



HEALTHY? THINK AGAIN

New ways of diagnosing illness are changing the rules of medicine. How to sort out what it all means:

By Katherine Hobson

One fall day in 2003, more than 20 million Americans went to bed healthy and woke up sick. They didn't feel any different—no 24-hour stomach virus, no late-fall cold. What happened? An international committee published new guidelines for declaring someone “prediabetic”—that is, at increased risk of developing diabetes. Overnight, people who had never considered themselves sick were being told by their doctors that they had a medical problem. “Here are people who have been mostly doing what I asked—they’ve been keeping their weight under control, exercising, and keeping their blood sugar levels constant, which is a good thing,” says Jenni Levy, a primary-care physician in Bethlehem, Pa. “But now I had to say that this is

now abnormal. You have not changed, your blood sugar hasn't changed, but the rules have changed.”

The rules are changing everywhere. The threshold for prehypertension—worrisome blood pressure—has been lowered. So has the level of cholesterol that should be treated with statin drugs. Today, doctors routinely diagnose—and treat—a condition called osteopenia, a precursor to osteoporosis. Oncologists now treat cancer, often aggressively, at such early stages that it isn't even cancer, just an abnormal state that may—or may not—progress to the disease. Throw in conditions like mild asthma, which until just weeks ago was commonly treated by a daily dose of steroids, and being sick suddenly begins to look like the new normalcy. Consider: The new definition of prediabetes alone means that 40 percent of adults between

the ages of 40 and 74 now have the condition, while the definition of prehypertension slapped that label on 45 million Americans. “We are looking harder,” says Gilbert Welch, a faculty member at Dartmouth Medical School who wrote *Should I Be Tested for Cancer?* and who codirects the VA Outcomes Group. “We’re redefining disease, we’re using existing technology more frequently, and we’re using more advanced technology than in the past. All have the same result: There’s more disease out there.”

This is, odd as it may seem, progress. After all, the earlier that signs of trouble are identified, the better—like fixing the knock in your car engine before it seizes up on the highway. But as the definition of illness encompasses more people, doctors and researchers are questioning whether this is *always* a good thing. Life expectancy for Americans rose to a record high of nearly 78 in 2003, so how can so many of us be sick? And what should you do if you’re one of them?

Stuff under the sink. In some cases, discovering a disease before it becomes a full-blown medical emergency allows a patient and his physicians to nip it in the bud. As recently as the 1950s, cervical cancer killed more women than breast cancer. Then came the Pap smear, which lets doctors catch abnormal cells before they morph into invasive cancer. That has meant a dras-



RISKING IT

Because Chicago native Eric Bruce competes in triathlons and has long-lived relatives, he’s decided against drugs to lower blood pressure and cholesterol.

tic cut in the death rate of the disease. Studies also show that early intervention can help hold

off hypertension and diabetes. “I turn to [patients] and say, ‘Your sugar is elevated, and if you do nothing about it, you may progress to diabetes,’” says James Dudl, a physician with Kaiser Permanente in San Diego. “But if you would

lose 7 percent of your body weight and exercise five days a week, there’s a 58 percent chance of keeping diabetes away at least for a few years.”

With many diseases influenced by lifestyle choices—diet, exercise, tobacco use—early warnings can be a vital wake-up call. “It may be the thing that is motivational enough to prompt both patient and physician action,” says Paul Wallace, executive director of Kaiser’s Care Management Institute. An “official” diagnosis also means patients can be reimbursed for visits to a dietitian or counselor. That’s what happened when Beatrice Velasco of San Diego was told she was prediabetic—frightening, since her sister died of diabetes. Velasco quickly saw a dietitian, switched from Atkins to a more inclusive diet, and started walking 30 minutes a day. “The doctor said if I follow my diet and walk,” says the 66-year-old, “I’ll never have to go on insulin.”

Early intervention is even more critical with young people and kids. A 75-year-old edging up on hypertension is very different from an 11-year-old whose

THE NEW RULES

Over the years, the definitions of various diseases have been expanded. The new definitions encompass millions of Americans.

CONDITION	OLD THRESHOLD	NEW THRESHOLD	NO. OF ADDITIONAL AMERICANS AFFECTED
PREHYPERTENSION	None	Blood pressure of 120/80	45 million
PREDIABETES	Fasting glucose of 110	Fasting glucose of 100	21 million
HIGH CHOLESTEROL	240	200*	42 million
OVERWEIGHT	BMI** of 25	BMI of 27	29 million

*Recommended by one study; government uses different criteria. **Body mass index.

body might be affected for decades. In the case of kids, anticipating early signs of diseases like hypertension is like “getting household cleaning stuff out from under the sink,” says Bonita Falkner, a pediatrician at Thomas Jefferson University. And if diseases really can be prevented, particularly chronic ones, that could save lots of money.

