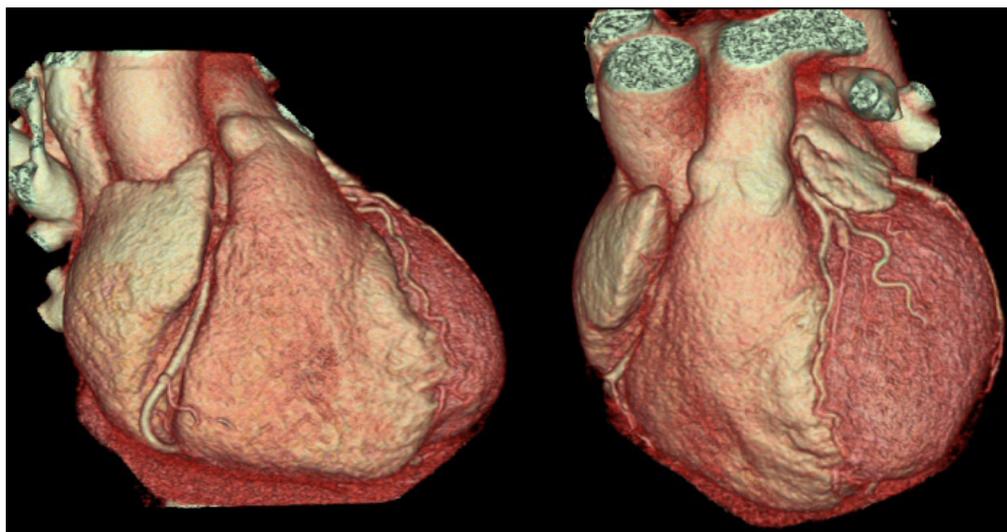


MEDICAL NEWS

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YOU CAN USE



FROM WESTSIDE MEDICAL ASSOCIATES OF LOS ANGELES & WESTSIDE MEDICAL IMAGING

DON'T BE LULLED BY YOUR PHYSICALLY FIT PATIENTS: WESTSIDE MEDICAL IMAGING OFFERS CORONARY CALCIUM SCREENING TO MEN AND WOMEN TO IDENTIFY EARLY CORONARY ARTERY DISEASE LEADING TO AGGRESSIVE LIPID MODIFICATION THERAPY TO PREVENT PROGRESSION TO OBSTRUCTIVE DISEASE

The news that former President George W. Bush, known for being physically fit, was hospitalized Tuesday for a heart procedure sparked heavy print and online coverage in both national and local outlets with one story, noting that the diagnosis “has put the spotlight on the limits of a healthy lifestyle when it comes to a healthy heart.” We are told that “a routine physical yesterday found a blockage in a crucial artery that supplies the heart with blood,” leading his doctors to insert a stent to prop open the artery....”

In its lead story, NBC Nightly News reported that the news “caught a lot of us off guard, as the 67-year-old former President has always appeared quite fit, and is known for maintaining a vigorous exercise regimen”. Coronary calcium scoring is a low cost screening exam that should be considered in a male > 40 years of age or perimenopausal female with any conventional coronary risk factor (hypertension, dyslipidemia, smoking, diabetes or family history).

Tiny adrenal tumors can cause high blood pressure

Treating tiny benign tumors in the adrenal glands identified on CT imaging that are often ignored may prevent huge numbers of cases of high blood pressure.

The team at the University of Cambridge and Addenbrooke's Hospital think that up to 10% of cases of hypertension particularly patients with “resistant” hypertension may be caused by these small adrenal tumors that secrete aldosterone. Their study, published in Nature Genetics, said young patients could be freed from a lifetime of medical therapy. This could represent 10% of all hypertensive patients. Hypertensive patients who are in their 30's and 40's



would benefit the most from seeking these smaller benign tumors. Westside Medical Imaging offers a unique battery of imaging exams to identify reversible causes of hypertension including abdominal CT for the adrenal tumors mentioned above and MR angiograms that require no contrast to identify renal artery stenosis.

Exercise: Is There Too Much of a Good Thing?

Recently published papers reviewing the latest research suggest that “elite athletes” that participate in training for triathalons, marathons and other extended aerobic workouts including biking “run” increased the risks of an abnormal heartbeats, damage to heart tissue, and hardening of the arteries,” while other research has shown that daily hard training can reduce life expectancy compared to moderate exercisers.

