

RX SPA

Ultraprevention Spas

FOUR PROPERTIES AT THE FOREFRONT OF DIAGNOSTIC TESTING BY AIMEE LEE BALL

I AM LYING, FULLY CLOTHED, ON A NARROW SLICE OF SLIGHTLY PADDED METAL, BEING FED a few inches at a time into an ultrafast CT scanner for an electron beam tomography test. At intervals I hold my breath as this multimillion-dollar machine searches for indications of disease from my neck to my hips—coronary artery calcification or growths in my liver or lungs, either of which would show up as white spots on the series of cross-sectional computer images, like slices of a tree trunk, that I will view just 20 minutes from now.

But here's the important thing: I'm not sick, and I'm not in a hospital. I'm at a spa.

Diagnostic and preventive healthcare, using cutting-edge technology, is infiltrating the American spa industry. Europeans have long had medical-spa options at places like Germany's Baden-Baden and Italy's Montecatini Terme, which combine health and fitness assessment with pampering, but in this country the trend is recent. Now clinics are adding hot stone massages and herbal wraps to their regimens, while spas known for Spinning classes and aromatherapy facials have started programs in "ultraprevention." It's a new term, taken from the title of a recently published book by the medical directors of Canyon Ranch in the Berkshires (see "By the Book" on page 103), and it marries the deployment of high technology in the search for early signs of disease to research in physiology and nutrition that's used to teach ►

people how to live a healthier lifestyle. (And while the former is sexier, the latter is where the—or your—future lies.)

Four destination spas are at the vanguard of this trend: the Cooper Aerobics Center in Dallas; Pritikin Longevity Center in Aventura, Florida; Canyon Ranch in the Berkshires in Lenox, Massachusetts (and its sister property in Tucson); and Well-Max at La Quinta Resort near Palm Springs. I recently visited the first

THE COOPER AEROBICS CENTER
When Dr. Cooper went to medical school in the 1950s, he was taught that no one over 40 should exercise vigorously, and early in his career he was called before the Dallas County Medical Society for administering “dangerous” treadmill stress tests. But the iconoclastic Cooper believed, then and now, that it’s more effective to maintain good health than to regain it. “The ancient Chinese only paid

brick guest lodges. One building houses the clinic, another the fitness center (also open to the public). Spa facilities were added six years ago.

Everyone in the Wellness Program (a maximum of 24) is given a name tag in the form of a little pouch worn around the neck (it contains Advil and a Band-Aid, not an auspicious sign), and a large blue loose-leaf binder chock-full of information about strength training, heat and hydration,

proper shoes, travel fitness, stress management, sleep, stocking a pantry, calories of popular foods, and more. The notebook swells with each lecture, for instance “Aging with Attitude,” “Understanding Your Blood

I went home from Pritikin with religion, pillaging my kitchen cabinets, reading labels for sodium content and hydrogenated fats.

three and did extensive interviews with Daniel Cosgrove, M.D., the director of the fourth, to find out as much as I could about ultraprevention.

I learned that all these places do one thing exceedingly well: provide extensive, if not comprehensive, health assessment in a leisure environment, with an emphasis on modifiable risks. But I also found distinctive differences in approach. Although one might expect Cooper to emphasize exercise—Kenneth Cooper, M.D., its founder, is widely known as “the father of aerobics”—cardio and weight workouts are not built into the Wellness Program. Nutrition and lifestyle notes are hit hard, through lecture after lecture after lecture, but the message is different from the one at Pritikin Longevity Center, founded by Nathan Pritikin, M.D., the champion of the low-fat diet. The fitness program there is part of every day’s activity and kicks ass. Here’s my report.

doctors when they were well,” says Cooper, who bears an uncanny resemblance to Frank Perdue. “There’s no profit in health; the profit’s in disease. Today health insurance is disease insurance. And primary care is really secondary care: Doctors don’t see you until you’re sick.”

