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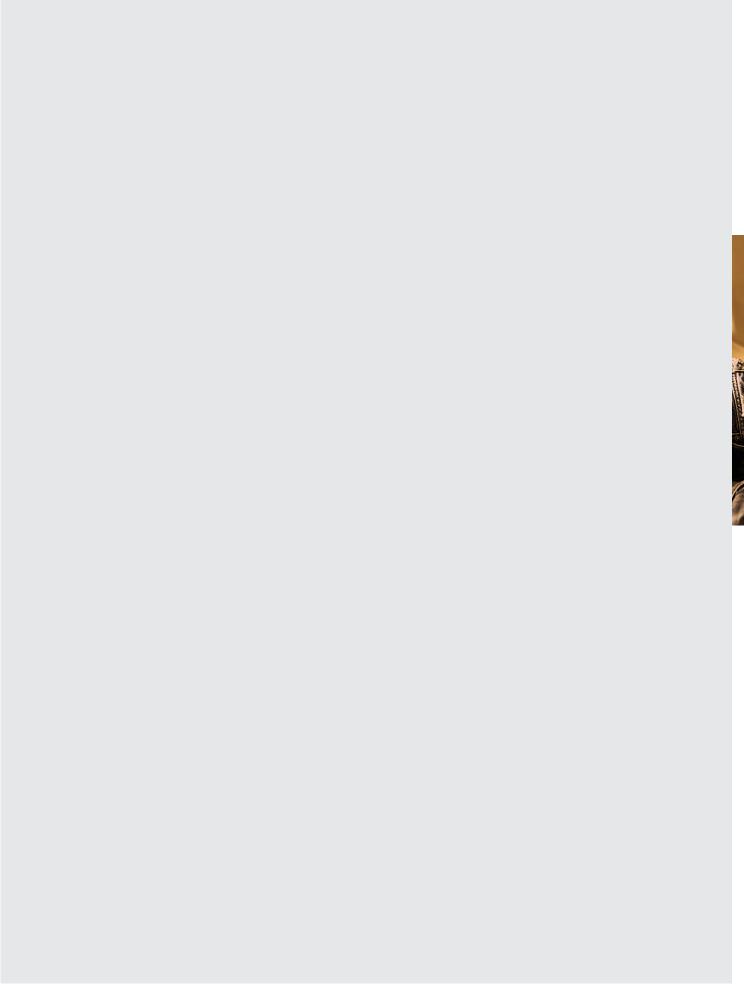
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**MUSCLE & BODY** 

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Hooray-ish for Hollywood

#### **EDITOR'S LETTER**

It could be fairly said that 2011 wasn't a banner year for movies. (Or for much else, for that matter. See also: the Republican Party, the Democratic Party, the global economy, the euro, Arab dictators, the Kardashians.) When one of the most regular logos on movie titles belongs to the comic-book publisher Marvel, you know it's not 1939 anymore—the year that was arguably the high-water mark of American moviemaking. But we have a big Hollywood Issue to put out, so let's try to look on the bright side.

For those with upper-middlebrow taste in movies—which is to say, most of us—there were a number of bright spots. Youngish old-timers such as Steven Spielberg and Martin Scorsese produced endearing family classics of lasting value in War Horse, The Adventures of Tintin, and Hugo. If these two masters have an heir, it is most surely David Fincher, who, like them, is a protean filmmaker of remarkable range and talent. His 2007 film, Zodiac, was brilliant but largely overlooked. The Social Network, on the other hand, became a part of the conversation in 2010 the way few movies have since All the President's Men. With The Girl with the Dragon Tattoo, he's made a taut, immersive film that causes you to forget the superb Swedish film trilogy based on the same Stieg Larsson novels—no mean accomplishment

George Clooney's The Ides of March will slip easily into the pantheon of political films and thrillers, and when you couple it with his moving, nuanced role in The Descendants, well, he had a pretty decent year. When it comes to Meryl Streep and her portrayal of Margaret Thatcher in The Iron Lady, the Academy should assign handicaps to the rest of the competition, the way they do to duffers in a club golf tournament. It's the only hope to even out the field given Streep's constant, almost otherworldly talent. And throughout the year, there were pockets of unbridled enjoyment—Bridesmaids, Midnight in Paris, Captain America, the fourth Mission: Impossible—movies that provide the sort of theatergoing pleasure that generally eludes the vast, award-giving industry that thrives on the fringes of creative endeavor.

In pulling together this Hollywood Issue—our 18th—we've made the best of things, culling from the high points of 2011. And, as we have in the past, we also look back at the stars and filmmakers who once made going to the movies such a magical experience, back in that faraway time before superheroes, children's toys, and even board games replaced wars, literary classics, and epic love stories as fodder for producers and studios.

With the death of Elizabeth Taylor, Sophia Loren, at 77, is one of the last reigning goddesses from Hollywood's golden age. Unlike Taylor, Loren began life not as a cosseted protégée of the studio system but as an illegitimate urchin, starving on the streets of Pozzuoli, near Naples, before, during, and after the war. Her first break came when she was a runner-up in a local beauty contest (for which her grandmother had yanked down a household curtain to make a dress). Loren worked for a few years in low-budget Italian films before arriving in Hollywood in 1957 with perfunctory English and a voluptuous presence so pronounced that Time magazine later noted she could have consumed her leading men "with half a glass of water." Hollywood had no idea what to do with her, so she made her own way, ramping up to serviceable English in 20 days and then finding in Cary Grant the perfect foil to her sultry beauty in the 1958 film Houseboat.

What is most astonishing about Loren's story is not her success—she was the first to win a best-actress Academy Award for a non-English-language performance (in 1960's Two Women)—but rather the hardships she endured at virtually every stage of her life. As she put it to contributing editor Sam Kashner for his story "Sophia's Choices," on page 370, "My life is not a fairy tale." Even after Loren had achieved international fame, she suffered at the hands of the Vatican, which condemned her romance with her mentor, the still-married producer Carlo Ponti, and later at the hands of Italian authorities, who confiscated the villa she and Ponti shared near Rome as well as the art on its walls. The Italians sent Ponti into exile and Loren to prison in a controversial tax-and-currency-violation case. So how wonderful it is to find Loren still radiant at her grand apartment in Geneva, and still able to summon her "marvelous cascading laugh, halfway between a tease and a call to joy," as Kashner aptly describes it.

— GRAYDEN CARTER

#### **Letters To The Editor**

#### A request....

Dear Editor:

I am a sports fan and in particular a big follower of Thoroughbred racing totally agree with the position the Times has taken regarding the abuse and doping of horses at race tracks across America. These are key issues to resolve if the sport is to move forward.

That said, the N.Y. Times rarely covers any racing news unless it is negative or during its inferior coverage of the Triple Crown races. The Times continually misses opportunities to give something of value to it's readers. It is also a disservice to the sport.

For years horse racing, which has many positive and interesting angles to it, routinely gets ignored. It baffles me especially when you see how the sport is revered in other parts of the world and a few locals in the U.S. Instead of taking a mostly one sided position on racing in New York, perhaps the Times should make an effort to have some knowledgeable person report on a more regular basis many of the fascinating human interest stories that surround the industry. The sport has so much more to offer then the parimutuel payoff although, given the millions of dollars wagered daily should be of interest.

—THOMAS PONZIIO

#### Requesting Copy of a Photo

Dear Editor:

The June 4th issue of Sports Illustrated contains a photo of Dario Franchitti, his wife Ashley, and my son, Kevin O'Donnell, Dario 's crew chief on the far left. Quite a stunning image of Target Chip Ganassi Racing's victory at the greatest spectacle of racing.

I am requesting you send me a hi-res file of that photo so I can have it printed and framed for my private use. If there is a release or fee to receive this file, please forward the necessary requirements.

Thank you for your consideration.

—CORY O'DONNEL



#### Rooney

Dear Editor:

Rooney is not an international centre foreword, but he could be world class midfield player. At club level he could replace Paul Scholes has Ferguson bottled it. In fact he could be Roy Keane and Paul Scholes rolled into one.

—TONY GIBSON

#### **The Washington Nationals** *Dear Editor:*

Recently, in the wave of a Phillies' losing streak, someone asked, "What's wrong with Lee?" Here we are, in the middle of July a \$120 million pitcher with a win-loss record of zero, his ERA is a whopping 7.30 in the last four Phillies' games. In fact, Lee's ERA for the 2012 season is 4.13, the highest he has had in five

vears.

So I ask, what is wrong with Lee and the Phillies in particular in this 2012 season of high expectation? Well, injuries aside, I do not think anything is wrong with Lee except for some psychological remaining effect from his elaborate exit from the Phillies a couple of years ago, when he was booted out of Philadelphia after his brilliant regular season's pitching performance and his stellar pitching in the 2009 World series. After all, why would Ruben Amaro or any other intelligent human being trade someone who was solely responsible for the 2009 championship season in Philadelphia for the simple reason of getting the coveted marquee player the Phillies wanted in the name of Roy Halladay?

I believe, enough is been said about the mis-calculated 2009 trade that sent Lee to Seattle only to reclaim him back in 2011 when the pressure by the Philadelphia's fans became evident that indeed, Amaro had made a mistake in letting Lee go. I was one of those fans, who for the life of me, did not comprehend nor did I believe the reason given for

getting rid of Lee in the first place.

So in a nutshell, nothing is wrong with Lee because time will cure all. The 2012 Phillies will soon be history with the Washington Nationals winning the division. I only hope that the Phillies can return as champions in 2013 because as I said so many times before, timing is everything. The Phillies lost a golden opportunity in 2009 and 2010 and as a result, in 2012 must settle for mediocrity.

If Hamels resigns with the Phillies, I believe the Phillies can recapture the glory days of 2008 when they single-handedly won the World Series. As an avid Phillies' fan I wish for nothing less than to have a 2013 World Series in Philadelphia.

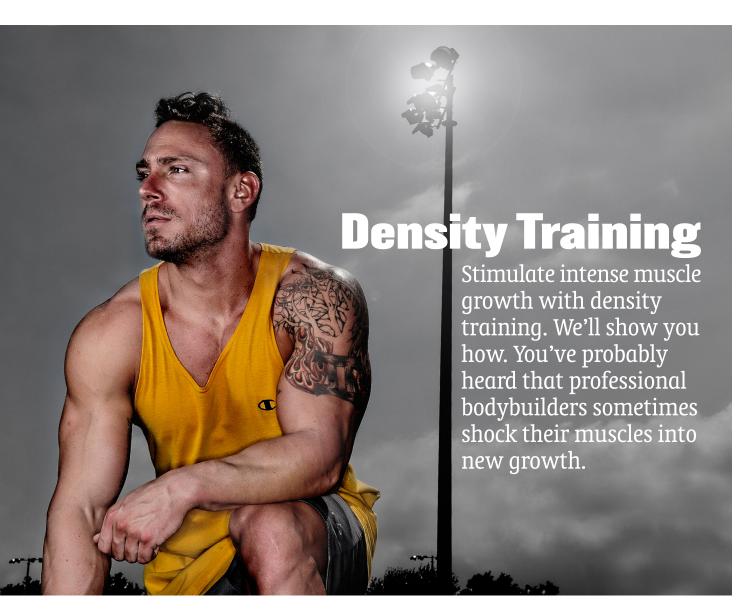
—JOHN PINO

#### **Hockey Stanley Cup**

Dear Editor:

I saw the very first Kings game at the old Foprum, and 21 more that first season. I have waitied all these years for that Stanley Cup! Thank you, Kings, for fulfilling a life long dream! And GO KINGS GO!!!

—RAYMOND SCHWARTZ



No, they're not attaching electrodes to their bodies and running mega voltage into their quads, pecs and biceps. If only it were that easy. Instead, they're using a relatively new concept called density training that promotes electrifying strength and muscle-mass gains. But it's not reserved exclusively for guys who inhale tuna from the can and cross the color line with insane amounts of instant tan. You, too, can use density training to become bigger, thicker and stronger, even if you don't have a single extra minute to spare at the gym.

Not familiar with the concept? It's pretty simple, even for the scientifically challenged. It all boils down to doing more work in the same amount of time each workout, or the same amount of work in less time. In other words, you're basically cramming more volume into fewer ticks of the clock.

Density training is particularly effective for increasing the number of reps you can perform on body-weight exercises like pullups, dips and pushups, but you can utilize it to increase the volume of any exercise. You may want to implement DT when you're experiencing a growth plateau or when you are coming off of a planned volume decrease (i.e., tapering). But density training isn't for wimps; maximizing its full potential requires honest effort. If you want size and strength increases, you've got to eat a little pain. But you wouldn't want it any other way, would you?

—ROBERT SMITH

### Gain Muscle Fast: With the Muscle Express Train

Take this simple self-test to uncover the secret to instant gains.



When it comes to building a better body, every guy is looking for an edge. And while some men might opt for a 'roid trip to an underground pharmacy, the rest of us want a safer, smarter shortcut to more muscle. And I've found your advantage: fast-twitch muscle training. It's the X factor that'll help you pack on new muscle, add strength, and even burn more fat.

But before I reveal the secret, let's make one thing clear: Nothing can help you increase the quantity of your fast-twitch fibers. That was determined at birth.

This leaves you with a choice: Pray that you won the genetic lottery, or find the best way to make your fast-twitch fibers bigger. Follow this two-step approach, and you'll build more muscle than you ever thought possible.

Listen to the Professionals: After all, they are the experts. If you are looking for guidance on lifting or any other fitness regimens, check out Men's Health Personal Trainer. There are fitness and kinesiology experts on hand to provide instruction and advice.

#### **Test Your Fast-Twitch Fibers**

You can activate your fast-twitch fibers two ways—by lifting heavier weights or by lifting lighter weights very quickly. Take this test to determine your fast-twitch ratio. The result will tell you how you need to lift in order to see the fastest improvement.