Dr. Paul Thompson has run 29 Boston Marathons over the past four decades — he finished 16th in 1976 — but has also spent a good part of his career as a cardiologist researching the detrimental effects that high-endurance training has on the heart. Some of his recently published papers reviewing the latest

research suggest that regular marathon running increases the risks of an abnormal heartbeat, damage to heart tissue, and hardening of the arteries. Other research suggests that those who train hard every day don’t live as long as those who run at a more moderate pace a few days a week.

“When there’s enough smoke, there’s usually some fire,” Thompson said. “This may be a small fire, but I think most of us believe there’s cause for some concern.”

“It appears that most people can get maximum health benefits with relatively low amounts of exercise, and that’s comforting,” said exercise researcher Dr. Carl Lavie, medical director of cardiac rehabilitation and prevention at the John Ochsner Heart and Vascular Institute in New Orleans. “You don’t need to push it longer and harder if you’re trying to make yourself as healthy as you can be.”

Of course, the majority of Americans aren’t pushing themselves nearly hard enough, failing to meet the government’s exercise recommendations: 150 minutes a week of moderate activity (a 30-minute stroll five days a week) or 75 minutes of vigorous exercise (such as jogging briskly for 25 minutes, three days a week). Getting that amount of exercise has clear health benefits such

as reducing the risk of heart disease, diabetes, and a variety of cancers, and helping people maintain their weight and muscle mass as they age.

But more than a million Americans fall into the extreme end of the exercise spectrum, competing in marathons or ultra-marathons of 40 or 50 miles in length or participating in other high-endurance events such as Olympic-length triathlons that include a 1-mile swim, 25-mile bike ride, and 6-mile run.

“I personally think that making a habit of running marathons is just not a good idea, which is supported by the medical literature,” said Dr. James O’Keefe, a cardiologist at the Mid America Heart Institute of St. Luke’s Hospital in Kansas City, Mo. “When you go out and exercise hard, a healthy heart will pump four to five times as much blood as when you’re sitting. Doing this for hours at a time is asking the heart to do something it wasn’t designed to do.”

While exercise researchers haven’t determined the exact toll this takes on the heart muscle, evidence suggests that too much prolonged exertion over time can do irreversible damage. In a 2012 review of more than 50 studies published in the journal *Mayo Clinic Proceedings*, O’Keefe and his colleagues concluded that endurance athletes who participate in marathon-style running, biking, and swimming races have five times the risk of developing an irregular heartbeat called atrial fibrillation because of an enlargement of their heart muscle. Some also have more scarring on heart tissue and higher levels of a protein called troponin, which is involved in inflammation and atherosclerosis, a chronic condition that damages blood vessels. “Survival of the fittest doesn’t really hold true today,” O’Keefe said. “Survival of the fit will do just nicely.”

There still isn’t enough evidence, however, to determine a safe upper limit for

exercise, and it likely varies from person to person. Even researchers who have collaborated on studies don't agree on how much is too much.

