm.

Do not check your BP immediately after putting on the cuff; Dr. Mann says this is perhaps the most frequent cause of misleadingly high home readings.

“After you put on the cuff, sit for three to five minutes before you inflate it,” he advises.

How often and how many?
The number and timing of readings that you take also are important.

“Don’t take just one reading; take three readings, about one to two minutes apart,” says Dr. Mann. “After you take three readings, record them, and then take off the cuff.”

Check your BP no more than twice a week. “If a patient is checking her BP several times a day, it indicates that she is likely anxious about her BP, and this can affect the readings,” says Dr. Mann. However, if you have recently changed medications or have severe hypertension, follow your doctor’s orders, which may include checking it more frequently.

Take BP readings at random, ordinary times. “If you check your BP only when you think it is high—for example, when you are angry or upset—you will get higher BP readings, but these elevations are only temporary, and they are not representative or your usual BP,” notes Dr. Mann.

Gather information

Using a home BP monitor also can provide you with helpful information about what affects your BP.

“You can perform your own experiments and determine what elevates your BP and what doesn’t,” says Dr. Mann. For example, you can use your monitor to see if taking cold remedies or anti-inflammatory drugs, drinking coffee or other caffeinated beverages, getting vigorous physical exercise, or reducing the sodium in your diet raises or lowers your BP.
“JNC8 put a lot of effort into investigating the relationship between blood pressure and cardiovascular outcomes. They must not have found much difference in outcomes with higher blood pressures, because they gave the recommendation to raise the target blood pressure in patients 60 and over their highest grade, an A,” she says. “They said that if your blood pressure is stable at less than 150/90 mm Hg, keep doing what you are doing.”

Numbers are not absolute
While the numbers are debated, there’s no magic line delineating “bad” blood pressure from “good.” Rather, blood pressure and its associated problems exist on a spectrum.

“As a society, we say you should take action at 150/90 mm Hg. But it’s really a continuum of worsening disease,” Dr. Lash-Dardia explains. “If your blood pressure is hovering around this number, it’s in an undesirable place, and you need to lower the range that it’s in.”

Medications and other treatments
JNC8 also made some changes to the recommended medications used to control blood pressure, the order in which they are used, and the blood pressure reading at which treatment should begin.

Medications are only one type of blood pressure treatment, however. Lifestyle measures—exercising regularly and eating a healthy, balanced diet—are equally important. In fact, for some people, adopting lifestyle strategies eliminates the need for medication.

“In general, if you are sedentary, overweight, and eat a sodium-heavy diet, you can lower blood pressure on your own. If you are fit and are exercising and eating well, and you can’t get your blood pressure down low enough, you need medication,” says Dr. Lash-Dardia.

Lifestyle is key to BP control
The best thing you can do to lower your blood pressure is to get moving, advises Dr. Lash-Dardia.

“Strive to elevate your heart rate and break a sweat three to four times a week for 45 minutes,” she says. “It will have a huge impact on your mental, as well as your physical, state. It changes how much you want to eat, and makes you less prone to overindulging. You will feel stronger and more in control.”

Her second suggestion is to eat a healthy diet that is high in fruits and vegetables and low in sodium—the DASH (Dietary Approaches to Stop Hypertension) diet, for example, which was developed specifically for blood pressure control.

Dr. Lash-Dardia points out that diet and exercise produce benefits that go far beyond blood pressure control: They help lower your risk of heart attack and stroke by lowering your cholesterol and blood sugar levels. That’s why she recommends sticking with a diet and exercise plan, even if your blood pressure is controlled with medications.

Take high BP seriously
High blood pressure is one of the most common medical problems in the U.S., affecting at least 68 million adults. It plays a role in 69 percent of first heart attacks, 77 percent of first strokes, 74 percent of cases of chronic heart failure and contributes to nearly 1,000 deaths every day.

Less than half of people with high blood pressure keep the condition under control. Often, it’s because they don’t understand the need.

“Many people don’t know how powerful an impact blood pressure has on quality and length of life. It’s our job to help patients understand why it’s important to care and motivate them to bring it under control,” says Dr. Lash-Dardia.

Blood pressure goals:
- Less than 140/90 mm Hg (age 60+)
- Less than 150/90 mm Hg (age 60+)

Blood pressure goal: Less than 140/90 mm Hg

Medications
- Antihypertensives
- Diuretics
- Calcium channel blockers
- Angiotensin-converting enzyme inhibitors
- Angiotensin receptor blockers
- Beta blockers

THE DASH DIET
The DASH (Dietary Approaches to Stop Hypertension) diet includes the following types of foods and number of servings* for a person who consumes an average of 2,000 calories per day:

- Grains and grain products (at least 3 whole-grain foods each day): 6-8 daily
- Vegetables: 4-5 daily
- Low-fat or nonfat dairy foods: 2-3 daily
- Fats and oils: 2-3 daily
- Fruits: 4-5 daily
- Lean meats, fish, and poultry: 6 ounces or less daily
- Sweets and added sugars: 5 or fewer per week

*Go to www.nhlbi.nih.gov/health/health-topics/topics/dash/ for specific serving sizes and more info on healthy eating.
**ASK DR. ETINGIN**

Socializing online... Driving and glaucoma... Randomized, controlled studies

My lack of mobility is making it difficult for me to get out of the house, and not having anyone to interact with leaves me lonely. What are your thoughts on using online forums for social engagement?

It is vital to stay socially engaged as we get older, since loneliness has been linked to an increased risk of developing dementia. If you aren’t able to keep up an active social network due to illness, disability, spousal loss, or because friends and/or family have relocated, online forums can help. They are particularly beneficial for hearing-impaired patients who have difficulty socializing via the phone.

Even if you are functionally limited by age-related sight impairment, or your manual dexterity is affected by arthritis, you can still take part—computer keyboards are available with larger, more widely spaced keys and bigger letters. You can also order adaptive devices through Lighthouse International (www.lighthouse.org).

I’ve seen references to “randomized controlled studies” being the best type of medical research. Why is this?

A randomized, controlled trial (RCT) is considered the most reliable type of study for determining that a cause-effect relationship exists between a treatment and an outcome. Randomization, which means that participants are randomly assigned to a treatment group, helps prevent bias on the part of researchers. For example, in a drug study that isn’t randomized, doctors might unconsciously allocate participants who would benefit most from a drug to the treatment group, which could skew the results to make a drug seem more effective than it is.

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- New stroke risk factors identified, guidelines issued for women
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