#### Step 1:

Test your 1-rep max on the bench press. Using a spotter, perform a barbell bench press. Start with half of your estimated 1-rep max, or 1RM (the amount of weight you think you can press only once). Do 5 or 6 reps with perfect technique. Now add 10% more weight but subtract 1 rep.

Rest 2 minutes. Repeat this pattern until you do 1 rep with about 90% of your estimated 1RM. Rest 3 to 5 minutes, and try your estimated max. If you achieve it, then that's your true 1RM. If you fail, then use the 90% weight; if it's too easy, add 10% to your estimated 1RM. Then rest 5 minutes.

#### Step 2:

Select a weight that's 45 percent of your 1-rep max. (So if your max is 225 pounds, you'll start with about 100 pounds.) Try to perform 5 reps in 5 seconds.

#### Step 3:

If you succeed, rest 1 to 2 minutes and then repeat the test, this time using 5 to 10 percent more weight. Keep adding 5 to 10 percent until you can no longer complete 5 reps in 5 seconds.

#### Sten 4

Calculate your fast-twitch ratio: Simply divide the heaviest weight you could lift in 5 seconds by your 1-rep max. If you lifted 135 pounds in 5 seconds and your max is 225, your ratio would be 60 percent.

—BY BILL HARTMAN, P.T.

## **Building Muscle Without Heavy Weights**

Weight training at a lower intensity but with more repetitions may be as effective for building muscle as lifting heavy weights says a new opinion piece in Applied Physiology, Nutrition, and Metabolism.

"The perspective provided in this review highlights that other resistance protocols, beyond the often discussed high-intensity training, can be effective in stimulating a muscle building response that may translate into bigger muscles after resistance training," says lead author Nicholas Burd. "These findings have important implications from a public health standpoint because skeletal muscle mass is a large contributor to daily energy expenditure and it assists in weight management. Additionally, skeletal muscle mass, because of its overall size, is the primary site of blood sugar disposal and thus will likely play a role in reducing the risk for development of type II diabetes."

The authors from McMaster University conducted a series of experiments that manipulated various resistance exercise variables (e.g., intensity, volume, and muscle time under tension). They found that highintensity muscle contractions derived from lifting heavy loads were not the only drivers of exercise-induced muscle development. In resistance-trained young men a lower workout intensity and a higher volume of repetitions of resistance exercise, performed until failure, was equally effective in stimulating muscle proteins as a heavy workout intensity at lower repetition rates. An additional benefit of the low-intensity workout is that the higher repetitions required to achieve fatigue will also be beneficial for sustaining the muscle building response for days.

—TONY STARK

#### Keep me logged in

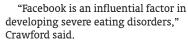
# Feeling Fat!? Maybe Facebook is to blame.

"Do I look fat?" The answer is a resounding yes if you're on Facebook. But it's not your friends telling you, it's yourself.

Facebook is fueling our thin-obsessed culture, says a new study from the Center for Eating Disorders at Sheppard Pratt in Maryland that surveyed 600 Facebook users, ages 16 to 40. More than half said that Facebook makes them more self-conscious about their bodies and weight. And men were some of those with the most negative feelings.

While more women than men admitted they'd like to lose some weight, 75 percent compared to 58 percent, men were far more vocal about their dissatisfaction. Forty percent of men said they've posted negative comments about their bodies, while only half that number of women had done

"People are now constantly aware of their appearance, thanks to Facebook," Steven Crawford, associate director at the center, told TechNews-Daily. "A common reaction is, 'I need to be thinner' And it's that kind of thinking that can lead to hazardous dieting."



When you're unhappy with the way you look, it's easy to avoid mirrors. But it's becoming pretty tough to go without Facebook. Eight percent of those surveyed log onto Facebook at least once a day. It's impossible to avoid seeing photos of yourself and your friends. But we're not just looking—we're comparing.

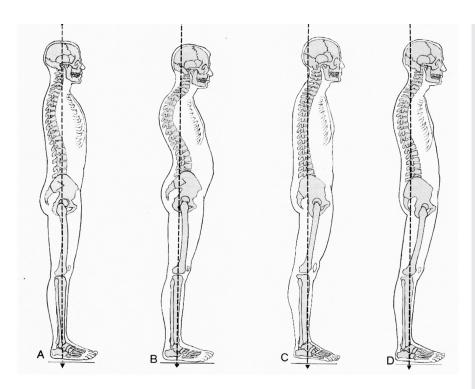
Timeline—Facebook's new profile format—makes it easy. With a click you can see what you looked like five years ago, and the comparison can be depressing. Nearly a third of people felt "sad" when comparing photos of themselves and their friends, and 44 percent wished they had the same body or weight as a friend on Facebook.

Facebook photo comparisons are also affecting the social lives of Facebook users. Like celebrities who worry about the paparazzi, Facebook users are concerned every time they go out that their photo will show up on the network

"Facebook is fueling a "cameraready" mentality," Crawford said.
"People look at photos before an upcoming high school reunion and decide not to go." Why? Because they think they don't look good enough.

The center has tips for people suffering from Facebook-induced body envy, including subscribing to Facebook pages such as "Adios Barbie" and "End Fat Talk." But if you can't stop making negative comparisons between yourself and others, log off.

-LESLIE MEREDITH



### Fix Your Posture to Maximize Muscle

Without even looking at you, I'm pretty sure you have a posture problem. That's because almost everyone I see has a posture problem.

After years of evaluating clients at my fitness center in Indianapolis, I've learned to spot an anatomical abnormality from the way a guy walks through the mall, sits on a park bench, or stands at a bar.

The trouble isn't just that slumped shoulders make you resemble a Neanderthal. Over time, your poor posture takes a tremendous toll on your spine, shoulders, hips, and knees. In fact, it can cause a cascade of structural flaws that result in acute problems, such as joint pain throughout your body, reduced flexibility, and compromised muscles, all of which can limit your ability to burn fat and build strength.

But don't worry—all these problems can be corrected. Are you ready to straighten yourself out? Use this head-to-toe guide to make sure your posture is picture-perfect.

#### **Analyze Your Alignment**

Strip down to a pair of shorts and ask a friend to take two full-body photos, one from the front and one from the side. Keep your muscles relaxed but stand as tall as you can, with your feet hip-width apart. Now compare your photos with the illustrations below to diagnose your posture problems. Then see the following repair plans.

—BILL HARTMAN, P.T., C.S.C.S.

#### Build a Better Back

"Scapular retraction" sounds like a surgical procedure—and, for all we know, it very well may be.

But in the weight room, it's a muscle action that strengthens the middle part of your trapezius, one of your back's biggest muscles.

#### The Movement:

Pull your shoulder blades (scapulae) together in back (retracting them). The exercise: any variety of row -- seated using a cable machine; bent-over with a barbell, dumbbells, or T-bar; or standing, pulling a cable down to your face.

#### **Latest Retraction:**

For something a little different, try the bow and arrow, suggests Craig Ballantyne, C.S.C.S., a strength coach in Toronto. Attach a stirrup handle to a high cable pulley. Stand with your right side facing the weight stack, as if you were a left-handed archer. Grab the handle with your left hand and hold it in front of your face, like a bowstring you're about to pull back. Now pull it back and to the left using midback muscles, pause, return to the starting posi-tion, and repeat. Do one set of 10 to 12 repetitions with each arm for starters. Add one set each workout, to a maximum of three sets. This will build strength and muscle mass in your scapular retractors.

—BRUCE WAYNE





## Regular weight training is the most basic requirement for gaining sizeable muscle mass. However, many dedicated gym regulars risk entering a harmful phase of Overtraining.

Please understand that this phase is usually found among the more serious gym-training folks, i.e. bodybuilders and other gym devotees who tend to spend hours in the gym on a daily basis.

#### **Understand Overtraining**

Overtraining is established when the body is not allowed sufficient time to recover. Here, understanding the basics of muscle growth is vital. Muscle development is essentially a process of muscle repair and the associated increase in volume and size of muscles that happens after the muscles have been stretched or worked upon during a physical training regimen. After a workout, a muscle group undergoes a process of recovering wherein more nutrients and muscle building nutrients like amino acids are absorbed into the muscles, helping them recuperate fully. Now, during Overtraining the muscles are pushed into a mode of continuous exertion without being allowed to recover. As a result the muscles don't

develop properly and the affected bodybuilder might complain of not seeing any visible gains from his workout schedule.

Symptoms of Overtraining
It is very difficult to decode when
overtraining has commenced. This is
because training hard and Overtraining are separated by rather confusing,
hard-to-identify factors. If you are
regular in the gym and are suffering
from any of the following signs, you
should get an opinion from an expert
gym trainer to re-evaluate your exercise regimen:

Your body feels sore all the time even though you have been working-out for months and are used to lifting heavy weights. This indicates that your muscles are not being allowed to recuperate properly. Some degree of muscle soreness is common among the serious weight-trainers but permanent soreness and pain-like contractions in the body indicate Overtraining.

You feel tired throughout the day as if you are suffering from light fever.

This condition is often referred to as Malaise. However, this is not due to an illness but due the higher presence of lactic acid that is produced in the muscles due to lack of oxygen. This physiological problem is created when the muscles are overworked and their oxygenation is incomplete. Lactic acid accumulation produces symptoms that are similar to having fever, including headache and feeling drowsy throughout the day.

Please Note: the most unacknowledged form of overtraining is mental exertion. This refers to a stage when the psychological intensity for working-out is lost. It is a commonly-acknowledged fact that physical training is executed at two levels, i.e. the mind and body. Once, the mind enters a state of sustained fatigue, the enthusiasm to exercise and the inherent ability to lift more and keep oneself motivated. Thus, an over-trained mind is as big a deterrent to gaining serious gym gains as physical overtraining.

-STEVE ROGERS

## FITNESS PLATEAU

Your body gets bored when you exercise the same way over and over again. By changing your routines and giving your body a jolt, you can get over a fitness plateau.

You're doing everything right. You're eating healthy foods in limited portions. You're working out regularly. But suddenly you reach a certain point—the dreaded fitness plateau—and you just can't seem to lose any more weight or gain any more muscle mass. What gives?

The problem lies in the body's ability to adapt. Unfortunately, that applies to things that are good for you as well as things that are bad for you. The more fit you become, the better able your body is to handle the same level of exercise. You burn fewer calories, your metabolism decreases, and you find that your progress stalls out.

"You're at a fitness plateau because your body has reached a comfort level," said Nicki Anderson, a personal trainer in Naperville, Ill., and the IDEA Health and Fitness Association Trainer of the Year for 2008–2009. "You need to get out of that comfort zone by challenging yourself."

#### **Exercise: Breaking the Fitness Plateau**

The best way to challenge yourself and get past a fitness plateau is to shake up your routine. Tactics you might want to try include:

Take a break. Put your training on hiatus for one week to give your muscles a chance to reset their baseline.

Mix it up. Challenge your body and your mind by changing up your program. If you're the treadmill master, switch to an elliptical machine or swim laps once or twice a week. If you weighttrain with free weights, try resistance machines instead.

Focus on training neglected or weaker body parts. For instance, if you spend hours on sit-ups, shift your attention to your shoulders and back.



Give your muscles a jolt. Challenge different sets of muscles by pushing them to their limits, where they are barely able to successfully finish the last rep with a higher weight.

Turn up the intensity on cardio workouts. Try the technique called interval training to push yourself to new fitness levels. Whether you're on the treadmill, elliptical machine, or stationary bike, increase your speed or intensity for one minute of every three to five minutes at your usual exercise pace. Repeat this pattern for the entire length of your aerobic session. After a few days, you'll probably to be able to raise the intensity of those one-minute spurts even more.

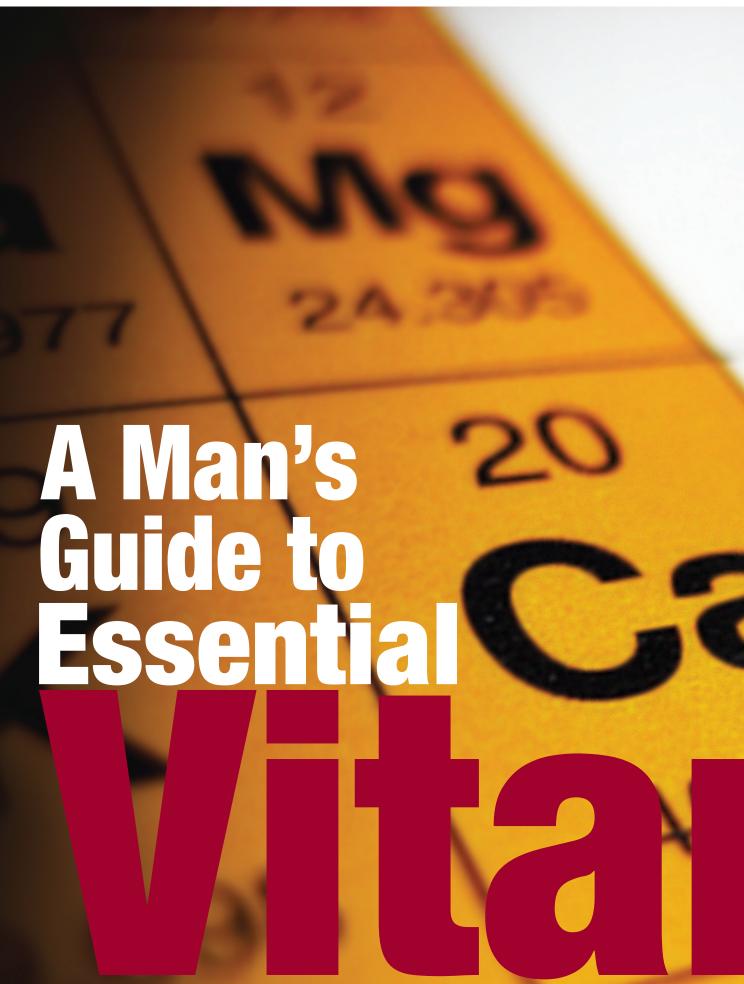
Rethink meal sizes. When your metabolism is crawling along, readjusting your calorie intake might help move it back into high gear. Instead of eating the typical three meals a day, divide the same number of calories into five or six meals. Spreading calories out throughout your day can spark a spurt in your metabolism. You also should be adding new foods to your diet all the time to prevent boredom, Anderson says. For instance, if you eat oatmeal for breakfast and a garden salad for lunch every day, you will quickly get tired of that routine. Eat healthy, but try new recipes, even new cuisines, as often as you can.