These days, doctors spend an average of 23 seconds with a patient before being interrupted, according to a recent study in the *Journal of the American Medical Association*. So a lengthy visit with a staff physician is one of the great luxuries of the Wellness Program at Cooper’s eponymous center, opened more than 30 years ago in a Colonial-style mansion surrounded by large ponds. The owner’s husband had died of heart disease, and she happily sold it to Cooper, insisting only that her ducks and geese remain. And so they do, an amusing omnipresence, sometimes paddling in a lap lane alongside swimmers. The 30-acre property looks like a college campus, with a winding one-mile walking/jogging trail and white-columned red-

Profile,” and “Taking Your Diet ‘Out.’” But the undisputed favorite subject is cardiovascular risk.

Since the Cooper Clinic is in the business of minimizing such risk, Wellness guests begin with blood tests for cholesterol, the fatty substance produced by the liver and transported through the circulatory system by two lipoproteins: LDL, the “bad” cholesterol that increases the risk of blockages in the vessels, and HDL, the “good” cholesterol that “unsticks” the LDL.

But Cooper, being on the cutting edge, puts weight on recent evidence that two other markers are even more important: C-reactive protein, produced by the liver when arteries become inflamed, and homocysteine, an amino acid that’s a by-product of protein digestion and may irritate blood vessels or make blood clot too easily, creating blockages. “Homocysteine is as much a factor as cholesterol in causing heart disease,” says Cooper, “but there’s a whole lot more money going to control cholesterol

because it's more lucrative. Homocysteine can be controlled with the use of folic acid, B6, and B12."

For one-stop shopping, Wellness Program participants may have body-composition tests that provide a ratio of lean muscle mass to fat (see "Fat Grams" on page 106), mammograms and Pap smears, bone-density scans, and virtual colonoscopy (CTC), which doesn't require sedation but does entail two days of "prep," meaning fasting and enemas. Since the procedure is less sensitive for benign polyps and, being virtual, doesn't allow for their removal, it has been judged inappropriate for colorectal cancer screening by the American Cancer Society and two national medical task forces. Cooper medical director Tedd Mitchell, M.D., concedes that traditional colonoscopy "is the gold standard" but says virtual will find most polyps and is a reasonable alternative for patients who dislike the sedation and penetration that the conventional procedure involves.

Detailed results of all clinical tests and recommendations are mailed within a few weeks, along with an extra copy for the client's physician. I was

Cookery, usually with the nutritionist, and dine several times at local restaurants to learn how to choose wisely from menus that are minefields of fat and empty calories. Cooper philosophy holds that there are no bad or good foods, just better options and smaller portions. Some protein at breakfast is particularly advised, and Cooper even serves a modified eggs Benedict, even though the yolk has a full day's allowance of cholesterol. Since lack of time is an enabler of poor eating, take-home recipes make extensive (perhaps too extensive) use of packaged products, for instance, a boxed mix and Diet Coke for a cake.

PRITIKIN LONGEVITY CENTER

The Pritikin people would be horrified at the cake, the Coke, the yolk—in fact, at much of the Cooper Cookery. The antithesis of the current low-carb craze, the Pritikin Eating Plan (PEP) is 15 percent protein, 10 percent fat, and 75 percent carbohydrates, almost entirely unrefined (see "Dynamic Diet Duo" on page 105). It is low in oil, salt, sugar, and caffeine, and the coffee substitute, Cafix, made of roasted barley, rye, chic-

The iconoclastic Cooper believes that it's more effective to maintain good health than to regain it later.

gratified to know that my abdomen had no hepatosplenomegaly or bruises; that my heart had no gallops or clicks; that my extremities showed no cyanosis or joint effusions; and that my liver, spleen, kidneys, adrenal glands, and pancreas were "unremarkable."

