

The Sex of Your Dreams (& Hers)!

TONS OF  
USEFUL STUFF

# Men's Health

Amazing New Plan!

## LOSE YOUR GUT

SCULPT YOUR BODY  
IN JUST MINUTES A DAY!

## POWER UP YOUR DIET!

10 PERFECT MUSCLE FOODS

## MORE ENERGY INSTANTLY!

YOUR SECRET SOURCE

JUMPSTART YOUR LIFE!

# 2,143

COOL NEW HEALTH,  
FITNESS, SEX &  
NUTRITION TIPS!

## STRENGTH & CALM

A MIND/BODY  
WORKOUT

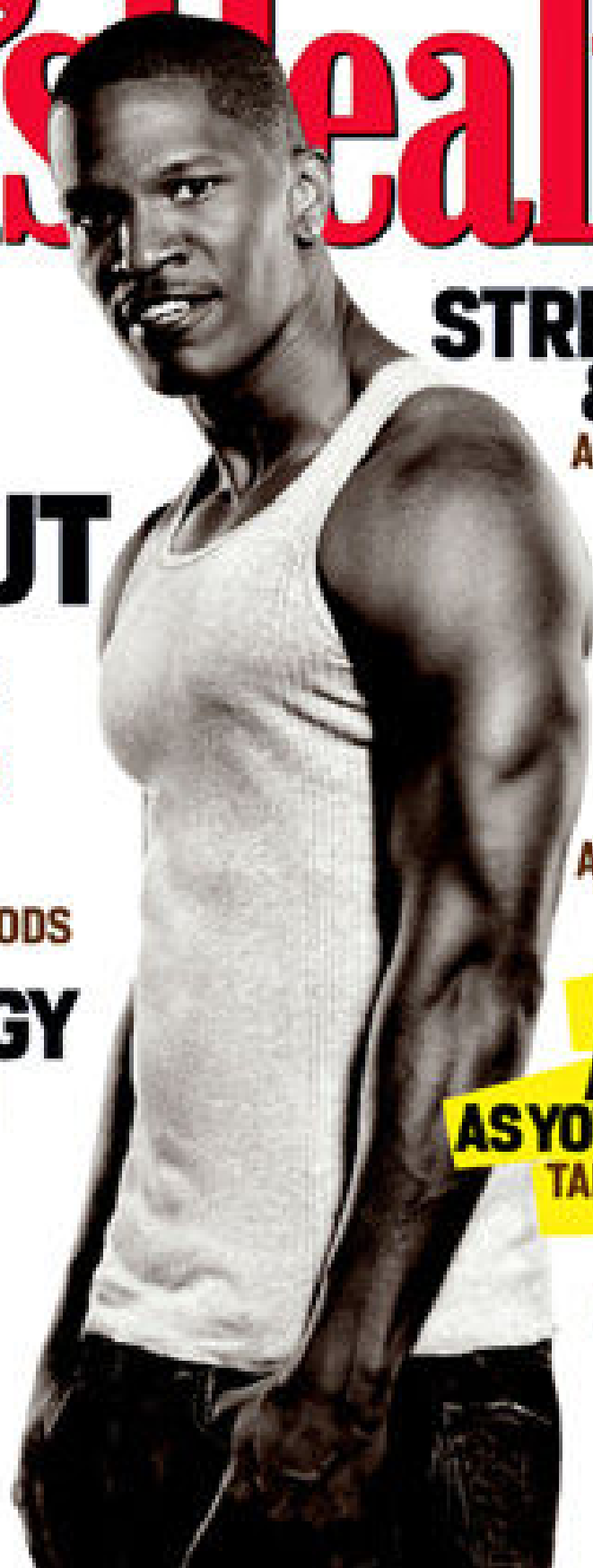
## LOOK YOUR BEST NOW!

AVOID THESE  
MISTAKES

## ARE YOU AS FIT AS YOU THINK?

TAKE OUR TEST  
p.82

The Men's Health Guy  
**Jamie Foxx**  
"Get up in the morning  
and challenge yourself!"



## 9 WAYS TO KEEP YOUR BALLS IN PLAY

**TOXINS LIKE PCBs and dioxins not only slam the environment, they also hit you below the belt by reducing your sperm count and lowering your testosterone. Here's how to safeguard your manhood.**

### 1 WEAR A DUST MASK



Old stone or cement walls—especially caulking from the 1960s and '70s—can release dangerous levels of PCBs when pulverized. As you breathe in, your testes can deflate.

### 2 EAT SALTWATER FISH

PCBs and dioxins accumulate faster in bluefish, striped bass, and farmed salmon, because the fatty tissues absorb more toxins. Put wild salmon, skip-jack tuna, or black sea bass on the menu instead.

### 3 AVOID SEX TOYS AND FISHING LURES



Gelled rubber—which makes fake worms and vibrators squishy—contains phthalates that can enter the body, decreasing semen quality in men. To be safe, swap in real worms in fishing; fingers and tongue during sex.

### 4 SUPPORT CLEAN-WATER LAWS

Environmental groups like Robert F. Kennedy Jr.'s Waterkeeper (waterkeeper.org) have the balls to protect yours. His group helped force General Electric to spend millions to clean up PCB contamination along 40 miles of New York's Hudson River.