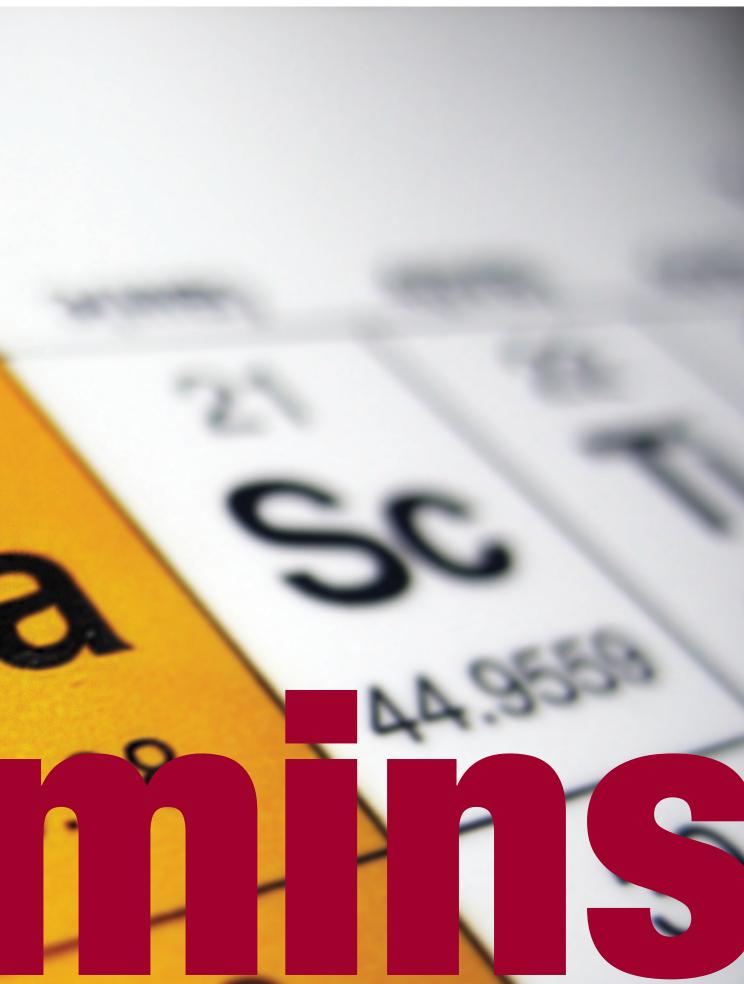
#### **Exercise: Beating the Boredom in Your Head**

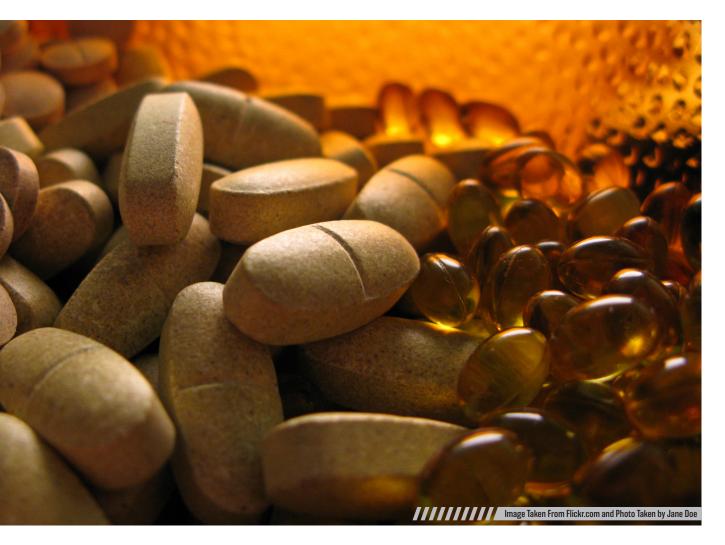
There's also a psychological aspect to a fitness plateau that you'll have to overcome. You might get so bored and frustrated by your lack of progress that you start doing things that are counterproductive to your overall goals, like snacking on junk food or skipping workouts. "Usually that's the main reason people stop working out—because they're bored and no longer seeing the results they used to," Anderson explains.

Besides changing up your workout schedule, you can jumpstart your program by taking an exercise class or working with a personal trainer, she Anderson. Both will push you to work harder and better. "A class can be fun and really challenge your body," she said.

—DENNIS THOMPSON JR.







#### By Chris Iliades, MD Medically reviewed by Pat F. Bass III MD, MPH

## Research shows that men are missing out on some key nutrients for their health. Here's the 411 on what you need—and where you can get it.

You know the rules for healthy living—exercise, eat right, sleep well, etc.—but how many of them do you actually follow? Data from the International Food Council Foundation suggests that while a majority of men are aware that changes to their diet could benefit their overall health, fewer than half actually follow through with those changes.

"Most men can get almost all the vitamins they need if they pay attention to nutrition," says Bruce B. Campbell, MD, a Men's health specialist at the Lahey Clinic in Burlington, Mass. "But not all men do pay enough attention, and nutrition needs may change with age." Men over 70, for example, need more vitamin D than middle-aged men, and according to a recent study, 72 percent of them don't get it. In fact, men of all ages have deficits in nearly every nutritional category. According to the United States

Department of Agriculture, men need to eat 350 percent more dark green vegetables and 150 percent more fruit in order to meet federal guidelines.

"Eating a diet rich in fruits, vegetables, whole grains, healthy oils, and low in saturated fats from red meat is rule number one for healthy nutrition," says Dr. Campbell. He and other experts warn against mega-dose vitamins (those containing more than 100 percent of your recommended daily allowance) but say certain supplements may help compensate for deficiencies. Many nutrition specialists, for example, may recommend multivitamins. Although some recent studies have questioned the value of them for preventing conditions like heart disease and cancer, experts say a basic multi could act as an insurance policy for men who have nutritional gaps in their diet.

#### **Essential Vitamins for Men's Health: Vitamin D**

"It's hard to get enough vitamin D from food," advises Campbell. "Many men who work inside all day do not get enough exposure to the sun, which is needed for the body to manufacture vitamin D. Most men can benefit from taking 1,000 IU [international units] of vitamin D daily."

#### What you need to know about vitamin D:

Vitamin D becomes even more important with age, because it's needed to absorb calcium and helps prevent weak muscles and bones.

Recent research also suggests that vitamin D deficiency may increase the risk for colon cancer, and one study found that men with low levels of vitamin D were twice as likely to have a heart attack as men with normal levels.

On the other hand, too much vitamin D can cause fatigue and muscle weakness, so you should stay below 2,000 IU unless your doctor advises otherwise.

"Good nutrition sources for vitamin D include salmon, sardines, cod liver oil, milk, cheese, egg yolk, orange juice, yogurt, and fortified breakfast cereal," says Kari L. Kooi, MS, RD, a clinical dietitian specialist at the Methodist Hospital in Houston, Tex.

#### **Folate for Heart Health**

Folate, or folic acid, is one of the important B vitamins. Folate may help protect men and women from heart disease because it prevents the build-up of homocysteine, a substance that your body needs to build protein but that can lead to heart and blood vessel disease if produced in excess.

#### What you need to know about folate:

The recommended allowance for folate is 400 micrograms (mcg) a day, which you can get from eating a few servings of leafy green vegetables or beans daily.

Folate can be included in your multivitamin, but you should not have to take extra dietary supplements unless your doctor says your homocysteine is low. Too much folate may increase your risk for colon cancer.

"Great sources of nutrition for folate include lima beans, spinach, asparagus, oranges, strawberries, and avocado," says Kooi.

#### Vitamin B12 for a Healthy Nervous System

Older men, in particular, may have an increased need for this B vitamin, which boosts brain health. "Vitamin B12 supports the normal functioning of the nervous system, including memory," says Kooi. "Depression and dementia are symptoms of a low serum B12."

#### What you need to know about vitamin B12:

The recommended daily allowance for B12 is 2.4 mcg, which you can easily get from your diet. One serving of fortified breakfast cereal will provide all that you need.

B12 may be included in your daily multivitamin. Although high doses have not been shown to be harmful, you should not need to supplement this vitamin unless your doctor recommends it.

"Great food sources for B12 include salmon, shrimp, beef, chicken, clams, eggs, milk, and cheese," says Kooi.

#### **Vitamin A for Vision and a Good Immune System**

"Vitamin A is important for maintaining good vision," Kooi says. "It is also known as the anti-infective vitamin because of its role in supporting activities of the immune system."



#### What you need to know about vitamin A:

The recommended daily intake of vitamin A is 3,000 IU. Too much vitamin A can cause nausea and vomiting and result in weak bones.

Vitamin A deficiency is rare in the United States—you should get plenty as long as you eat your fruits and vegetables. It may be in your multivitamin, but you should not need any additional supplements.

"The best nutrition sources for vitamin A are carrots, spinach, sweet potatoes, apricots, cantaloupe, broccoli, eggs, milk, and cod liver oil," says Kooi.

#### Vitamin C for Healthy Aging

"Vitamin C is a potent antioxidant that serves a protective role in the body by neutralizing free radicals that want to attack healthy cells," explains Kooi. "High intake of vitamin-C foods can help slow signs of aging." Although it is no longer believed that vitamin C can keep you from catching a cold, it is an essential building block for good nutrition.

#### What you need to know about vitamin C:

Not enough vitamin C can result in anemia and scurvy. Scurvy is still seen in some malnourished older adults.

The recommended daily amount of vitamin C for men is 90 milligrams (mg) a day.

Too much vitamin C will not hurt you, because your body can't store it, but it can give you an upset stomach. Taking a multivitamin and eating your fruits and vegetables is all you need to do to be sure you get enough of this nutrient.

"Great sources of vitamin C include oranges, bell pepper, broccoli, Brussels sprouts, cabbage, potatoes, strawberries, tomatoes, kiwi, lemons, limes, cantaloupe, watermelon, pineapple, and asparagus," says Kooi.

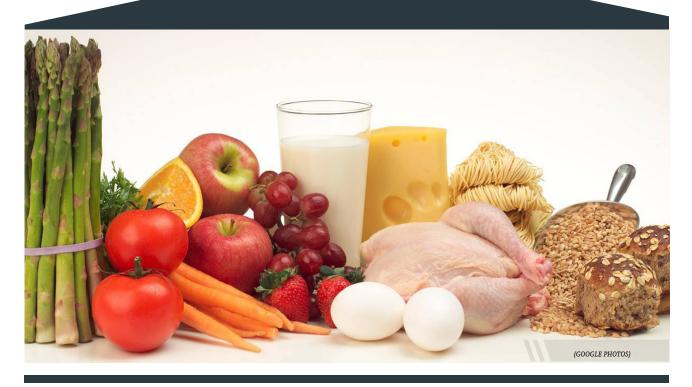
Some medical conditions may require special dietary supplements, so talk to your doctor about your specific nutrition needs. For most men, the bottom line on vitamins and men's health is this: If you eat a well-balanced diet, take a standard multivitamin, and supplement with 1,000 IU of vitamin D every day, your nutrition needs should be covered.



### MUSCLE & BODY PRESENT

# NUTRION 101 FITNESS FROM A TO Z

For the most part, when we read textbooks or try to figure out the jargon associated with nutrition, it tends to confuse or even alienate us. It certainly did that to me in the beginning when I tried to make sense of it all. And what a shame that was, because to be able to understand how to maintain a healthy body and a healthy mind is so importantly basic to each and every one of us.



It's a given that if we don't care for our cars and fuel them improperly, they will break down on us. Even though the mechanics of a car is simpler than the mechanics of our bodies, the principles nonetheless, are the same.

Our bodies are like cars in this sense that they are vehicles carrying a passenger for a while, requiring fuel or energy and proper care to keep them going. That which is meant to provide proper fuel and energy for the body is called eating. products of other living beings that ate foods, which had stored solar energy.

Our highly industrialized society has come to be powered by the same solar energy stored in the bodies of past generations of plants and mammals, which has been transformed into fossil fuels during the course of time.

Our dependence on fossil fuels as an energy source, how we get energy into our bodies, what it does there and what we do with it, are all linked together.

## izing, spraying, harvesting, transporting, processing, and storing, adds up to about 10 calories of fossil fuels being used for every 1 calorie of energy, in the form of food, consumed in the United States.

The question that must be asked is how has this inefficient use of energy come to be? First of all, agriculture has become a very centralized "industry", with approximately 3% of the population in the United States growing the food for the rest of the population.

What this means is that large amounts of energy are expended just to transport harvested foodstuffs to different parts of the country, while nutrients are lost along the way. And the large-scale, intensive agribusiness has totally changed the face of farming from a more appropriate technology business, in touch with the laws of nature, to an industry dependent on fossil fuels that, as with the other such large industries, plays its part and destroying nature.

We have large machines replacing farm workers, we have the use of petro-chemicals as fertilizers and sprays, and now we have Monsanto. All these are slowly depleting and pollut-

#### "IT'S HARD TO JUST TALK ABOUT NUTRITION WITHOUT TAKING A GOOD, HARD LOOK AT HOW WE LIVE OUR LIVES AND THE WHOLE PICTURE."

Unfortunately, feeding our bodies a nutritious diet has become an "energy problem" similar to and connected with the energy problem that modern man has become so preoccupied with lately.