Wellness guests take meals together in a small demo kitchen called the

ory, and beetroot, leads to occasional surreptitious Starbucks runs. Meals and regular snacks feature enormous quantities of fresh (often raw) vegetables and fruits and are so high in fiber that there is often what the staff delicately refers to as "a little adjustment period" when it comes to bowel habits. (When you can't face another bowl of oatmeal or ►

By the Book

THE MEDICAL DIRECTORS OF Canyon Ranch in the Berkshires, both M.D.'s, have written

Ultraprevention (Scribner), a self-policing, at-home version of the diagnostic and treatment program available at the spa. The book focuses on five key bodily functions that authors Mark Hyman and Mark Liponis contend are forces of illness: nutrition, metabolism, inflammation, detoxification, and oxidative stress (which they nickname sludge, burnout, heat, waste, and rust).

Everything in the body is related, according to the doctors. Imbalances or dysfunctions in one system affect the other systems. The same behavior can create ten different diseases—high levels of the stress hormone cortisol, for instance, kill neurons in the brain, damage the gastrointestinal tract, and lead to osteoporosis, diabetes, and cataracts—and the same disease can have ten different causes.

Good health is not the absence of disease, argue Liponis and Hyman, who knock traditional medicine because it tests only for organ damage, not for cellular and biochemical function. They're amusingly deprecating about their own profession ("A doctor without a prescription pad is naked"), and they dispute the idea that genetics is destiny. "Few people realize that our genes are not static but dynamic—the active machinery of our biochemistry.... So yes, you can change your genetic inclination."

The doctors admit that they don't always follow all their own advice, but their information is motivating. "We will die after approximately a few minutes without oxygen, one week without water, or a month without food, but it might take thirty years for lack of exercise to kill us. The effect is the same: It just takes longer." If that doesn't send you to the gym, nothing will.

salad, you can request a baked potato or veggie burger, which comes in half a whole-wheat pita, with low-sodium ketchup and mustard.) The food is hearty and attractive, but I kept thinking of George Burns's line when he first ate eggs without salt: It tasted like the chicken wasn't getting paid.

It's ironic that the virtuous Pritikin Center is at the Turnberry Isle yacht club, where Gary Hart was photographed with Donna Rice in his lap on the *Monkey Business*, ending his political career. The lounge, now the setting for "cocktail" hours with virgin Marys and unbuttered popcorn, used to be the hottest spot in town, with a disco in the basement. There are plenty of resort

obic workouts, strength training, and yoga together; your group ID, along with your maximum heart rate, is printed on your neck pouch.

High-tech evaluations include body-composition tests, bone-density scans, and ultrasound imaging of the coronary arteries (see "The Heart of the Matter" on page 108). But one of the most amazing assessments, the musculoskeletal and biomechanical evaluation, uses no technology at all. Two nice fellows, both physical therapists, measured my extension, flexion, rotation, abduction, gait, mobility, and balance. They studied my shoulders, elbows, wrists, hips, knees, feet, and ankles, communicating all the while in

nets, reading package labels for sodium content and hydrogenated fats. "But we also go to dinner at the Cheesecake Factory and figure out how to eat," says Lehr. "If you want to be 100 percent Pritikin, you're going to be like Meg Ryan in *When Harry Met Sally...* We're arming you with the truth, but only people who have significant health issues have to follow it 100 percent."

CANYON RANCH IN THE BERKSHIRES Food is not an obsession here. Yes, there are calorie, fat, and fiber counts listed for everything, right down to the spoonfuls of flaxseed you're encouraged to sprinkle on salads (the omega-3 fatty acids promote healthy cells, organs, and tissues), but there's salt in the food, eggs with yolks at breakfast, meat on the menu, and—oh, my God—real coffee. The food is tasty enough to linger over, but right upstairs is the medical department, Ultraprevention headquarters.

A paradigm for well-being, the Ultraprevention program involves an extensive assessment that begins before you leave home, with a questionnaire about symptoms and lifestyle and a telephone conversation with a staff nurse, who delves pretty deep, all the way down to the fillings in your teeth, a possible source of mercury poisoning. (A six-day package is also offered at Canyon Ranch in Tucson).