Marathon man. As great as all this sounds, there are some hazards in defining illness as early as possible. Labeling someone as ill can cause anxiety and fear. “When you tell someone they have a disease,” says Levy, the Bethlehem physician, “you are challenging something very fundamental about their self-image.” That can cause real damage. One study found that some women told they had osteopenia were so frightened of fractures that they stopped exercising, though physical activity can retard bone loss. Sometimes, treating disease in its very early phases may not work. “We have a well-ingrained mind-set for so much of medicine—fixing what is broken,” says Kaiser Care’s Wallace. That mind-set is appropriate for the seriously ill, he says: “But there are situations where there isn’t a quick fix.”

Take osteopenia. The disease was arbitrarily defined as a statistical variation from the bone mass density of a woman in her 20s. Using that definition, half the women over age 52 have osteopenia, says John Abramson, author of *Overdosed America* and an instructor at Harvard Medical School. But bone density is only one of several factors that contribute to bone fractures, the ultimate concern. Steve Cummings, an epidemiologist at the University of California–San Francisco medical school, says there

is no evidence that treating otherwise healthy women with osteopenia with osteoporosis drugs cuts the risk of hip, wrist, or rib fractures later in life.

Even if early treatment changes a specific clinical measurement, it may not result in improved longevity. Giving statin drugs to low-risk patients with normal cholesterol levels, for example, did cut the risk of heart attack, but it failed to reduce the death rate of those patients. A study found that treating prehypertension cut the risk of a stroke slightly, but the patients didn’t live any longer.



RIGHT INSTINCTS

Mary Walker thought that the risks of daily asthma treatment weren’t worth it.

A new study says less-frequent treatment works just as well.

Just last week, another study showed that people who are now identified as “overweight” (though

not obese) actually live longer than people of “normal” weight.

The growing debate over preconditions would be different if such diagnoses resulted only in lifestyle advice from physicians. There’s little downside to advising women with osteopenia to increase their consumption of calcium-rich foods and stop smoking. But many doctors figure it’s safer to write a prescription, and many low-risk patients—bombed by pharmaceutical ads that show young and healthy people taking drugs—wind up taking medications that at best may not

work and at worst may have harmful side effects. Eric Bruce, a 43-year-old in Chicago, thought about those risks when he learned that his blood pressure—130/85—falls in the prehypertensive range. His cholesterol is about 220, somewhat high. But he exercises frequently—he’s completed several Ironman triathlons and last week ran the Boston Marathon—eats well, and says he’s got good genes. “Historically,” he says, “my family members have passed away near the age of 100.” For now, Bruce is staying away from medication. Mary Walker, a 39-year-old in Redwood City, Calif., had similar thoughts when her doctor prescribed a daily steroid inhaler for her mild asthma. She’s not automatically op-

posed to drugs but decided that her symptoms weren't bad enough to risk the potential side effects of long-term steroid use. Her instincts, as it turned out, were right: This month a new study showed that people with such mild, persistent asthma could find relief equal to daily medication just by using an occasional inhaler, as she does.

Weighing the risks and benefits of treatment is more agonizing, obvious-

ly, when the diagnosis is more serious. The incidence of ductal carcinoma *in situ*, an early form of breast cancer that hasn't yet invaded the surrounding tissue, has skyrocketed recently. Data show that most women with DCIS don't develop invasive cancer, but the treatment is still nearly always aggressive—mastectomy, lumpectomy, or radiation. There is plenty of debate about how to approach and screen for DCIS, but stud-

ies by Lisa Schwartz, codirector of the VA Outcomes Group, and her coauthor, Steven Woloshin, found that people view cancer screening as a nearly unqualified good. "We were surprised at how strongly people feel about this," she says. "We've spent so long convincing them that earlier is better, and when someone tries to change that without explaining . . . there's a lot of cynicism."

Cynicism often comes down to

Rethinking Abnormal Behavior

What is "normal" when it comes to brains, behavior, and emotional life? Some things, like hallucinations or debilitating melancholy, are clearly diagnosable. But what about "caffeine intoxication"—characterized by insomnia, muscle twitching, nervousness, perhaps even rambling thoughts after more than two to three cups of joe? Or how about premenstrual irritability?

Since 1952, the American Psychiatric Association has published what over time became the complicated, much-criticized, often satirized, but endlessly utilized diagnostic arbiter of "normal" in the world of mental health.

While the first two editions of the *Diagnostic and Statistical Manual*

of *Mental Disorders* did not make much of an impression, when *DSM-III* was published in 1980, it transformed the landscape of mental health—

for good and ill. The slender paperback manual of 1952 ballooned to 943 pages in 2000 with the revised version of *DSM-IV*, cataloging more than 350 mental disorders.

Practitioners celebrated the standardization of emo-

WHAT'S SICK?
Or just eccentric? What one person finds noxious another might find inoffensive, perhaps even delightful.