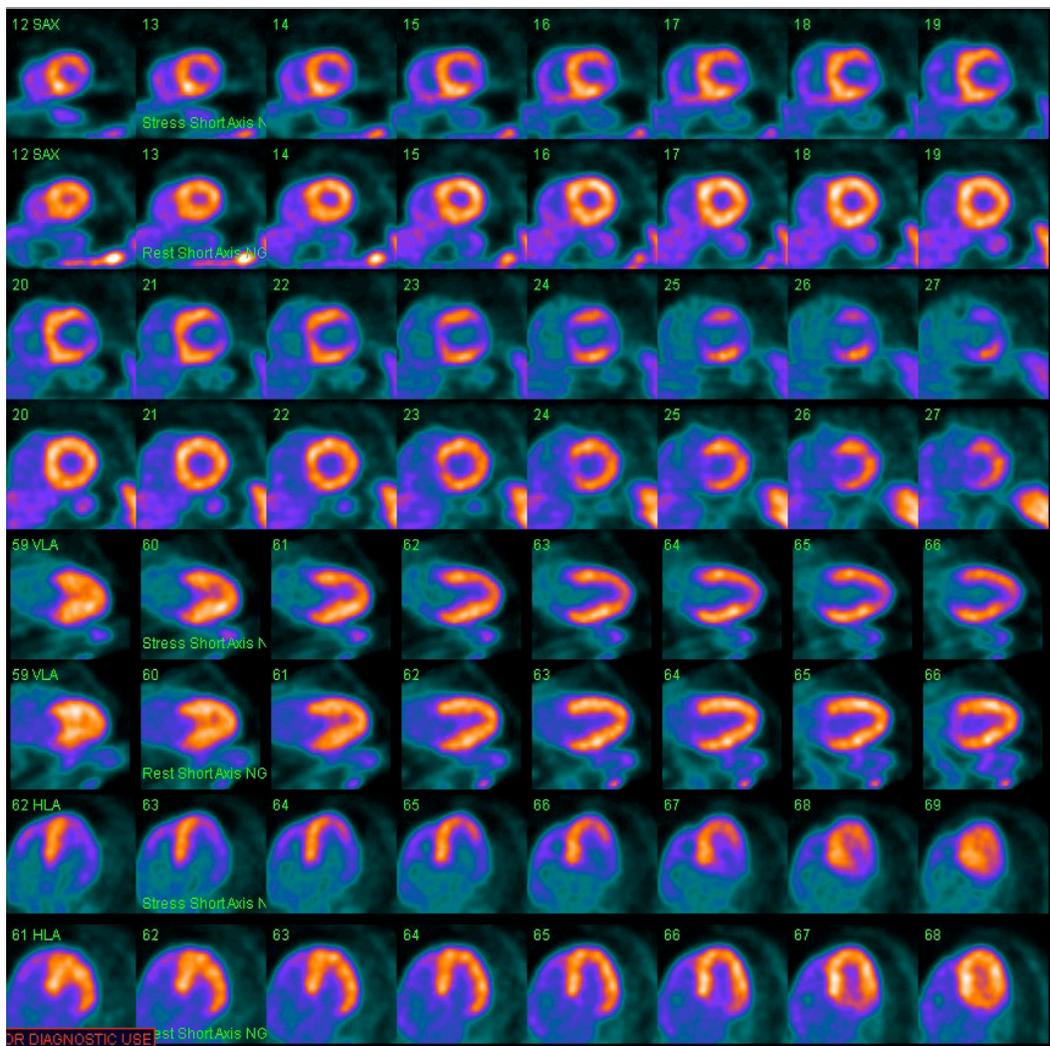
O'Keefe advises those older than 40 to avoid marathon-length races because the training causes microtears in heart muscle that don't heal as well as we age. Thompson, on the other hand, said participating in a long endurance race once or twice a year is fine at any age, barring any orthopedic issues in the hips, legs, or feet, or established heart disease that would require a doctor's clearance. Lavie agrees but pointed out the dangers of entering such races too often. "There's a small group of Americans who do some sort of triathlon every weekend or a marathon once a month — which no one was doing 20 or 30 years ago — and that I think is concerning because the heart never has a chance to recover."

While the risk of dying during a marathon is remote — 1 in 200,000 — the heart does need time to repair itself after competition. Studies suggest about one-third of marathon runners develop signs of heart stress immediately after a race, such as elevated troponin levels or enlarged heart chambers on imaging tests, but Lavie said these abnormalities usually vanish within a week.

Whether elite endurance athletes live shorter lives than those who run, swim, or bike shorter distances in slower times remains unknown, though population studies indicate this could be the case. "This research doesn't show a U-shaped curve where all the benefits of exercise disappear at the extreme end," said Dr. Timothy Church, director of preventive medicine research at Pennington Biomedical Research Center in Baton Rouge, La. "There is probably an optimal level of exercise, but I think everyone's optimal level will be different based on who you are and your genes." Until further studies can help physi-

cians personalize their advice on exercise, researchers agree that the safest bet is to listen to your body and cut back if you experience pain or excessive fatigue between workouts. Many people check off marathons and triathlons from their bucket lists and then ease back into shorter workouts. Resistance training with weights, balance exercises, and stretching also become more important as the body ages, to combat the loss of muscle mass, balance, and flexibility. "Optimal aging includes not just cardiovascular fitness but retention of overall muscle strength," Church said. According to Dr. Norman Lepor, a cardiologist who has studied the relationship between elite athletics and cardiomyopathy, recommends that athletes who complain of palpitations, dizziness,