Our bodies are powered by solar energy, which we consume directly in the form of foods, which have collected and stored energy from the sun, or indirectly by eating the bodies or byTherefore, it's hard to just talk about nutrition without taking a good, hard look at how we live our lives and the whole picture.

The system of moving food from farms and/or laboratories to our homes has become an insanely energy-intensive endeavor that manages to separate the links between agriculture, food, and nutrition.

The total chain of events from fertil-

## Muscle & Body Recipe Corner INSIDE-OUT CHEESEBURGERS

ing the soil and adding harmful and unwanted pesticides to the foods that we eat.

If you think that the increase in fossil fuel consumption stops on the sprawling agribusiness so-called "farms", guess again. What about the process, which transforms food into a multicolor product to be placed on the supermarket shelf? Understand this, the more the food is processed, the more fossil fuels will have been burned to provide a food with less nutrients.

Would it not be more energy efficient to consume unrefined and unprocessed foods that are locally grown or organically grown or grown in our own backyards or our balconies or in our kitchens to provide our bodies with energy?

Most of us know that energy obtained from eating has to be burned off because an excess of energy consumed and stored in the body causes obesity and disease.

Our industrialized society utilizes energy from fossil fuels to do the work. We have created "leisure activities" (physical work which does not produce anything), like jogging, exercise spas, gyms, fitness clubs, etc., to burn unused energy. And, since we have to use the energy we consume, an alternative source we might seriously consider and not look down on, is people power, aided by appropriate and people-oriented technology.

Much of today's problems come from the under-utilization and misdirection of people's energy and over-dependence on stored energy from past generations of living entities.

Unemployment, pollution, inflation (overconsumption and underproduction), and bad health are a few obvious results of the system, which is not in harmony with the arrangements of God and nature.

To make a long story short, the story of food is the story of energy, whether we are looking at the process by which solar energy provides nutrients for the body, or how that energy, in the form of fossil fuels, is used to bring energy, in the form of food, to our tables.

So, what we'll do here is to concern ourselves with the nutritional aspects, keeping in mind that our patterns of consumption will not only affect our health, but also have much deeper and far-reaching ramifications.

— LESLIE MEREDITH



#### INGREDIANTS

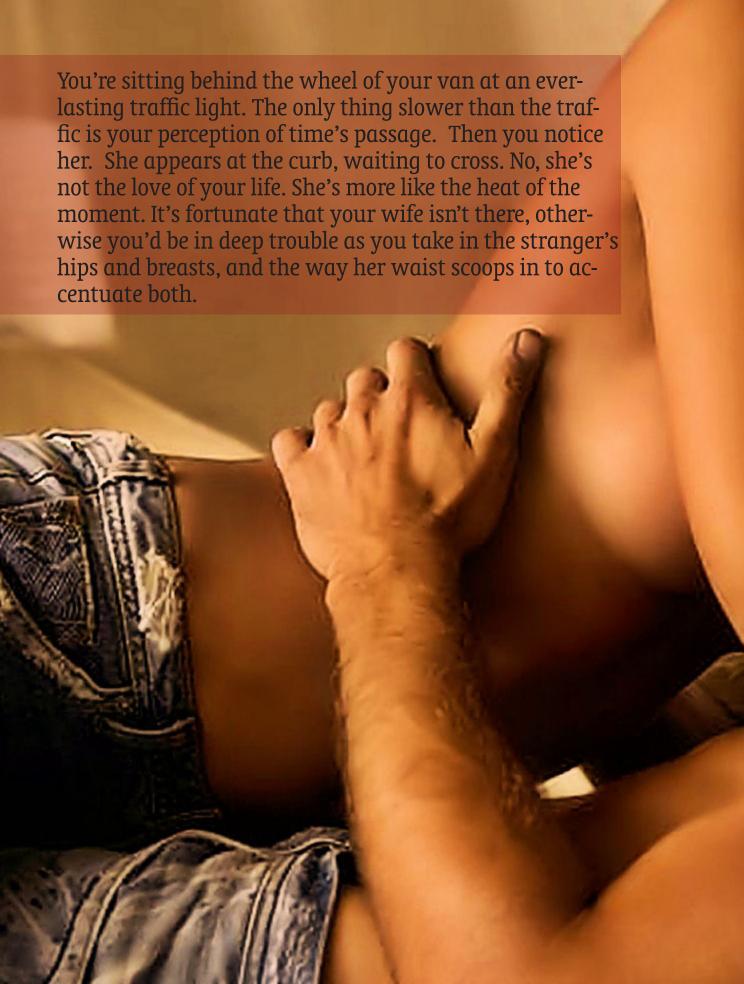
- 1/4 cup shredded Cheddar cheese
- 1/4 cup shredded Gruyere cheese
- 1 pound 90%-lean ground beef
- 1 tablespoon Worcestershire sauce
- 1 1/2 teaspoons paprika
- 1/4 teaspoon freshly ground pepper

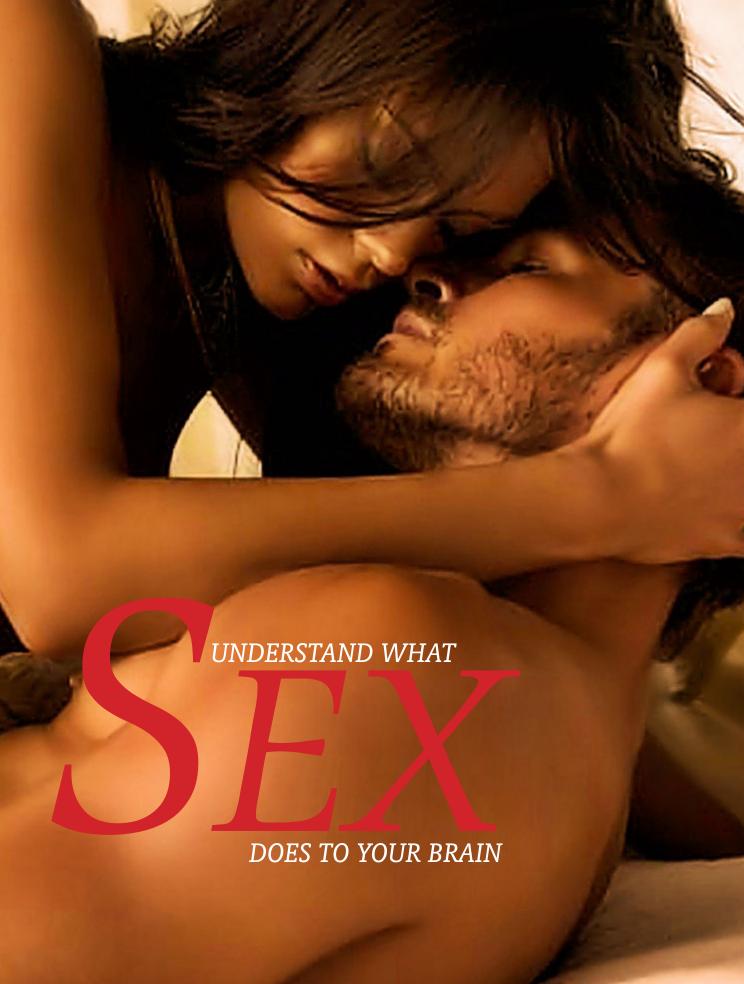
#### **PREPARATION**

Preheat grill to medium-high or preheat the broiler. Combine Cheddar and Gruyere in a small bowl. Gently mix beef, Worcestershire, paprika and pepper in a large bowl, preferably with your hands, without overworking.

Shape into 8 thin, 4-inch-wide patties. Mound 2 tablespoons of the cheese mixture on each of 4 patties, leaving a 1/2-inch border. Cover each with one of the remaining patties. Crimp and seal the edges closed. To grill: Lightly oil the grill rack (see Tip).

Grill the stuffed patties over medium-high heat, about 4 minutes per side for medium-well. (Be sure not to press the burgers as they cook or they'll split open and the cheese will ooze out.) To broil: Cover a broiler pan with foil and coat with cooking spray. Broil the stuffed patties in the upper third of the oven, about 4 minutes per side for medium-well. In either case, let the burgers stand for 5 minutes before serving.





Time is enhanced; there's a pleasing buzz connecting your temples. PLUS: The red-hot guide to the sex of your dreams. Your reaction is automatic, reflexive, and quite possibly the most powerful one you'll have this day. It temporarily blots out your long-range commitments—that 10-year marriage, that kid in second grade, that responsibility to keep eyes forward at traffic lights. You've surrendered control; you're captivated by the pleasure in the vision.

"You dog!" you may whisper under your breath, embarrassed by what you're envisioning as you sit there in your family van. But it might be more correct to say, "You dopamine fiend!" As a neuroscientist of 25 years, I know that your brain is command central for everything sexual.

When you spot the object of your desire, the neurotransmitter dopamine lights up areas deep within the brain, triggering feelings of pleasure, motivation, and reward. (Cocaine acts the same way.) You feel a rush, and your heartbeat quickens. Attraction, too, is a powerful drug. The brain stem also gets into the act, releasing phenylethylamine (PEA), which speeds up the flow of information between nerve cells. It's no wonder your neck and eyeballs track her every movement.

But she's not gawking back at you, and it's not just because you're driving a family bus with a paint scrape on the fender. Her brain acts very differently from yours. You're keyed in to beauty, shape, fantasy, and obsession; on some biological level that she may be unaware of, she's trolling for a mate who will sire healthy children and protect and provide for her and them.

#### "YOU DOG!" YOU MAY WHISPER UNDER YOUR BREATH, EMBARRASSED BY WHAT YOU'RE ENVISIONING AS YOU SIT THERE IN YOUR FAMILY VAN

And yes, maybe even buy them a family van. Her goals are programmed for the long range; yours are often shockingly short term, right up to and including thoughts of pedestrianophilia. And she knows it, which is why she presses those short-term buttons shotgun-style: She never knows when a suitable mate might be looking. The whole encounter can leave you quivering with pleasure, hoping for more. It can also hijack and ruin your life.

And between the "walk" and "don't walk" signals of delight and disaster, your brain is sorting information, making choices, spurring actions. But you don't want to passively accept all that, especially because your whole life is riding on the choices you make. That's where I come in. I know the brain processes behind the temptations, and I can help you steer clear of trouble. After all, that woman in the crosswalk could help you realize your destiny, or derail it entirely. All the more reason to get to know that big sex organ between your ears so you can control the smaller, less important one between your legs

#### Why You've Always Been Horny

You've been lit up on testosterone right from the start, even when you were just a multicelled notion in your mother's womb. The inherited Y chromosome that makes you male (thanks, Dad) triggers two bursts of testosterone that change your brain and body.

The first produces a male brain: one that's more interested in objects, actions, and competition. The left (parietal) lobe flourishes in the testosterone bath and helps you visualize objects in three dimensions (good for catching a football or watching a woman cross the street), and it boosts your aptitude in mathematics (that's how you estimate that she's about a 34DD). In addition, testosterone beefs up your hypothalamus, the area of the brain that's interested in sex. The hypothalamus is twice as large in men as it is in women.

#### Why You Become Hornier as a Teen:

That's when the second big burst of testosterone hits, causing your hair to sprout everywhere, your voice to flip from Norah Jones to James Earl Jones, and your interest in third base to go from literal to metaphorical. (Touch 'em all!) Your body now harbors 20 times the level of testosterone found in girls your age, which accounts for your sexual obsessions. Unfortunately, your brain is maladapted for sociability, so she can overwhelm you with words, and all you have to counter them is silent (thank goodness) adolescent lust. It's an advantage she has that you'll never make up. On your side of the ledger: Your left brain—the planning center—is massive, which helps in planning the Panama Canal, a rocket launch, or a lifetime of wedded bliss.

#### Why She Looks at Your Ring Finger

Because it knows and tells all. University of Liverpool researcher John Manning has determined that the size of a man's ring finger is related to how much testosterone he received in the womb. That's true of your penis, as well. The more T, the longer they grow. It's interesting to note that your digital symbol of virility is also the finger on which she slips the golden shackle during the wedding ceremony.

#### **Why You Must Watch Your T-Levels**

Women are more predisposed (in brain structure and hormone secretions) to settle down and start a family than you are. But committing to family life is easier for men who have lower testosterone levels. A study of more than 4,000 men found that men with high testosterone levels were 43 percent more likely to get divorced and 38 percent more likely to have extramarital affairs than men with less of the hormone.

Guys with high levels were also 50 percent less likely to marry in the first place. Men with the least testosterone were more likely to get and stay married, maybe because lower testosterone levels make men more cooperative. If you're too cooperative for your own good, build some muscle: It will increase testosterone levels over time. You can even coordinate dating with workouts. A study at Baylor University determined that testosterone levels were highest 48 hours after weight lifting.

#### **Why You Should Marry After 25**

Quite simply, a man's brain is incomplete before then. Sure, his sexual organs are all present and accounted for, but his prefrontal cortex (PFC) is still developing. Which is too bad,

because that's the part of his brain that's involved in judgment, impulse control, organization, planning, forethought, and learning from mistakes. And it won't be fully developed until he's 25.

#### **Why Beauties Make You Stupid**

You act like a goof with the Hooters waitress, leaving a tip that doubles the bar bill. But why? Beautiful women cause a man's limbic system (the amygdala and other brain-stem structures, which are in charge of emotion) to fire up at the same time that his PFC checks out, leaving the judgment area vacant. Las Vegas casinos hire beautiful cocktail waitresses, dress them in low-cut tops and miniskirts, and have them pass out free alcohol—all of which encourages men's self-control to take the day trip to Hoover Dam. No wonder the house has the edge

#### **How You Can Get the Edge Back**

When faced with the dilemma of a bad bet on a beautiful woman, remember that her beauty is fleeting, but a bad decision can last a lifetime. It's a very PFC sentiment, in fact.