The 120-acre Berkshires outpost is built around a replica of Louis XV's Versailles château. The building was the summer "cottage" of a Gilded Age grandee, and it's easy to imagine Edith Wharton, then a neighbor, coming over for tea. It is not easy to imagine Edith wandering over at 7 a.m., as I did, with unbrushed teeth and uncombed hair (as instructed), for a test of my resting metabolic rate.

A technician placed an airtight ►

An exercise physiologist fit me with a heart monitor and a mask, reminiscent of Hannibal Lecter in captivity.

niceties (a wake-up call for an afternoon nap, a bellman to pick you up in a golf cart if it rains).

But this is first and foremost a residential program for the recovery and sustenance of health. (Only recently has a seven-day program been available; some people stay for weeks or months.) And so, along with fluffy robes and eucalyptus-scented toiletries, there is a specimen kit on the bathroom vanity, the first step here, along with a blood draw and a treadmill stress test, more benignly referred to as an "exercise tolerance test" because the word *stress* itself proved so stressful to guests. During the test, you're asked to report your perceived exertion on a scale of 1 (no sweat) to 20 (near exhaustion). The results are used to group similarly fit people, who then go through daily aer-

what sounded like dolphin-speak. Ultimately they provided me with pages of illustrated exercises to increase muscle strength and mediate pain. Only my mother has ever taken a more personal interest in me.

Pritikin guests also get a fat loose-leaf notebook and handouts at daily lectures, where the information imparted is often shocking, particularly about diet (see "Dynamic Diet Duo," opposite). "We're the documented science, the published results, and we don't do things half-assed," asserts president Paul Lehr, the son of David Lehr, M.D., Nathan Pritikin's partner. "We have a scientific committee that looks at everything we do, and we video-conference every six weeks."

The spirit is infectious: I went home with religion, pillaging my kitchen cabi-

Dynamic Diet Duo

EVERY DAY OF A PRITIKIN STAY IS another opportunity for indoctrination by the passionate team of nutritionists, Jeff Novick and Jay Kenney. Novick became a vegan in response to what he learned about meat from his father and grandfather, both Brooklyn butchers, then spent time as a French pastry chef before embracing the Pritikin diet 20 years ago. He affectionately refers to Kenney as an armadillo because he has turned so far away from standard food. (Kenney had an angina scare as a young man, which set him on the path of spare righteousness.) As reedy as Ichabod Crane, he eats in restaurants perhaps twice a year, whereas Novick eats out at least twice a week, begging for Pritikin-style food from accommodating chefs. Both say unequivocally that what the government calls “energy-dense, nutrition-poor food” (a.k.a. junk) is what’s making two-thirds of us overweight or obese, a lethal trend.

“Americans are digging their graves with their teeth,” says Kenney. “Today it’s not a matter of luck if you live a long time. It’s a little luck, a little genetics, but mostly diet. Countries with the lowest risk of breast cancer—Ceylon, El Salvador, the Philippines—are places where there is a low incidence of animal protein, and I could show you the same stats for prostate cancer. In Nazi-occupied countries, where they confiscated the animals, heart disease went down—it’s what happens when people come into your country with guns and take away the butter. The heavier you are, the more likely you will die of a heart attack or a stroke.”

Novick and Kenney preach the gospel of calorie density: the number of calories in a given weight of food. Thus one pound of broccoli (128 calories) is better than one pound of lobster (490 calories), which beats

one pound of Oreos (2,197 calories). Pritikin foods are nutrient-dense and calorie-poor.

As food becomes more concentrated in calories (often because it’s highly processed, like Oreos), it’s easier to overeat trying to achieve satiety. One ounce of bread and one-half cup of cooked oats both have about 80 calories, but the former is much less food than the latter. One tablespoon of olive oil has the same calories as one pound of broccoli, and despite the highly touted “Mediterranean diet,” the nutrient content of the oil is low—mostly monounsaturated fat, which your body can make. But it’s still better than butter.