syncope or a decrease in exercise tolerance should undergo a basic cardiac evaluation that can include an ECG, echocardiogram and Holter monitor." Lepor adds that "the finding of repolarization abnormalities such as deep T wave inversion on the chest leads, the finding of left atrial and left ventricular enlargement on echo and nonsustained ventricular tachycardia is consistent with the cardiomyopathy of elite athletes." Cardiac MRI with a 3T magnet at Westside Medical Imaging can be useful in identifying the cardiomyopathy of athletes by a specific "fibrosis signature". While researchers conduct more studies to "help physicians personalize their advice on exercise, they agree that the safest bet is to listen to your body and cut back your workouts if you experi-



ence these symptoms or have any of the findings associated with this cardiomyopathy.

Men and Women Losing Weight: Men are from Mars and Women from Venus

Men and women diet and lose weight differently, research has shown. Men often go for diets with a simple message—eat this, avoid that—and don't care about the ins and outs of nutrition science as much as women do, weight-loss experts say. While women might like the idea of dieting, men instead prefer talking about getting in shape. Biology also plays a role: Men tend to lose weight more quickly and might find it easier than women to stick to a diet, says Jim White, a men's nutrition specialist with the Academy of Nutrition and Dietetics, a professional association.

One program that has caught on with some men recently is "The Fast Diet," a best-selling book that tells people to eat normally for five days each week, then sharply restrict intake to 500 calories a

day for the other two days. In Britain, where the book launched, some people refer to this so-called 5:2 weight-loss plan as "the bloke's diet."

"I suspect that while few men would ever admit to being on a diet, they are happy to say that they fast two days a week, as that sounds altogether more spiritual and more manly," says author Michael Mosley, a physician and medical journalist.

Men "like being able to eat without thinking about it," says Colette Heimowitz, vice president of nutrition and education at Atkins Nutritionals Inc. So a hard-and-fast rule like "eat for five days, fast for two" is easy for men to follow and has wide appeal, she says. Ms. Heimowitz says the Atkins diet, which aims to limit intake of carbohydrates, has a similar appeal for men, who make up 40% of the company's customers. "With Atkins, we tell them that they don't need to count calories, and it's easy to eat out," she says.

Mr. White, of the Academy of Nutrition and Dietetics, says that because men tend to have greater muscle mass than women they also have a higher basal metabolic rate, which means they burn more calories at rest.

And research has suggested that men have an easier time resisting food cravings than women. A 2009 study, published in the Proceedings of the National Academy of Sciences, found that men's and women's brains reacted differently when the subjects were tempted by favorite foods. Gene-Jack Wang, a researcher at the Brookhaven National Laboratory, in Upton, N.Y., says brain scans showed less activity in men than women in parts of the brain associated with decision-making and emotions. "When those areas show activity, it means that you're still associating food with emotion and struggling to suppress cravings or make a decision about eat-

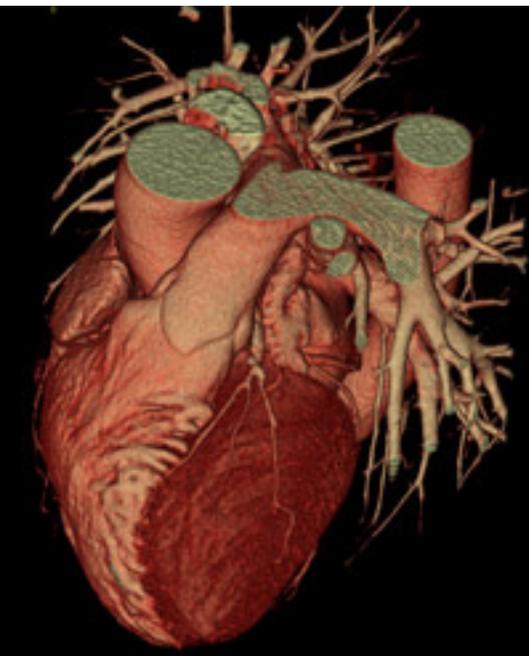
ing it," Dr. Wang says. While it's unclear what's behind the different responses, he suggested it may have to do with higher estrogen levels in women's brains.