#### **Why You Love Porn**

Guys aren't shallow; it's just that the visual parts of their brains are strong and tend to twang their emotions. Using sophisticated imaging equipment, researchers at Emory University in Atlanta found that the amygdala, which controls emotions and motivation, is much more activated in men than in women when they view sexual material for 30 minutes, even though both sexes report similar levels of interest.

This may be one of the reasons men are much more captivated by pornography than women: For men, it's not just porn, it's personal. Back in the real world, women hijack men's brains by appealing to their strong visual sense. But women can take in a guy's visuals and think, Yeah, but how much does he have in his 401(k)? To avoid the tyranny of the visual, you need to kick-start your responsible prefrontal cortex by asking yourself, What's my goal in a relationship? That can divert you from those short-term, erotic visions

#### **How Your Nose Triggers an Erection**

There's a direct connection between the olfactory bulb, at the top of your nose, and the septal area, the arousal center of your brain. When cells in your nose are stimulated, they send signals to your libido (and hers) to stand up and pay attention. You know what smells turn you on—the evidence is obvious. As for her, a study at the University of California at Berkeley found that women become aroused when exposed to a chemical called 4.16-androstadien-3-one (AND). The good news? AND occurs naturally in men's sweat, hair, and skin. Take her someplace cold on your date—the favorite jacket or sweater you'll conveniently have on hand to lend her should be loaded with the stuff

#### **Why You Lose Your Erection in Bed**

Maybe little Willie is nervous during his big moment onstage. Performance anxiety is about the fear of being judged or not living up to expectations. The body is programmed to see anxiety as a threat, and the nervous system sets up the fight-or-flight response, sending out chemicals to protect us: Our heart races, muscles tense, and blood is shunted from our hands, feet, and penis to the large muscles of the shoulders and hips so we can fight or run away. That's not such a good strategy in bed, however.



#### Why You Can Be Addicted to Love

As with obsessive-compulsive disorder, love decreases brain levels of serotonin, the neurotransmitter responsible for mood and flexibility. Low serotonin means you can get stuck on ideas—you become obsessed. Which is just fine, unless she suddenly dumps you. That's when the short supply of serotonin makes you vulnerable to depression. In extreme cases, the serotonin shortage can trigger obsessive behaviors, such as exhibiting extreme jealousy or even stalking. To get those serotonin levels back up before the police come, try exercising more, eating more carbs, and generally distracting your lonesome thoughts. (Road trip!) All of them will boost your serotonin levels

#### **Why Touch Strengthens the Bond**

Oxytocin is your brain's love juice: the bonding and attachment hormone. When you feel connected, empathic, in love, the oxytocin jets are spurting. Women have naturally higher levels of this chemical: It boosts nonsexual bonding between a mother and newborn, and it's responsible for putting babies to sleep after they nurse. Though both men and women secrete an extra jolt of oxytocin during orgasm, we men go through a 500 percent surge—which explains our special talent for falling asleep immediately after sex. If she complains that she doesn't feel close enough, ask for her help readjusting your oxytocin levels

#### Why Women are the Dumpers

Women have greater access to the more negative right side of the brain, one of the reasons they suffer from depression twice as much as men. The right hemisphere also allows women to see the gestalt, or big picture, of relationships, so they tend to know before men when a relationship is not working out.

#### Where the Thrill Goes

Dopamine and PEA—your powerful attraction chemicals—are strong stuff. But, as with any high, it can't last. Intense feelings of euphoria and obsession start to wane. You again wonder what's been going on in the NFL or whether you should see your buddies. As you come down off the hard stuff, you may actually go through withdrawal, missing the high of the attraction stage.

#### **How to Get the Love Buzz Back**

You have a choice to make. Either you go right out and chase that high (and some comely tail) again, or you settle into the longer-term buzz of a committed relationship. Oxytocin and serotonin are your two best chemical friends for the drive toward your 25th wedding anniversary. They're not as exciting to the brain as the attraction chemicals, but they have longer-lasting effects. So you can trade the dizzying high for a sustainable one.

Of course, if you're really smart, you can inject the hot stuff back into any love relationship. Take her away on a trip, spoil her rotten with La Perla lingerie, send her flowers with a dirty note attached, and the little dopamine chemicals come back out and play. Just like the night you met her

#### **What Makes Your Eye Wander**

Blame vasopressin. This hormone is involved in regulating sexual persistence, assertiveness, dominance, and territorial marking. And men have lots of it, naturally. In male voles (night-loving rodents, which probably describes you perfectly), the levels of vasopressin seem to make the difference between

stay-at-home dads and one-night-stand artists. Your hormone levels are probably set at the genetics factory, but the more you give in to vasopressin, the more of it you produce. It's your choice.

#### **Should You Stay or Should You Go?**

Only your prefrontal cortex knows for sure. Men who have healthy activity in their PFCs have greater empathy, can focus for longer periods of time, and tend to make better husbands. Men who have overactive PFCs tend to be obsessive, oppositional, and argumentative. This can turn them into major chick repellents. Likewise, men who have low activity in the PFC tend to be impulsive (more vulnerable to affairs), easily distracted (lousier at listening), easily bored (more "business" trips to Vegas), and constantly scamming for that attraction high (more given to looking for love in all the wrong places). To keep your PFC firing on all cylinders, protect it from injury, which can come from using too much alcohol, nicotine, or caffeine. Better still, exercise your PFC by setting goals and following through on them.

#### Why the Guys in Bands Get Lucky

In a study in Finland, eight male volunteers underwent brain scans while they were having orgasms. (Must have been a fun study.) Overall bloodflow in the brain decreased during orgasm, but it skyrocketed in the right prefrontal cortex—as it does in creative people (like musicians) when they do their creative thing. Now, exactly why did you give up those guitar lessons?

#### Why She Moans During an Orgasm

It almost certainly doesn't have anything to do with you. In addition to its duties as an orgasm assistant, the right hemisphere has also been called the "God" area of the brain. When scientists stimulate the right hemisphere, their subjects have more religious or spiritual experiences. So it's not too much of a leap to guess that when she moans "Oh, God" in the throes of sexual ecstasy, she may be connecting pleasure to a deeper spiritual place in her brain. Music and dancing can jumpstart the right hemisphere, which means the nuns at your high school were right to discourage it.

#### Why Her Orgasms are Like Paxil

Sexual climax has an antidepressant effect. Orgasms cause intense activity in the deep emotional parts of the brain, which then settle down when the sex is over. Antidepressants calm the same part of the brain. This calming effect may be why people who regularly have sex experience less depression.

#### Why It's Better if She Swallows

Prostaglandins, fatty acids found in semen, are absorbed by the vagina and may have a role in modulating female hormones and moods. I also feel duty-bound to report that women who perform oral sex on their mates are less likely to suffer from preeclampsia, a condition that causes a dangerous spike in women's blood pressure during pregnancy. Plus, sperm carries TGFbeta, a molecule that can boost the activities of her natural killer cells, which attack the rogue cells that give rise to tumors. Don't make her beg. Offer.

#### Why a Foot Massage is Foreplay

When you rub the arch of her right foot, you affect her about 30 inches higher, and a little to the left. The footsensation area of the brain is next door to the clitoral (and



penile) region, which may be a big reason that women are so focused on shoes—yours and hers. Carrie Bradshaw was on again, off again with any number of men, but her Manolos endured, And perhaps now we know why Imelda sought solace in 1,060 pairs of shoes. But even if you're not a Filipino dictator, you can make this work for you. "There are 36,000 nerve endings in the foot," says Kathleen Miller-Read, a massage therapist and spokeswoman for the American Massage Therapy Association. "By exploring these, you can find sore spots all over the body." If your girlfriend has her feet crammed in high heels all day, she's bound to have aching toes and a sore back. Use your thumb and forefinger to gently pull, twist, and rub below her toes. For her back, focus on the heel of her foot, moving your knuckles in a circular motion all over the heel. She'll let you know when it's working.

#### **Where Your Kinkiness Come From**

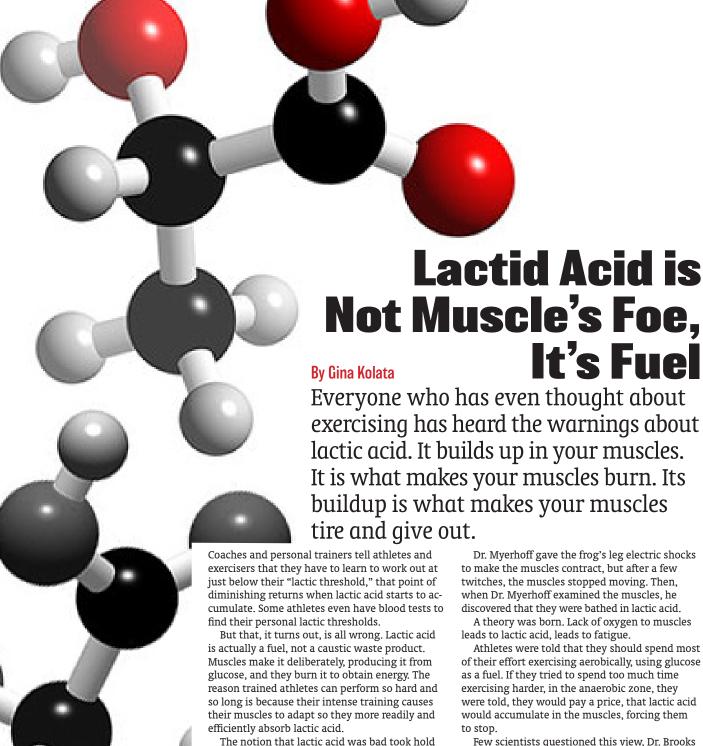
Weird sexual fetishes or fantasies are brain symptoms. They fall into the category of impulsive-compulsive disorders: impulsive when you can't control the behavior and compulsive when, even though you may want to, you can't stop.

A person who's prone to voyeurism, exhibitionism, bestiality, transvestism, S and M, or infantilism (deriving sexual pleasure from being treated like a baby) often has too much activity in the emotional parts of the brain, as we see in people who have obsessive-compulsive disorders, and too little activity in the PFC, or judgment center. A study of 26 men with unusual sexual fantasies found that using medications to balance these two areas of the brain gave the men significant relief. But then, so did wearing an adult diaper and being handed a rattle. You can't tell with some people.

#### **How to Control Your Brain**

Even though men are programmed to look at beautiful women and populate the earth, the human brain, especially the prefrontal cortex, has evolved to the point where, with proper training, we can be thoughtful, goal oriented, and focused on our families. You are not a rodent, doomed to follow the pattern of hormone receptors in your brain. Ask yourself: What are my goals for my relationships? Stay focused on loving and protecting the people in your life, and it's mind over what really matters.





Dr. Myerhoff gave the frog's leg electric shocks to make the muscles contract, but after a few twitches, the muscles stopped moving. Then, when Dr. Myerhoff examined the muscles, he discovered that they were bathed in lactic acid.

It's Fuel

A theory was born. Lack of oxygen to muscles leads to lactic acid, leads to fatigue.

Athletes were told that they should spend most of their effort exercising aerobically, using glucose as a fuel. If they tried to spend too much time exercising harder, in the anaerobic zone, they were told, they would pay a price, that lactic acid would accumulate in the muscles, forcing them

Few scientists questioned this view, Dr. Brooks said. But, he said, he became interested in it in the 1960's, when he was running track at Queens College and his coach told him that his performance was limited by a buildup of lactic acid.

When he graduated and began working on a Ph.D. in exercise physiology, he decided to study the lactic acid hypothesis for his dissertation.

"I gave rats radioactive lactic acid, and I found that they burned it faster than anything else I could give them," Dr. Brooks said.

Its origins lie in a study by a Nobel laureate, Otto Meyerhof, who in the early years of the 20th century cut a frog in half and put its bottom half in a jar. The frog's muscles had no circulation-no

more than a century ago, said George A. Brooks, a professor in the department of integrative

biology at the University of California, Berkeley. It

"It's one of the classic mistakes in the history

stuck because it seemed to make so much sense.

source of oxygen or energy.

of science," Dr. Brooks said.

It looked as if lactic acid was there for a reason. It was a source of energy. Dr. Brooks said he published the finding in the late 70's. Other researchers challenged him at meetings and in print.

"I had huge fights, I had terrible trouble getting my grants funded, I had my papers rejected," Dr. Brooks recalled. But he soldiered on, conducting more elaborate studies with rats and, years later, moving on to humans. Every time, with every study, his results were consistent with his radical idea.

Eventually, other researchers confirmed the work. And gradually, the thinking among exercise physiologists began to change.

"The evidence has continued to mount," said L. Bruce Gladden, a professor of health and human performance at Auburn University. "It became clear that it is not so simple as to say, Lactic acid is a bad thing and it causes fatigue."

As for the idea that lactic acid causes muscle soreness, Dr. Gladden said, that never made sense.

"Lactic acid will be gone from your muscles within an hour of exercise," he said. "You get sore one to three days later. The time frame is not consistent, and the mechanisms have not been found."

The understanding now is that muscle cells convert glucose or glycogen to lactic acid. The lactic acid is taken up and used as a fuel by mitochondria, the energy factories in muscle cells.

Mitochondria even have a special transporter protein to move the substance into them, Dr. Brooks found. Intense training makes a difference, he said, because it can make double the mitochondrial mass.

It is clear that the old lactic acid theory cannot

explain what is happening to muscles, Dr. Brooks and others said.

Yet, Dr. Brooks said, even though coaches often believed in the myth of the lactic acid threshold, they ended up training athletes in the best way possible to increase their mitochondria. "Coaches have understood things the scientists didn't." he said.

Through trial and error, coaches learned that athletic performance improved when athletes worked on endurance, running longer and longer distances, for example.

That, it turns out, increased the mass of their muscle

## LACTIC ACID IS ACTUALLY A FUEL, NOT A CAUSTIC WASTE PRODUCT. MUSCLES MAKE IT DELIBERATELY, PRODUCING IT FROM GLUCOSE, AND THEY BURN IT TO OBTAIN ENERGY.

mitochondria, letting them burn more lactic acid and allowing the muscles to work harder and longer.