BILL BINZEN-CORBIS

tionally disordered. Critics, however, were appalled at the oversimplification, lack of nuance, and arbitrariness being imposed on the infinite varieties of human behavior gone awry. Not to mention the way that the *DSM* seemed to pathologize what in many cases could reasonably be seen as simple quirks of normal human

behavior, like getting jittery after too much coffee.

Multipurpose. The *DSM* became, in the words of Harvard psychologist Richard McNally, a *DSM* consultant, an "instrument that serves different masters." It helps clinicians identify patients' disorders and points to the best treatments. It also helps researchers better organize the study of mental illnesses. It has become the only tool that insurance compa-

nies use to decide if they are going to pay for medicine, hospitalization, or therapy, and it figures in legal and employment contexts as well. The problem, McNally continues, is that "all these masters are not necessarily always congruent." In addition, says critic Paul Genova, a psychiatrist and author of *The Thaw: Reclaiming the Person for Psychiatry*, "You start out billing this way, and a year or two later you are thinking this way." Doing great disservice to patients in the process.

In fact, the descriptive nature of the document is one of its greatest problems and one that those who are planning for *DSM-V*, due in 2011, are trying to correct by including more biology and hard science. Despite the enormous progress in understanding the brain through genetic research and imaging technologies, these diagnoses are still determined by a cluster of behaviors that becomes a cluster of symptoms that becomes a discrete diagnosis. "The problem is that when you have a category, there is an implication that a boundary exists between who fits in and who doesn't," says psychiatrist Michael First, editor of *DSM-IV*. "We have a model that appears to have hard boundaries that don't actually fit what we see in the real world." —Marianne Szegedy-Maszak

CHERYL HIMMELSTEIN FOR USN&WR

**WAKE-UP CALL**

Her sister's death from diabetes made Beatrice Velasco take seriously her diagnosis of prediabetes. Now she exercises, eats a good diet, and has lost weight.

cost. Many people feel that cutbacks in treatment or diagnosis are merely attempts to save money. But what if treatments are unproven? The asthma study, for example, suggested that annual medication costs would be \$2 billion lower if all those people took inhaled steroids only when symptoms flared up. Paying for everyone to hedge their bets with unproven treatments, many doctors say, simply can't go on. "What we are doing

is not sustainable," says Nortin Hadler, a rheumatologist at the University of North Carolina–Chapel Hill and author of *The Last Well Person*. "It's about to implode. If it's been studied, and there is no evidence it works, it shouldn't be paid for. If it's been studied and there is evidence, that's not enough. I want to know whether the evidence will advantage my patient."

associated with their treatment, many physicians say they can't afford *not* to ask the hard questions. The rewards of early detection of disease have long been clear. For now, however, we are only beginning to come to grips with the risks and the costs. ●

So what happens now? Researchers are trying to figure out who might benefit from early diagnoses and who might not. Says Bernard Levin, vice president for cancer prevention at Houston's M. D. Anderson Cancer Center: "The issue is not so much whether identifying pre-cancer is a bad thing but how to individualize the treatment."

Until then, patients and doctors are going to have to get used to more complicated conversations about risks and benefits. One example: the prostate-specific antigen test. Despite its unproven accuracy, the PSA test is widely used to screen for prostate cancer. More recently, however, more doctors are debating when its use is and isn't appropriate.

With life possibly hanging in the balance, none of this, of course, is easy. But given the number of people now diagnosed as "sick" because of preconditions and the enormous costs

If You Get a 'Predisease'

For otherwise healthy people who have been told they have a pre-disease, medical experts recommend:

Prevention. Everyone—not just those at risk—can do "the stuff your grandmother told you," says Gilbert Welch, author of *Should I Be Tested for Cancer?* "Eat right, exercise, sleep, don't smoke. It doesn't require a risk analysis."

Screening. If offered a screening test, Welch says, ask why. How confident in the test is the doctor? Is it appropriate for you? What will you do if it's positive?

Diagnosis. What specifically is your diagnosis based on? If it's a single lab test, what other risk factors are involved? For example, says Michael Alderman, president of the International Society of Hypertension: "The sum total of your

blood pressure, cholesterol, whether you have diabetes, cigarette smoking, obesity—all of that together combines to create your risk for a heart attack."

Risk analysis. Understand risk. Don't just accept that your risk of getting a disease is twice that of an untreated person. That's "relative risk"; you want to know your "absolute risk"—the bottom-line risk of getting the disease. If a drug cuts the risk of developing a disease from 2 percent to 1 percent, that's less

significant than if it cuts the chances from 60 percent to 30 percent.

Evidence. Ask for supporting research for proposed treatments, suggests Maryann Napoli of the Center for Medical Consumers. Has the treatment been shown to work for everyone, or only the most ill? What about for people who are the same age and sex as you? Is there evidence that it actually extends or improves life? What about side effects? —K.H.