“The fat in dairy is more saturated than any other source,” says Kenney. “Butter is considerably worse than lard in raising cholesterol. And choosing between butter and margarine is like asking, Who am I going to have over for dinner, Osama bin Laden or Saddam Hussein?”

Salt is the worst offender in the American diet, according to these two. They point out

prostate, and colon cancers in the United States. And the more salt you eat, the more calcium you excrete, which leads to osteoporosis. It’s hidden in foods—there’s more salt in Total cereal than some potato chips, but in the chips it’s on the surface so you taste it more. The FDA has banned things that are far less dangerous, but if it tried to ban salt, the food industry would be up in arms. They all give money to the Salt Institute, and it operates the same way the Tobacco Institute did, arguing that more research is needed. Meanwhile there’s no warning label about sodium.”

Novick and Kenney blow away many commonly held conceptions about food, especially protein and carbohydrates. Here’s a sampling.

- All vegetables have protein. “What’s the biggest land animal?” asks Kenney. “An elephant, which eats grass. Do you think it’s getting enough protein? Does anyone want to be bigger or stronger than an elephant?”

Novick and Kenney preach the gospel of calorie density.

that medical anthropologists have identified 20 peoples worldwide who don’t have high blood pressure, and the only thing they have in common, from the Yanomamo Indians of the Brazilian rain forest to the Kalahari bushmen of Africa, is no salt in their diet.

“You should not try to go on a no-sodium diet because you’ll die,” says Kenney, “but your body needs only the amount that occurs naturally in foods. You don’t see stomach cancer anywhere in the world where people don’t eat salt, but in Japan, with its high-sodium diet, there’s more stomach cancer than the *total* of breast,

- Nuts, the one food occurring in nature that is calorie-dense, should be eaten sparingly. (One ounce has approximately 175 calories.) “Think about the purpose of a nut,” says Kenney. “It’s got to grow into a tree. The energy for that has to be concentrated.”

- Forget the idea of complex versus simple carbohydrates. Instead substitute *unrefined* carbs for *refined* ones. The definition of an unrefined carbohydrate is simple: something eaten largely the way it grew in the garden (peeling and cooking are allowed). “You’ve never seen a bagel bush,” says Kenney, “even if it’s whole wheat.”

plastic hood over my face and then fed me oxygen, calculating how much I used. (Warning to claustrophobes: Keep eyes closed.) The resulting number is my baseline daily caloric expenditure, the minimum amount my body needs to perform basic biological functions such as digestion. If I dieted and ate fewer calories, my body would start burning lean muscle for fuel.

The metabolic exercise test (known as VO_2 Max) required me to look even more ridiculous: An exercise physiologist fitted me with a heart monitor and a mask, reminiscent of Hannibal Lecter in captivity, that tracked the oxygen and carbon dioxide I breathed out and sent this information, via a small tube, to an analyzer on my back. Then he put me on the treadmill until I achieved my maximum heart rate.

The point of the test is to determine exactly how many calories you burn a minute. (The average person burns about 10, Lance Armstrong about 20.) The reason this is important has to do with the mitochondria, tiny cell structures about the size of bacteria that take in oxygen and fuel (mainly fat and carbs) and convert them to energy. The cells that require the most energy, such as those in muscles, contain the most mitochondria, each with thousands and thousands of these little power plants.

The good news is that you can substantially increase your metabolic rate—meaning burn more calories—by increasing your number of mitochondria. Because mitochondria respond more efficiently to exercise intensity than duration, you do this best through interval training, making a task harder by revving up the speed or incline until you reach your anaerobic threshold, then slowing down and reentering your aerobic range near the top—and repeating the process for 30

to 45 minutes. The VO_2 Max test pinpoints that threshold.