Just before a race, coaches often tell athletes to train very hard in brief spurts.

That extra stress increases the mitochondria mass even more, Dr. Brooks said, and is the reason for improved performance.

And the scientists?

They took much longer to figure it out.

"They said, 'You're anaerobic, you need more oxygen,'

"Dr. Brooks said. "The scientists were stuck in 1920."



## Bloating how to beat the belly bulge Ry Monica De Control of the Bulge By Monica De Control of the By Monica De Co

Bloating is a common, day-to-day battle that can leave you wondering what triggered your bulging belly. The answers may be hidden in what you're eating. Start the fight against bloating today by identifying the common culprits, and what you can do to keep your belly flat and pain-free.

Nothing can sabotage a flat belly faster than bloating. In addition to the dreaded stomach bulge, this familiar ailment results in terrible discomfort. Bloating symptoms come from excess gas accumulating in the abdomen, particularly in the intestines. Intestinal bacteria produce gas when foods haven't yet travelled through the small intestine. If gas particles aren't released right away, the stomach expands like a balloon.

Although overeating is the most known cause for bloating, some people battle the bloat daily—even if they haven't polished off an oversized meal. If this sounds like you, the triggers may not be how much you're eating, but what you're eating. Once you trace the root of your problem, you can employ some belly-rescuing cures to help you win the war against bloating and take back control of your body.

**Sodium** causes the body to retain fluid—a common cause of bloating. The American Heart Association suggests that only 1,500–2,300 milligrams of

sodium should be consumed per day, but the average American takes in nearly 3,400 milligrams. Before you reach for the saltshaker, consider swapping your snacks for a healthier option. Rather than munching on a bag of potato chips, stick to fresh fruit and veggies. Avoid buying frozen

dinners and processed foods, as they are often overloaded with salt.

A great all-natural alternative to table salt is Spike, Salt-Free Magic. Spike contains 37 herbs and spices. It doesn't contain any salt so it will not result in water retention. You can find it at your local grocery store for \$3.

**Starches** are carbohydrates that are sometimes difficult for the stomach to digest. Heavy starches such as bread,

potatoes and pasta can cause water retention. Any food products made from flour, especially whole-wheat flour, form gas when broken down in the large intestine. Beware of eating these types of food before bedtime to avoid feeling inflated in the morning.

Adequate doses of the mineral calcium are vital to bone health and muscle function, but too much can leave you ballooning around the waist. One of the best sources of calcium is dairy, which can be hard on your digestive tract as it contains lactose, a difficult-to-digest sugar. Lactose intolerance is also a very common problem for many people. Modify and moderate your dairy intake or try switching to lactose-free products to deflate your tummy.

**Artificial sweeteners** are frequently found in many reduced-calorie foods, processed products and diet or decaffeinated drinks. They contain chemical compounds called sucralose, aspartame and cyclamate that the digestive tract cannot break down easily. Sweeteners, which can be up to 300 times sweeter than natural sugar, are known to increase appetite and result in overeating. Be on the lookout for artificial sweeteners, and when possible, steer clear of them.

Carbonated drinks, like soda, cause air bubbles to form and expand in your abdomen. When they burst, carbon dioxide particles are dispersed in the stomach. They fill up your belly and cause bloating. Click here to wean yourself off soda with Dr. Oz's 28-Day National Soda Challenge.

There's plenty you can do to prevent bloating, but sometimes it is unavoidable. For those times, there are simple cures you can recourse to alleviate bloating and aid digestion. These effective solutions will remedy a bloated belly and cleanse the body.

#### **Powerful Bloating Cures**

When your stomach feels like it's about to pop, downing water may be the best quick fix. Good old H2O restores the



sodium balance in the body and normalizes your digestive tract. Be sure to keep hydrated. Drink the daily recommendation of 8 (8-oz) glasses of water to rid the body of harmful toxins.

**Dandelion tea** is a mild diuretic that will also help get rid of the water your body is holding onto. It stimulates bile to help break down fatty meals that also make you bloated. Try drinking one cup per day.

Try taking 200 milligrams of magnesium daily to fight fluid retention and to expel gas. This crucial mineral eases constipation by relaxing the muscles in the intestinal walls. You can also find magnesium in green leafy vegetables such as spinach, legumes (beans and peas), nuts and seeds, whole grains and fish (such as halibut).

**Potassium** ensures that all cells, tissues and organs are operating properly. It can provide relief from bloating by balancing and circulating body fluids. Try eating potassium-rich foods such as bananas, kiwis and strawberries.

Feasting on fiber-rich foods can push stomach-clogging materials out of the body. Fiber moves food through the gastrointestinal tract quickly for better digestion.

About 25–30 grams of fiber is recommended per day, but most people usually get only 10–12 grams. Incorporate fiber into your diet by including foods like oatmeal, bran flakes, raspberries, lentils, and artichokes into your meals. You can also try fiber supplements that contain psyllium, a soluble fiber that can help regulate digestion and prevent constipation.

**White bean hummus** is a great fiber-rich food that can actually soak up water in the intestines. It helps to move the bloating, causing foods to push through your body faster.

**Probiotics** are made up of "good" living bacteria similar to those that naturally exist in the body and aid with digestive health. Probiotics regulate the amount of healthy bacteria in your system and normalize bowel movements. Through nutritional supplements or

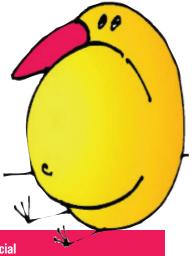
probiotic-enriched food sources like yogurt, miso, soy drinks, and juices, probiotics can be integrated into your diet. Look for "live and active cultures" listed on their packaging labels

**Over-the-counter diuretics** may be an alternate solution for you if can't seem to beat bloating through dietary changes. Detoxifying supplements that contain the active ingredient simethicone will dissolve gas quickly to prevent the development of larger bubbles from forming in the intestinal tract. Look for simethicone listed on the ingredient labels of over-the-counter aids.

Jumpstarting your physical activity can also give your digestive system a boost. Rigorous cardiovascular exercise, such as running or aerobics, activates the sweat glands that release fluids that the body could be retaining. Even just a 15–20 minute stroll around the neighborhood after dinner can help with digestion. Additionally, a workout is a huge stress-reliever; exercise can ease day-to-day pressures and prevent stress-eating.

**Massage** is a helpful way to keep bloating at bay. Massaging the abdominal area helps relax the muscles that support the bladder and intestine. Press your fingers near your right hip. Start massaging in small circles. Move hands from right to left making an arc under your breastbone. Massaging stimulates bowel activity to help push out excess stool and reduce bloating.

**See your doctor** if you find that bloating is interfering with your daily activities. It could be attributed to many "silent" disorders such as endometriosis, peptic ulcer, liver, kidney, gallbladder, celiac, thyroid, and pelvic inflammatory diseases as well as cancers such as stomach, colon, and ovarian. It's also frequently linked to irritable bowel syndrome, inflammatory bowel disease, and other gastrointestinal conditions. If you notice that your abdomen is looking persistently and unusually inflated and/or you're experiencing intense pain, be sure to schedule an appointment.



#### Artificial Sweeteners

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We're giving it to you straight: You're never going to swim like Michael Phelps. For starters, you're probably not 6'4" and in the water, length means speed. Then there's your, by comparison, penguinlike wing span. Phelps's span is 79 inches, and it propels him through the water like a nitro-fueled speedboat. And the 45 miles of practice he puts in a week?

Great for him, but you have commitments. Now, the good news: All of this had less to do with Phelps's eight gold medals at the 2008 Olympics than one basic in-pool principle that anybody can learn: "The longer and more streamlined you can make your body, the faster you'll go," he says. "It's that simple." Phelps and swimming guru Terry Laughlin, president of the New Yorkbased swimming think tank Total Immersion (totalimmersion.net), helped us put together a step-by-step swimming workout guide to leaving your lanemates behind.

If you're a beginner, our plan will keep you from flailing about like you're being attacked by piranhas. If you're a pro, we'll show you how to shave seconds without having to shave your knees. We're focusing on the freestyle stroke here, not only because it provides a killer cardio workout, but also because it works the most muscles overall—building core strength and carving your V. And it shreds calories. Blows them right out of the water, in fact. Phelps is as thin as an Olsen twin, yet he eats 8,000 calories a day. His average breakfast: two egg-and-cheese

sandwiches, a bowl of grits, a western omelet, French toast, and a stack of chocolate-chip pancakes ("for dessert," he says). Being 19 doesn't hurt, of course, but if Phelps can keep his abs well groomed despite eating enough for four, you should be able to make sizable strides with just a modest amount of effort. Here's our seven-step plan for leaving everyone in your wake.

#### **Swim Tall**

"Water is 1,000 times denser than air," says Laughlin.
"So the single most important factor is to slip your body through the smallest hole in the water." Imagine a central axis extending from the top of your head to the opposite end of the pool. Rotate your body along this axis with each stroke, stretching your leading arm (the one reaching out front) as far forward as you can. Keep the muscles in your lower back and abs taut as you power through the water—doing so will keep the propulsion coming from both your arms and legs and stop your midsection from sagging like an old first-mate's belly.

#### **Drop an Anchor**

Swimming with just your hands is like jumping with just your feet. Instead, grip the water with your entire forearm and hand, holding your forearm at a right angle to your upper arm and digging in like you're gathering sand with a shovel. Keep your hands broad, flat, and firm. You're not pushing your arm through the water as much as anchoring it and pulling your body over it.

#### **Keep Your Head Down**

Freestylers used to hold their heads high. That forced the rest of the body to drop, turning it into a high-drag plow. "I look pretty much straight down at the bottom of the pool," says Phelps. Not only does this technique cut drag, it keeps your torso high, reducing strain on your neck and lower back.

#### Find Your Glide Path

In the pool, fewer strokes is better. Your goal should be a high DPS—swim-speak for "distance per stroke." Elite swimmers like Phelps can easily traverse a 25-yard pool

in seven strokes (each hand entry counts as a stroke). Try to keep yours below 20 by conserving momentum. Pull yourself over your anchor and continue to glide forward with one arm forward and the other back. "You'll travel farther and faster with your legs streamlined near your axis," says Laughlin. When you begin to slow, start the next stroke.

#### **Drag Your Feet**

"If you're a good kicker, you're a good swimmer," says Phelps. The secret is turning your feet into fins. Here again, leverage rules: Your legs should be taut, scissoring you through the water, while your feet remain flexible. This will help them snap at the downstroke of

WATER IS 1,000 TIMES DENSER THAN AIR," SAYS LAUGHLIN. "SO THE SINGLE MOST IMPORTANT FACTOR IS TO SLIP YOUR BODY THROUGH THE SMALLEST HOLE IN THE WATER."

each kick, adding oomph and helping twist your torso along the central axis. If your feet don't flex well, buy a set of kicking fins (we like the Slim Fin, forcefin.com) to add flexibility.

#### **Don't Waste Your Breath**

Gasping for air every time your head nears the surface is a great way to drown. Instead, make each breath count. Emphatically exhale the air from your lungs (all of it, not just 90 percent) before snagging a quick, full breath on the high side. Beginning swimmers need to breathe after each stroke, but as your endurance improves, try breathing on alternate sides—that is, after three strokes. It'll reduce the strain on your neck and shoulders that results from always breathing on the same side.





Perform this routine as a circuit, Do 10 reps of each exercise, and complete as many circuits as you can in 15 minutes. Rest briefly when you need to, and resume working until the time is up. As your conditioning improves, increase reps or decrease the amount of rest.

#### **Body-Weight Squat**

Stand with your feet shoulder-width apart. Lower your body as far as you can by pushing your hips back and bending your knees until your thighs are parallel to the floor. Pause, and slowly stand back up.



#### **Judo Pushup**

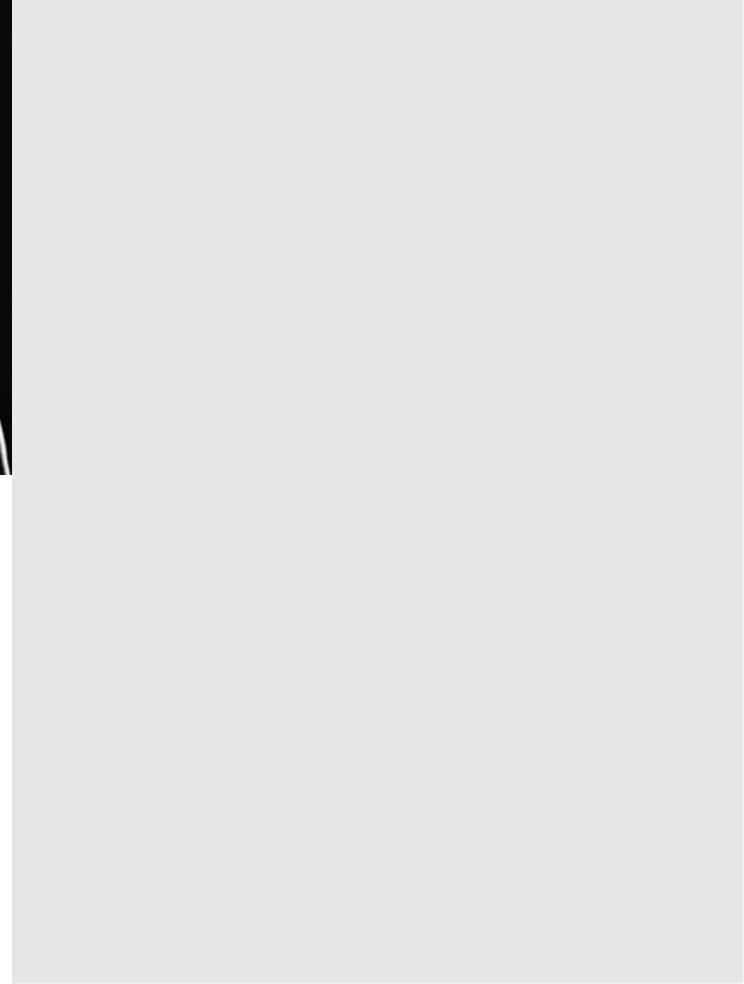
Begin in a pushup position but move your feet hip-width apart and forward, and raise your hips so your body almost forms an upside-down V. Lower the front of your body until your chin nears the floor. Then lower your hips as you raise your head and shoulders toward the ceiling. Now reverse the movement and return to the starting position.