Katy Stonitsch has been dieting for about a year, and her husband, Suneeth Samuel, for about 20 months. So far, she has dropped 15 pounds from a high of 190 pounds, while Mr. Samuel is down more than 100 pounds from his starting weight of 290 pounds. "He's disciplined, I'm not," Ms. Stonitsch says. "I cheat way more than he does."

Men are less food-obsessed than women, says Karen Miller-Kovach, chief scientific officer for Weight Watchers and author of the book "She Loses, He Loses: The Truth About Men, Women, and Weight Loss." And when it comes to dieting, "men usually get a wake-up call, declare fat the enemy and then do whatever to get rid of the problem." and had turned it into a game."

Subclinical Atrial Fibrillation and Silent Stroke

Subclinical episodes of atrial fibrillation (Afib) are frequent in those with type 2 diabetes and are associated with silent cerebral infarct and stroke. Diabetic patients under 60 without clinical atrial fibrillation (Afib) had a significantly higher prevalence of brief episodes of subclinical Afib compared with matched healthy controls (11% versus 1.6%), according to Raffaele Marfella, MD, PhD, of the Second University of Naples in Naples, Italy, and colleagues. Patients with subclinical Afib episodes were significantly more likely to also have silent cerebral infarcts at baseline (61% versus 29%) and a higher number of strokes during an average 3-year follow-up (17% versus 6%), they wrote in the study published in the Aug. 6 issue of the Journal of the American College of



Cardiology. They found that an episode of subclinical Afib in diabetic patients was an independent determinant of silent cerebral infarct (OR 4.44, 95% CI 2.42-816) and an independent predictor of the occurrence of stroke (HR 4.6, 95% CI 2.7-9.1).

Other studies have suggested a link between atrial fibrillation and silent infarcts and an association with Afib and cognitive decline. The American Heart Association has published a comprehensive evaluation of the literature on vascular cognitive impairment.

Paroxysmal atrial fibrillation has the same risk of stroke as persistent and chronic atrial fibrillation. Patients with diabetes and any type of atrial fibrillation who are not yet on anticoagulants, should undergo brain MRI. If a silent stroke is identified on MRI the patient should be treated with anticoagulants to prevent stroke and systemic embolization unless a contraindication exists.

Sex and Your Heart Attack

The American Heart Association (AHA) said in 2012 that sex is safe for most heart attack patients, and now a new statement from the AHA and a European cardiology group provides a road map for how to conduct sexual counseling.