### 5 TOSS OLD LAWN TREATMENTS



In 2002 the EPA banned sales of residential products with chlorpyrifos, an organophosphate proved to reduce testosterone in men. Time to dispose of (properly) the old weed killer. Industrial use is still okay; pay heed if the sign says "Keep off the Grass."

### 6 PROTECT THE PREGNANT

Women exposed to endocrine disruptors like PCBs, dioxins, and phthalates give birth to male babies with higher rates of birth defects like cryptorchidism (undescended testicles), hypospadias (malformation of the penis), and testicular cancer.

### 7 BUY A NEW BIKE SEAT



Narrow seats pressure your perineum, causing erectile dysfunction. Buy a seat that transfers pressure onto your hip bones during practice rides, and save the narrow saddle for race day.

### 8 SHOP AT THE ORGANIC MARKET



Pesticides are like debt: A little a day, over time, can develop into a big problem. Sidestep these testosterone killers by buying organic produce or growing your own testicle-friendly garden.

### 9 READ THE INGREDIENT LIST



A small study has shown a connection between lavender and tea-tree oils in cosmetics and the development of breast tissue in boys. Avoidance may be the best policy for now. JASON STEVENSON

would want less of a hormone like that?

And yet the quantity of the stuff, even in healthy young men, is astoundingly small. Most doctors measure total testosterone as the starting point, and for American men under the age of 40, the normal range is 300 to 1,000 nanograms per deciliter of blood. (That's what "ng/dl" means on your medical laboratory report.) A nanogram is a billionth of a gram, and a deciliter is a 10th of a liter. Or, to put it in layman's terms, not bloody much. If you somehow managed to collect all the testosterone from your entire body, it would barely fog the bottom of a shot glass.

But it gets more complicated. Testosterone occurs in the blood in three forms.

● About 40 percent of total testosterone is tightly bound to sex hormone-binding globulin, or SHBG, meaning it's not readily available for use by the body. In fact, nobody knows for sure what function SHBG-bound testosterone performs.

● "Free testosterone" isn't bound to other molecules. But it constitutes just 2 percent of total testosterone.

● Fortunately, the balance of total testosterone is bound to albumin and other proteins, and those links are easily broken. So together with free testosterone, this "bioavailable" testosterone is there when the body needs it.

You could look at it this way: Your manhood is based on half of almost nothing. And there's less of it with each passing year.

**MEASURING TESTOSTERONE** is complicated, because the tests themselves aren't always reliable, and results can differ from one lab to the next. "Normal" levels can also vary dramatically from one man to the next. And they can vary from minute to minute in the same man; testicles seem to do everything in spurts. That's because testosterone levels fluctuate with the little wins and losses of daily life. So if a test suggests that you have a testosterone problem, do not despair: There's a one-in-three chance you'll be back to normal on a follow-up.

But none of this diminishes the mystery: Why would testosterone levels in the United States today be substantially lower than they were 15 years ago? When they saw their results, the Massachusetts researchers thought they'd made a mistake. "We'd used the same lab, the same assay, and the same analyst to gather the data over time," says Travison. "But even so, subtle changes in the way the assay was manufactured could have had some impact."

Then in the summer of 2006, Travison attended an Endocrine Society meeting where another researcher, Antti Perheent-

tupa M.D., Ph.D., from the University of Turku, in Finland, presented evidence of a similar decline. The Finnish results suggested the change was happening among younger men, too. A man born in 1970 had about 20 percent less testosterone at age 35 than a man of his father's generation at the same age. "When I saw another group reproducing our results," says Travison, "that was convincing to me that we were seeing a true biological change over time, as opposed to just some measurement error."

One possible explanation for the decline is obvious: Men are fatter now. In the Massachusetts study, the average 60-year-old man in 1988 was already well past overweight (a body mass index, or BMI, of 25). But his 2003 counterpart was pushing obese (a BMI of 30). And obesity, says Travison, is "a very powerful predictor of low testosterone." Gain 10 percent in your BMI and you can expect your testosterone to drop by about the same amount. As a result, fat men typically have up to 25 percent less total testosterone than their trim counterparts do. (Fair warning: This doesn't make them girly men. SHBG—the stuff that locks up half your testosterone—also decreases with obesity. That means even a fat man with low total testosterone may have enough of the bioavailable stuff to crush you between his manboobs.)

Taking multiple medicines also tends to decrease testosterone, and a quarter of the Massachusetts test participants were practicing "polypharmacy"—taking six or more medicines at the same time. This was partly because the test group had aged. But in tandem with the obesity epidemic, participants also seemed to be experiencing an Rx epidemic. In 1988, 38 percent of the men were not taking regular medications. By 2003 not one man could make that claim.

Still, obesity and polypharmacy together weren't enough to explain the loss of testosterone. Nor was the dramatic decline in smoking among participants, though quitting can sometimes cause a decrease in testosterone. To filter out these effects, Travison's group looked at a subsample of 500 nonsmokers who were neither obese nor taking a large number of drugs. And even these apparently healthy men displayed the same exaggerated decrease in testosterone.



**SCIENTISTS HAVE BEEN** arguing for years about whether they are seeing a worrisome pattern in male reproductive-health problems around the world—and also about whether environmental