#### **Sprinter Situp**

Lie on your back with your legs straight and arms at your sides, keeping your elbows bent at 90 degrees. As you sit up, twist your upper body to the left and bring your left knee toward your right elbow while you swing your left arm back. Lower your body to the starting position, and repeat to your right. That 1 rep.

TROY MATTHEWS





## EXTREME HOME FAT-LOSS WORKOUT

Blasting fat has never been simpler, but are you up for the challange?



Ever seen a photo of Mark Wahlberg's old home gym? (He recently sold the property.) It was loaded. Reportedly, the space was 2,500 square feet, with 18-foot ceilings. It housed racks of dumbbells, weight plates, and preloaded barbells, along with variety of benches and other necessities. There was a catwalk with cardio machines, and yes, a regulation-size boxing ring right in the middle of it all. Oh, and a full-size basketball court just outside. Plus, a massage table. (Naturally.)

Now, it might be tempting to think, If I had access to all that stuff —at my home!—I'd be in great shape, too! Lose fat faster, build bigger muscle, and last longer in bed! But sorry, that's just not true. Right now, basements are filled with dusty fitness equipment, from infomercial weight machines to expensive state-of-the-art treadmills. The truth is, it takes very little-in terms of equipment-to get fit. What it really requires is time, know-how, and effort. "The latter is the most important," says Men's Health fitness adviser BJ Gaddour, CSCS, and CEO of StreamFIT.com. "And I can help with the rest, including the equipment." That's because Gaddour

took all of these major obstacles into account-including lack of equipment-when he created the all-new Abs Diet EXTREME Workout.

Our challenge to him was this: How do you design a cutting-edge fat-loss workout that requires very little equipment and maximizes every second of your time? Gaddour's super-simple solution: the "dumbbell complex." This genius workout method allows you to get in the toughest workout of your life using just a single pair of dumbbells. An extreme workout, if you will. For men, 15- or 20-pound dumbbells will likely do the trick; for women, all that's needed is a pair of 8, 10, or 12-pound dumbbells. (That's roughly a \$25 to \$50 investment, depending on the type of dumbbell you purchase.) How does it work? You do three exercises, back-to-back-to back. for 30 seconds each without resting. Then you catch a breather for 90 seconds, and repeat for several rounds.

You can also alternate between complexes of different exercises. But that's for starters. To make the workouts even harder, you can reduce the rest between rounds. This increases the intensity for even better results-

for both fitness and for fat loss. An important point: These complexes aren't comprised of random exercises that have been thrown together. Gaddour carefully chooses the movements so that the weights are challenging for each exercise, and to allow a smooth transition between moves while avoiding excessive "cross-fatigue." This enables you to work your hardest on each exercise for the entire 30 seconds, but still be able to go several rounds. The upshot: You work your entire body from head to toe, and at a high intensity. "This is called 'metabolic resistance training,' and it's the most effective way to quickly burn calories and boost your metabolism," says Gaddour. "You can do it almost anywhere, including your living room, and you don't have to waste time switching from machine to machine."

Ready to try it? Then check out the dumbbell complexes below. It's a time-saving technique that's expertly designed for the results you want. All you have to do is make the effort. And if you want a complete 12-week program that provides 24 different three-exercise complexes—along with a personalized Abs Diet nutrition plan-check out the Abs Diet EXTREME Workout. It'll blast fat and help you look and feel fitter than ever. Directions: You can do your entire workout using either Dumbbell Complex 1 or Dumbbell Complex 2, or use both complexes in the same workout. Simply choose a dumbbell complex and do each exercise within the complex for 30 seconds. Don't put the dumbbells down or take a breather until you've done all three exercises. Then rest for 90 seconds. That's one round.

After your 90-second rest period is up, you can either repeat Dumbbell Complex 1 or move on to Dumbbell Complex 2. Simply follow the same procedure, and then rest again. (That's two rounds.) Once you've rested, repeat the entire process until you've completed a total of 6 rounds. This is what Gaddour calls Level 1. It's the best place to start. And it takes less than 18 minutes, but it'll likely be all you want. If you feel like you need to work harder, you can move to Level 2 or Level 3, where you'll decrease the rest and increase the number of rounds. Note: A typical rep-range for each exercise is about 8 to 12 reps. If you're consistently getting more than 15 reps, the weight is too light. (Or you need to move to Level 2 or Level 3.) If you're consistently completing 6 reps or less, the dumbbells are too heavy. Also, for any single-leg or single-arm exercises, switch sides halfway through each work period. So you'd switch arms or legs at the 15-second mark of an exercise. Level 2: To make it harder, decrease your rest time to 60 seconds, and complete a total of 8 rounds. Level 3: This is really tough. Decrease your rest time to 30 seconds, and complete a total of 10 rounds. DUMBBELL COMPLEX 1 Exercise 1: Close-Hands Pushup Exercise 2: Dumbbell Skiier Swing Exercise 3: Overhead Split Squat

DUMBBELL COMPLEX 2 Exercise 1: Twisting Curls Exercise 2: Overhead Triceps Extension Exercise 3: Single-Arm Deadlift

The Abs Diet EXTREME Workout is available exclusively on Men's Health Personal Trainer. There you'll find Gaddour's complete 12-week plan, and have access to our customizable Abs Diet nutrition program—which will help you create the best diet for your goals, lifestyle, and preferences.

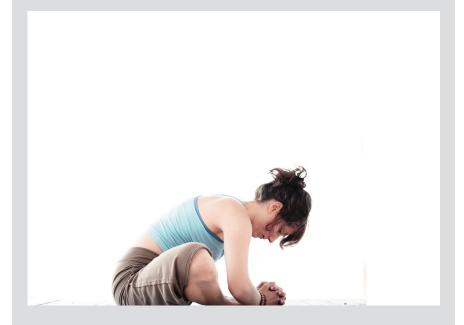
## STRETCHING

Stretching is a good idea. It keeps you flexible, prevents stiffness/cramps, and gets the blood pumping. There is great debate whether you should stretch before, during, or after weight training. It doesn't have to be that complex. Warm up before weight or cardio training with some light exercises or stretching. While you're recovering in between weight training sets, stretch the muscle you are working. After training, incorporate a few more stretches to get more blood pumping into the muscle and to aid in recovery. As with any exercising, don't overdo stretching; this may just lead to decreases in strength. Also be careful not to overextend the stretch that it becomes painful.

Incorporate 2–3 sets of the basic static stretches below into your exercise routine. These are easy to learn and

effective. There are many other stretching exercises for each bodypart, just like there are other weight-training exercises for each bodypart. Actually, weight training (using full range of motion) helps improve flexibility too, since you are not only contracting (shortening) the muscle, but elongating it when you lower the weight back down to the starting position. If there is a particular muscle group or joint that tends to be more inflexible, focus on it a little more.

To lose fat but keep the muscle you worked so hard to build, here are a few tips to focus on. A lot of these are similar to the Building Muscle section, with just a few tweaks. This should be done in combination with consistent, intense cardio and weight training sessions, over an 8–12 week period.



## A Full-Body Dumbbell Blast



"Dumbbell complexes that target large muscle groups can stimulate more muscle fibers and speed up fat loss," he says. Maximize gym time with a smart dumbbell routine like this one from Patrick Striet, C.S.C.S., owner of Force Fitness and Performance in Cincinnati.

**Do this:** Perform the circuit four times. For the first circuit, do 12 reps of each exercise. Then do 10 reps for the second, 8 for the third, and 6 for the fourth. Rest only after each circuit; select weight and rest time by your experience level.

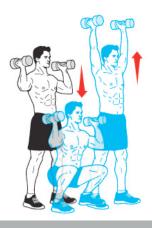
Beginner: 20-30 pounds, rest 60-90 seconds

Intermediate: 30-40 pounds, rest 45-60 seconds

Advanced: 40-50 pounds, rest 30-45 seconds

#### **Thrusters**

Stand with your feet shoulder-width apart, holding a pair of dumbbells next to your shoulders. Squat so your thighs are parallel to the floor. As you stand up, press the dumbbells up. Then lower them back down to your shoulders.



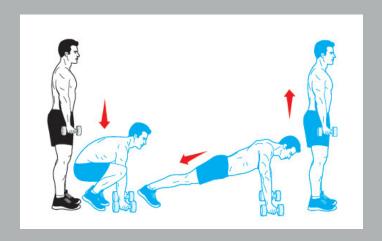


#### Straight-Leg Deadlift

Using an overhand grip, hold the dumbbells in front of your thighs. Stand with your feet hip-width apart and knees slightly bent. Bend at your hips to lower your torso until it's almost parallel to the floor. Pause, and raise back up.

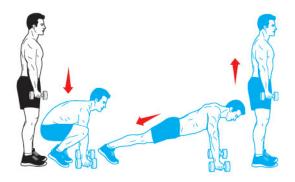
#### **Squat Thrust**

Stand holding a pair of dumbbells at your sides. Squat and kick your legs backward into a pushup position. Then quickly return your legs to asquat, stand up, and jump.



#### **Bent-Over Row**

Holding a pair of dumbbells, bend at your hips and knees and lower your torso until it's almost parallel to the floor. Bend your elbows and pull the dumbbells to the sides of your torso. Pause, and then slowly lower them.



# Proper Running orm

**Head Tilt** How you hold your head is key to overall posture, which determines how efficiently you run. Let your gaze guide you. Look ahead naturally, not down at your feet, and scan the horizon. This will straighten your neck and back, and bring them into alignment. Don't allow your chin to jut out.

**Shoulders** play an important role in keeping your upper body relaxed while you run, which is critical to maintaining efficient running posture. For optimum performance, your shoulders should be low and loose, not high and tight. As you tire on a run, don't let them creep up toward your ears. If they do, shake them out to release the tension. Your shoulders also need to remain level and shouldn't dip from side to side with each stride.

**Arms** Even though running is primarily a lower-body activity, your arms aren't just along for the ride. Your hands control the tension in your upper body, while your arm swing works in conjunction with your leg stride to drive you forward. Keep your hands in an unclenched fist, with your fingers lightly touching your palms. Imagine yourself trying to carry a potato chip in each hand without crushing it. Your arms should swing mostly forward and back, not across your body, between waist and lower-chest level. Your elbows should be bent at about a 90-degree angle. When you feel your fists clenching or your forearms tensing, drop your arms to your sides and shake them out for a few seconds to release the tension.

**Torso** The position of your torso while running is affected by the position of your head and shoulders. With your head up and looking ahead and your shoulders low and loose, your torso and back naturally straighten to allow you to run in an efficient, upright position that promotes optimal lung capacity and stride length. Many track coaches describe this ideal torso position as "running tall" and it means you need to stretch yourself up to your full height with your back comfortably straight. If you start to slouch during a run take a deep breath and feel yourself naturally straighten. As you exhale simply maintain that upright position.

**Hips** Your hips are your center of gravity, so

they're key to good running posture. The proper position of your torso while running helps to ensure your hips will also be in the ideal position. With your torso and back comfortably upright and straight, your hips naturally fall into proper alignment—pointing you straight ahead. If you allow your torso to hunch over or lean too far forward during a run, your pelvis will tilt forward as well, which can put pressure on your lower back and throw the rest of your lower body out of alignment. When trying to gauge the position of your hips, think of your pelvis as a bowl filled with marbles, then try not to spill the marbles by tilting the bowl.

Legs/Stride While sprinters need to lift their knees high to achieve maximum leg power, distance runners don't need such an exaggerated knee lift—it's simply too hard to sustain for any length of time. Instead, efficient endurance running requires just a slight knee lift, a quick leg turnover, and a short stride. Together, these will facilitate fluid forward movement instead of diverting (and wasting) energy. When running with the proper stride length, your feet should land directly underneath your body. As your foot strikes the ground, your knee should be slightly flexed so that it can bend naturally on impact. If

## YOUR ARMS SHOULD SWING MOSTLY FORWARD AND BACK, NOT ACROSS YOUR BODY, BETWEEN WAIST AND LOWER-CHEST.

your lower leg (below the knee) extends out in front of your body, your stride is too long.

**Ankles/Feet** To run well, you need to push off the ground with maximum force. With each step, your foot should hit the ground lightly—landing between your heel and midfoot—then quickly roll forward. Keep your ankle flexed as your foot rolls forward to create more force for push-off. As you roll onto your toes, try to spring off the ground. You should feel your calf muscles propelling you forward on each step. Your feet should not slap loudly as they hit the ground. Good running is springy and quiet.



Pregnancy is a wonderful experience for most women. Nothing in the world quite compares to the feeling and knowledge that you are growing your baby inside you. Words cannot do justice to the intense feelings you will experience when you feel your baby kick for the first time, or when you see the ultrasound pictures of your child. Alas, words also cannot do justice to the gruelling experience of labour and childbirth and the pain of sciatica or carpal tunnel syndrome! Yes, pregnancy and child birth are magical, but they also exert an extreme amount of pressure on your body.