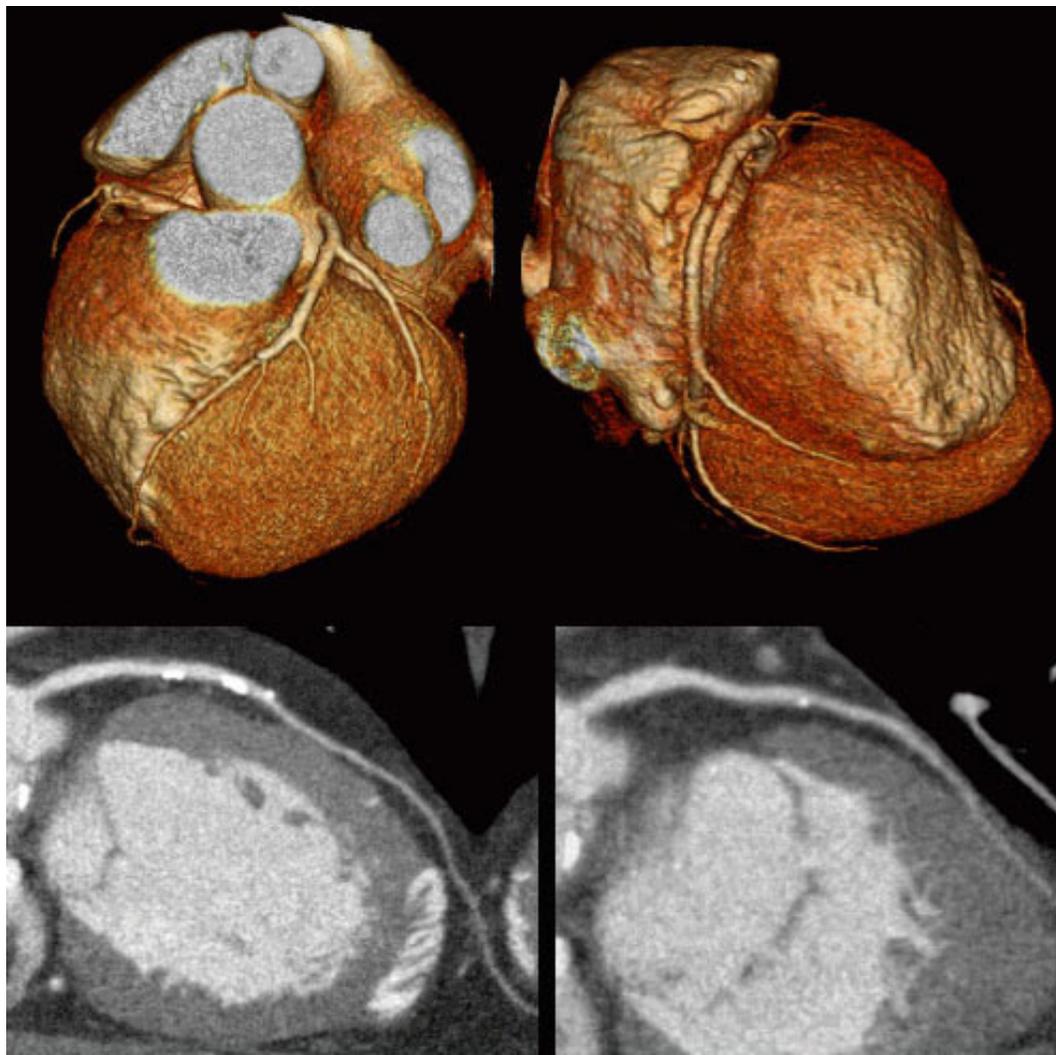
Sexual counseling should be tailored to each patient with cardiovascular disease (CVD) along with his or her partner, and should address topics such as when to resume sex, specific methods and recommended positions, and the role of intimacy without sex, according to writing chair Elaine Steinke, APRN, PhD, a professor of nursing at Wichita State University in Kansas, and colleagues. A recent study showed that many women lack guidance for sexual activity following a heart attack. The document

from the AHA noted the importance for healthcare providers to initiate the conversation about resuming sexual activity for those with CVD because patients might shy away from it. "Patients are anxious and often afraid sex will trigger another cardiac event -- but the topic sometimes gets passed over because of embarrassment or discomfort," Steinke said in a statement.

Sexual counseling can help reduce the psychological impact of CVD such as fear, anxiety, and depression associated with the disease itself or with resuming sexual activity. Depression, for example, can be a contributing cause of erectile dysfunction, decreased libido, and difficulty with orgasm, Steinke and colleagues pointed out. Consideration has

to be given to certain heart medications that might have an impact on sexual function. Providers should encourage patients to report any side effects and to continue taking the medication until the problem is thoroughly discussed in a healthcare setting.

If patients did not experience cardiovascular symptoms during exercise testing, they can be encouraged to resume sexual activity. Physical activities such as brisk walking may be suggested for some heart patients before resuming sexual activity. Patients should also be encouraged to engage in regular physical exercise.





Cardiac CT Scan

Discover your heart disease before you have it. This technology is for the first time capable of reliably identifying coronary artery disease in its earliest stage, before stress testing becomes positive and more importantly before complications such as heart attacks and sudden cardiac death can occur. Early diagnosis followed by an aggressive approach to reducing risk of disease progression with medical therapy and/or coronary angioplasty can and will save lives. Within 10 seconds, our 64-slice CT can perform a noninvasive coronary angiogram where we can detect both soft and calcified plaque in coronary arteries.

3 Tesla Cardiac MRI

MR is a true three dimensional approach making the more reliable than echocardiography for assessment of regional and global LV and RV parameters. Since it doesn't require an "acoustic window" patients with COPD, breast implants, chest wall abnormalities, etc, do not present any technical problems.

Greater Throughput Efficiency

Cardiac PET optimizes the efficiency of the cardiac imaging program at Westside Medical Imaging. Rubidium-82 PET Myocardial Perfusion Imaging offers an efficient means of coronary artery disease (CAD) patient management by providing faster results to the ordering physician. The entire rest/stress MPI scan can be completed in 30-45 minutes as opposed to typical current SPECT protocols of 2.5-4 hrs.



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