Depending on what tests are recommended, the medical staff may want a lot of your bodily fluids. For an ION profile, which measures more than 150 biochemical and nutritional markers (such as the fatty acids that provide coating for cells, the minerals used for cellular messaging, and cortisol, the fight-or-flight stress hormone), the nurses draw blood like vampires and ask you to collect overnight urine in an accordion-shaped container. If they suspect toxic levels of heavy metals (from childhood cavities, a diet of swordfish and tuna, even certain contact-lens solutions), they'll want a hair sample—and if you color your hair, it can't come from your head. If you have cold hands, soft nails, or thinning hair, they may test for Hashimoto's disease, an autoimmune thyroid condition in which white blood cells make antibodies that interfere with normal thyroid function. (It's the second most common endocrine disorder after diabetes.) If you have diarrhea or lots of tiny lines on your palms, they may test for allergies to gluten or dairy. To evaluate borderline hypertension (now defined as blood pressure higher than 120/80), you may be outfitted with a 24-hour blood-pressure monitor. And if stress is a problem, you may be offered a private class in biofeedback, in which little bunnies and rainbows appear on a computer screen if you successfully control your heart rate through breathing.

The escape from Ultraprevention is the spa part of Canyon Ranch, which is about as good as it gets, from the stacks of plush towels and citrus-ginger toiletries in the locker rooms to the pampering body treatments and generous choice of classes (graded by fitness level). But the key here is determina-

Fat Grams

MUSCLE IS CELL-DIVIDING, metabolizing, biologically active tissue, whereas fat is happy just sitting around being itself. Given that excess fat is a ticket to heart disease and other serious illnesses, you'd think there would be an accurate way of measuring percentage of body fat. But the most common current methods—pinching folds of skin with calipers, and comparing height to weight (the body mass index)—only yield an estimate. That's why ultraprevention spas are going to great lengths to devise more accurate tests, two of which I encountered.

At the Cooper Clinic one morning, I found myself sitting cross-legged and bare-ass naked, in a sort of canvas swing suspended in a tiled vat of water. (Shy folks can wear a bathing suit, but the result is not as accurate.) A heavy weight belt across my lap kept me submerged to my chin. At a signal from the female technician, I inhaled deeply, plunged my head toward my knees, and released the breath hard and fast. The technician watched the size of the bubbles, and when she saw that all the air had been expelled from my lungs, she noted the reading, then made a tapping sound, the signal to come up. This method of hydrostatic weighing has drawbacks—the technician estimates lung capacity based on height and weight, for instance—but it's still more accurate than calipers.

At Pritikin, Canyon Ranch, and WellMax, body-fat measurement is done with a DEXA (dual-energy X-ray absorptiometry) scan, the same procedure that's used to measure bone density. It's painless, and you're fully clothed. There's still a margin of error of several percentage points, but at the conclusion you get a souvenir: a graphic printout of your skeleton, showing the layer of lean muscle and, appearing as a ghostly white fog, the layer of fat. I'm considering turning mine into a dartboard.

tion: You don't wear a pouch around your neck, and you don't get a schedule. It's up to you to show up at Cardio Boxing or Power Plunge in the lovely heated 75-foot indoor pool, and nobody will stop you from ordering a double portion of chocolate biscotti cheesecake for dessert. Nobody's going to take you to a restaurant and show you how to handicap the menu, either.

WELLMAX AT LA QUINTA

When director Daniel Cosgrove, M.D., talks about "chemical soup," he does not mean something edible. Cosgrove believes that our most serious health risk is excess oxidative stress, a condition that occurs when the body can't handle the amount of free radicals, the

highly unstable molecules that cells generate while making energy.

"Oxygen is really potent stuff," he says. "Free-radical damage is what rusts cars, what makes avocado dip turn brown, what smoking and barbecuing do to meat." Human "rust" is similarly destructive, leading to cellular mutation, tissue breakdown, and compromised immunity. "I've been obsessed with this concept because I was an ER doc for 15 years," says Cosgrove. "I got tired of seeing someone come in with a heart attack, or a funny pain in the shoulder that turned out to be a metastasis from colon cancer. By the time you're symptomatic for most cancers, you're going to die. Why can't we do better, identify these things early and

keep them from happening? Instead of using the Jaws of Life at the bottom of a cliff, why don't we build a guardrail?"

Like Hercule Poirot, Cosgrove hunts for clues to oxidative stress, beginning with the "soup," the risk markers in the blood, including high concentrations of glutathione, the tiny protein (just three amino acids hooked together) that's the body's antioxidant. He believes in "going that extra mile," which means using methods that are still considered "research," such as a blood test for myeloperoxidase, an enzyme that may be an indicator of plaque since it kills bacteria that's been found in the artery-clogging substance. "I don't know if the jury is in yet about reversing damage," he says. "It's like a car: Whatever rusted away in the metal is gone, but you can stop the process and preserve the rest."

La Quinta is big: 800 guest rooms in Spanish-style casitas at the base of the Santa Rosa Mountains. It has a long history as a Hollywood playground. Legend has it that Frank Capra wrote *It Happened One Night* and Irving Berlin wrote "White Christmas" while visiting. Spa treatments reference the area's Native American ancestors and surrounding citrus groves. (A "body facial" called the Orange Blossom Special is an homage to the "orange juice" served in the lobby during Prohibition.) One of the four restaurants, an offshoot of New York's Le Bernardin, serves lemon brown butter on the skate wing. But Cosgrove worked with the chefs at the three other restaurants, where each menu has a color chart explaining how to choose red, orange, yellow, and green foods for their antioxidant benefits.

None of this is meant to be a day at the beach. The WellMax "platinum program" is an exhaustive two-to-three-day diagnostic marathon that

CANYON RANCH SEVEN-DAY ULTRAPREVENTION PROGRAM

Rate: \$4,500. Includes workshops; classes; medical, lifestyle, and nutrition consultations; body-composition test; and cardiac-stress or bone-density test. \$2,500 allowance toward lab testing, \$330 toward additional medical services.
Accommodations: \$5,580 for the minimum six-night stay.
Canyon Ranch in the Berkshires, 165 Kemble St., Lenox, MA 01240; 800-742-9000; www.canyonranch.com

COOPER AEROBICS CENTER WELLNESS PROGRAM

Rates: 4 days, \$2,295; 6 days, \$2,895; 13 days, \$4,295. Includes meals, workshops, classes, and training sessions.
Accommodations: \$135-\$335. Tests: Cardiovascular, from \$556; EBT scan, \$660; coronary risk profile, \$860; comprehensive exam, \$2,400.
Cooper Aerobics Center, 12200 Preston Rd., Dallas, TX 75230; 800-444-5192; www.cooperaerobics.com

PRITIKIN SEVEN-DAY LONGEVITY PROGRAM

Accommodations: \$3,000-\$7,600, single occupancy; \$5,000-\$9,200, double occupancy. Includes meals, workshops, medical exam and follow-up, stress test, blood panels, and a spa allowance. Optional tests: Body composition, \$195; bone-density scan, \$195; carotid artery ultrasound, \$299; musculoskeletal and biomechanical evaluation, \$285.
Pritikin Longevity Center, 19735 Turnberry Way, Aventura, FL 33180; 800-327-4914 or 800-842-4434; www.pritikin.com

WELLMAX AT LA QUINTA PLATINUM PROGRAM

Rates: 2-3 days, \$9,000; 1 day, \$3,100.
Accommodations: \$395-\$3,800, high season; \$175-\$1,900, low, double occupancy. Meals extra.
WellMax at LaQuinta, 49-499 Eisenhower Dr., La Quinta, CA 92253; 760-564-5757; www.wellmax.com or www.laquintaresort.com

includes cardiac-stress, resting-metabolism, and VO₂ Max tests; vision and hearing screenings; a bone-density test, a whole-body MRI, and CT scans of the lungs and coronary arteries; a pelvic or prostate exam; and either virtual or conventional colonoscopy.

Such detective work is meant to catch disease at the very earliest stages. "We put it at a resort and throw in some spa treatments to make it easier," says Cosgrove, "but it's not supposed to be cushy. Somebody has to confront people about their health, and I think you're not being a good doctor if you're too chicken to make them uncomfortable. We say it's the rejuvenation that's going to last. People can make changes that literally save their lives."

And that, all the high-tech diagnostics notwithstanding, may be the most valuable thing ultraprevention spas impart. It's not just pep talk, either. According to a study in the *Journal of the American Medical Association* earlier this year, the three main causes of mortality in America are tobacco use, inappropriate diet combined with lack of exercise, and intemperate use of alcohol. All involve voluntary behavior. "A lot of our premature morbidity and mortality we're either doing to ourselves or not for ourselves," says Dr. Mitchell, the Cooper medical director. "You better believe genetics and environment have a lot to do with what's going to happen to you, but to a large extent your behaviors are going to determine your health over the long term. Every patient I have is going to die. My hopes are to keep them as healthy as they can be for as long as they can be."

AIMEE LEE BALL is the co-author, with Liz Tilberis, of *No Time to Die* (Little, Brown), a memoir of the former Harper's Bazaar editor's life in fashion and battle with ovarian cancer.

The Heart of the Matter

MORE MEN AND WOMEN IN THE United States will die of heart disease than any other cause.

Women may clutch their breasts, and men may be preoccupied with their prostates, but statistically neither is nearly as vulnerable as the heart. But it takes some very high technology to catch heart disease early.

"Treadmill testing is a wonderful tool for finding what is called hemodynamically significant heart disease, obstructive heart disease," says Tedd Mitchell, M.D., the medical director of the Cooper Wellness Program. "We use it knowing full well the shortcomings, which have to do with simple flow mechanics from physics. A water pipe has to be blocked off by about 50 percent before you notice any difference in pressure at the spigot. The same thing holds with coronary disease. You can have fairly significant disease and have a normal stress test."

That's why the Cooper Clinic employs electron beam tomography to identify calcified plaque in the coronary arteries. (Plaque formation is an inflammatory immune process that occurs as cholesterol in the arteries leaches calcium from the blood.)

"Imagine a 50-year-old man who's gotten out of the habit of exercising," says Mitchell, "someone who's smoking, overweight, blood pressure's up a little, cholesterol's out of whack. We put him on the treadmill and it's normal. That happens a lot. And I know he's walking out thinking he's bulletproof."

"That's where the EBT scanner has become helpful. A standard CT scan yields two images per second—you can actually hear the machine going *clunk-clunk*. When Siemens Corporation developed this ultra-fast technology, it was trying to take images faster for folks who had claustrophobia. They went from 2 images per second to 20, and what they found

serendipitously is that the heart, which is just a blur on a CT, shows up at a standstill because of the speed of the film. So then they put in a software program to catch the heart at the same standstill every time. So we have this beautiful noninvasive way of imaging the coronary vessels."

Noninvasive, yes, but EBT is controversial—neither the American Heart Association nor the American College of Cardiology recommends it for people without symptoms or multiple risk factors. The main concern is the radiation administered, the equivalent of 35 chest X-rays—about the dosage a Denver resident receives in a year and twice what the rest of us get. "That's why we use the EBT scanner in age groups where the prevalence of certain diseases is on the rise," says Mitchell, adding that Cooper does not recommend the scan for those under 40.

Almost as important is the high percentage of false positives the test generates, which in turn leads to more tests. "EBT tests are generally not covered by insurance because they're still considered under investigation," says Nieca Goldberg, a cardiologist in New York City and spokesperson for the American Heart Association.

Pritikin holds EBT scanners in contempt, instead using ultrasound because it reveals early thickening of the arteries and soft plaque formation (prior to calcification), which EBT doesn't. The scan, also available at WellMax, takes 30 images per second of the two carotid arteries, the main pipelines of blood to the brain, and the resulting images are sent for automated computer analysis. The benefits can be debated, but the test doesn't involve radiation, and it sure is interesting: When the technician turns up the audio, you hear the blood coursing through your veins, and you get a little sonogram to take home, just like expectant parents.