Try to resist the urge to sleep your way through pregnancy, honestly, the best thing for your baby and for you, is in fact to exercise during pregnancy. Exercising during pregnancy, in conjunction with a healthy diet, is an ideal way to prepare your body for child birth. Not only this, but it will help you deal with the physical aspects of pregnancy, help you feel better about your ever expanding body, have more energy and quite importantly for most women, it will help your body to regain some shape after you have given birth. Some evidence has showed that mothers who exercised during pregnancy have children who grow up leaner and fitter. However, you should approach exercise during pregnancy with some caution. Extreme changes in your diet or exercise regime should not be attempted, especially

without consulting your physician first. Also you sho uld avoid contact sports, skiing and extreme sports activities such as sky diving, water skiing, any exercises that take place at high altitude or any exercises in which you are at risk of falling, such as horseback riding or cycling (from the second trimester onwards). You can regularly take part in ante natal Yoga, which is great for stretching your body out, opening up the pelvic region and strengthening your muscles. Also, antenatal swimming classes are usually highly recommended by health and sports officials alike. Being in the water whilst pregnant is a joy, as the water will support your weight. Taking part in antenatal exercise classes such as Yoga and swimming are also excellent ways to meet other pregnant

Fatigue and morning sickness are common side effects experienced during the first trimester and exercising may help to combat these. Try to exercise three to four times a week and concentrate on low impact activities (no bouncing or jumping!). Make sure you support your growing bosom with a sturdy sports bra and also ensure you warm up thoroughly before commencing any exercises. Brisk walking is an excellent exercise throughout pregnancy and one you may favour during your second trimester. As your bump gets bigger, even low impact exercises may seem too difficult to contemplate, so

now is a good time to start antenatal swimming. Pelvic floor exercises are also essential (for the rest of your life!). Pregnancy incontinence is no laughing matter (you will learn this and soon it will become natural to clench before you giggle) and your bouncing baby will literally be bouncing and kicking your bladder, so if you intend to go for long walks, ensure there are toilets along the way!

By the third trimester you will probably have started sleeping on your side, as it is important you do not lie on your back, otherwise you may restrict blood flow to the placenta. So, take heed and avoid any exercises which involved lying on your back!

Beware your sense of balance may fail you and also be forewarned that Braxton Hicks may increase after or during exercise! However, try to keep up with regular exercises, at least three times a week. Just be sure to rest your body in-between. Take care of your back during pregnancy by doing 'cat position' stretches (on all fours, arch back upwards). Also ensure you have the correct footwear during exercising. Buy good quality sports trainer, from recognised and respected brands-Reebok, Nike etc. It is common for your feet to go up a shoe size during pregnancy, so do not despair if you find yourself checking out the mens Adidas trainers section!

— DAVID SPRUCE

## Is health food really more expensive?

Contrary to popular belief, it can actually cost more to eat badly. In fact, a new government report finds that nutritious foods such as grains, vegetables, fruit and dairy typically cost less than items high in saturated fat and added sugars.

Researchers from the USDA compared the prices of 4,439 "healthy" and "less healthy" foods commonly available in supermarkets around the country, examining price of edible weight, price per average portion, and price per calorie.

When price of edible weight or price per portion were used to determine costs, the researchers found healthy foods like toasted oat cereal (a grain), vegetables, fruits, and low-fat milk and plain, low-fat yogurt (dairy) were more affordable than most protein foods (lean roast beef, chicken breast, or canned tuna) and other less healthful 'moderation foods' foods that typically pack in an excess amount of saturated fat, added sugar, and/or sodium.

Examples of moderation foods include ice cream sandwiches, low-fat fruit flavored yogurt, and macaroni and cheese. When another measure—price per calorie was used to compare foods, many healthful fruits and vegetables cost more than less healthy 'moderation foods'—especially those high in saturated fat and/or added sugars (such as chocolate candy, ice cream and tortilla chips ). Although previous studies that used priceper-calorie to measure food costs similarly suggested healthy foods were often more expensive than less healthy options, a 2011 study by the USDA that used price of edible weight found that, although whole grains cost more than refined

grains, and fresh and frozen dark green vegetables cost more than starchy vegetables, healthful items such as skim and 1 percent milk were less expensive than whole and two percent milk. Bottled water also tended to be less costly than carbonated nonalcoholic drinks. In the current study, researchers used the USDA's Center for Nutrition Policy and Promotion Food Prices Database to estimate costs and compare all food items included. Comparing the cost of commonly available foods is important because, at a time when two-thirds of Americans are overweight or obese and many low-income families struggle to control their grocery bills, the belief that healthier foods are always pricier adds to the problem. According The NPD group, a market research firm, it's no surprise that Americans come close to following federal dietary guidelines on only seven days per year. Although many variables—personal preferences, convenience, and cultural factorsplay a role in what we buy at the supermarket, cost may play an even greater role in our food choices."It's a common perception that healthy foods are more expensive than less healthy foods and this perception, real or hypothetical, may prevent many individuals from choosing healthy foods," says David Katz, MD, Director, Yale University Prevention Research Center.

So what's a family to do to

consume a more healthful and affordable diet?

Judy Caplan, R.D., a spokesperson for the Academy of Nutrition and Dietetics, suggests the following:

Plan meals ahead of time to cut down on food costs and reduce impulse buying. When you cook, make extra and freeze leftovers in individual portions. That can minimize waste and give you an alternative to grabbing take-out or convenience food.

Since protein foods such as meat and poultry can be expensive, use them more as a condiment than a main course. You can also replace some or all of the meat or poultry used in chilis and stews with beans.

Eat more 'south of the border' meals like whole grain tortillas with beans, cheese, and salsa. Choosing healthy fats like avocado (used to make guacamole) can also promote satiety and help you feel full longer. To trim produce costs, buy fruits and vegetables that are in season. You can save even more money if you plant your own backyard garden using seed packets. Plant the five vegetables your family eats most often. Continuous plantings throughout the summer will insure a steady supply. If you don't have a backyard, container gardening is another option. -ELISSA DIAZ

AZ.

AN APPLE A DAY KEEPS THE DOCTOR AWAY

(AT LEAST IF YOU EAT THE SKIN THAT IS)

An apple a day really could keep the doctor away—as long as you don't throw away the peel.

The chemical behind the apple skin's waxy shine is being credited with a host of health benefits from building muscle to keeping the lid on weight. Ursolic acid also keeps cholesterol and blood sugar under control, meaning an apple a day could do wonders for all-round health. Researcher Christopher Adams said: 'Ursolic acid is an interesting natural compound. It's part of a normal diet as a component of apple peels.'They always say that an apple a day keeps the doctor away...'

The importance of apple peel was discovered after Dr Adams, a U.S. expert in how hormones affect the body, set out to find a drug that stops muscles from wasting, keeping pesioners strong as they age and cutting their risk of hard-to-heal fractures. He said: 'Muscle wasting is a frequent companion of illness and ageing. 'It prolongs hospitalisation, delays recoveries and in some cases prevents people from going back home. It isn't well understood and there's no medicine for it.

'In order to remedy the situation, Dr Adams, of the University of Iowa, studied the genetic changes that occur when muscles waste or atrophy.He checked a pool of 1,300 chemicals for one that would counter the changes and hit on ursolic acid. The researcher then supplemented a normal diet in mice with small amounts of the compound and subjected them to a battery of health tests. The creatures' muscles got bigger and their grip became stronger. The benefits didn't end there. The mice fed the apple peel chemical had lower levels of cholesterol and other blood fats blamed for

clogging up the arteries and damaging the heart, and had around a third less body fat. It is thought that ursolic acid enhances the effects of insulin and insulin-like growth factor 1, two hormones key to muscle growth. It is particularly concentrated in apple peel but is also found in cranbries and prunes and in basil, oregano and thyme.

Dr Adams said: 'We know that if you eat a balanced diet like mom told us to eat you get this material. People who eat junk food don't get this.

'He added that the goal is to establish whether apple peel is as good for humans as it is for mice and work out how many apples we might need to help make muscles bulge and waistlines shrink.If large amounts of ursolic acid are required, it is likely that people will have to take it in concentrated form, either as a supplement or a drug. Reporting his findings in the journal Cell Metabolism, Dr Adams said: 'Given the current lack of therapies for muscle atrphy, we speculate that ursolic acid might be investigated as a potential therapy for illness-related and age-related muscle atrophy.' Obesity and diabetes might also be in its grasp, he added. Other recent research has credited an apple a day with keeping the undertaker away—at least in flies. Fruit flies given an apple extract lived 10 per cent longer and found it easier to walk, climb and move about as they aged.

Researchers who questioned women about their diets found that those who regularly ate apples were around 20 per cent less likely to suffer heart attacks and strokes.

—DR. CHRISTOPHER ADAMS



## Why Gluten Free Food is Essential For a Healthy Lifestyle

It's almost become a trend for people to eat food that is free from Gluten or is very low on gluten. It is common for many in the population to experience sensitivity to gluten or suffer from celiac disease.

If Gluten-sensitive people eat food laden with gluten they are always at a risk of suffering from various disorders like bloating, weight gain or loss, several other problems like stomach problems, stomach pain and nausea. Treatment of this disorder is not the only option to get rid of these ailments. You need to have a totally gluten free diet in your eating regimen to get rid of these kinds of disorders that you experience.

In order to live fit and healthy it is important that you avoid food that contains gluten. Gluten is one of the proteins found in varying levels in wheat, rye, barley and some other grains. The flours that are made from grains loaded with gluten give a doughy or elastic consistency. Dough that has undergone fermentation tends to be high in Gluten thus it's a strict no, no for Gluten intolerant individuals to have food products that have been prepared with fermented dough. People use these grains in bread and other baked products to make them soft and puffy. So your fist step to avoid gluten is to start reading product labels. Make sure that

the processed or manufactured food that you are planning to buy is Gluten-free. If you are not sure, the best advice would be to avoid it and look for another option. Get to know which ingredients contain gluten so you can avoid them.

Here are few common gluten intolerance symptoms you can spot.

There are a number of symptoms that can tip you off about gluten intolerance present in your body. As discussed above, symptoms to watch for after consuming food would be discomfort such as gas, bloating, diarrhea and constipation. Most people have said that they get extremely tired in the middle of the day and find themselves napping without knowing it. Apart from it they experience body and joint pain, depression problems. It is not easy for doctors to diagnose whether the patient is gluten intolerant.

It really seems to be whimsical. The indicators related to digestion are very rare in gluten intolerant people. These symptoms are very tough even for doctors to consider whether a patient has gluten intolerance. There have few indications that

will help you to discover if you are gluten intolerant such as abdominal pain, constipation, or weight gain or weight loss.

If you want to be free from these diseases, you need to eliminate all gluten containing foods and stay on a gluten free diet. Instead of focusing on what you can't eat, focus on what you can eat such as naturally gluten-free foods like meats, vegetables, fruits, nuts and pulses. There are many health stores and supermarkets nowadays that are producing gluten free products. If you are out of your town or gone to visit some place where you aren't sure if the food that you are going to get is gluten free or not make sure that you inquire with the food suppliers in advance or you can take a look at the ingredients of the product that you are planning to purchase.

For gluten-free recipes, find a good gluten-free cookbook or search the Internet, there are many gluten-free websites and excellent food websites that provide gluten-free recipes these can also give you ideas to help you develop your own style of gluten-free cooking.

—JOHN HIDDLESTON

# Salmon Omelette

#### Ingredients:

- Cooking spray
- 4 eggs (lightly beaten)
- 2 tablespoons mayonnaise (gluten free)
- 2 teaspoons dill (fresh finely chopped)
- 1 teaspoon lemon juice
- 100 g watercress (trimmed)
- 100 g smoked salmon
- 1/2 lebanese cucumber (65g, deseed and cut into matchsticks)

#### **Directions:**

- Spray medium frying pan
   with cooking oil spray, cook
   half the eggs over medium
   heat, swirling the pan to a
   make a thin omelette.
- 2. Remove from the pan; cool on baking paper covered wire rack.
- 3. Repeat with remaining eggs.
- 4. Combine mayonnaise, dill and lemon juice in a small bowl.
- Spread each omelette with half of the mayonnaise mixture; top each with half the watercress, salmon and cucumber.
- 6. Roll omelette to enclose filling and serve.

Serves: 2

### **Slimming Food Combos for Your Body Type**

The secret to getting slim may be found in eating specific food combinations that target your body shape.

The best combinations you can try doing is getting a good proportion of carbs, protein, and fats. A good rule of thumb is to eat 40/40/20 ratio, respectively.

You can diet smart not hard when it comes to working on your problem areas. Much of winning the battle is in knowing what to eat to optimize your weight loss. Those who carry excess weight in their bellies need foods that can work together to fight cortisol, the stress hormone that slows metabolism and increases inflammation. Those who want to get rid of excess fat from a big bottom do well on a low-fat, high-calcium diet. And if you have fat distributed all over, your biggest challenge is igniting your body's natural fat burners.

The following food combos work with your body type to melt away your unwanted pounds.

#### **Oranges and Avocados for a Big Belly**

People with big middles tend to have higher levels of cortisol, the body's key stress hormone. Too much cortisol slows your metabolism and also breaks down muscle, making you hard-wired to store fat. Vitamin C is known to reduce levels of cortisol. Pair oranges with avocados, rich in monounsaturated fats (or MUFAs), which are known to reduce inflammation and decrease fat storage in the belly.

Slim-Belly Salad: Take 1 avocado, pitted and sliced, and mix it with 3 oranges, peeled and parted. Toss with 1 tablespoon of olive oil, another MUFA, and a dash of salt. Eat this every day for lunch; add grilled chicken for protein, which will provide prolonged satiety and satisfaction.

#### Low-fat Cottage Cheese and Black Beans for a Big Bottom

Low-fat dairy is key for big bottoms. Research shows increasing calcium levels with a low-fat diet will actually speed up weight loss as calcium promotes fat breakdown. Pair low-fat cottage cheese with black beans; complex carbs will amp up weight loss further in big bottoms.

Together, this combo will also decrease the amount of estrogen circulating in the body (estrogen is associated with carrying weight in your bottom).

Slim Bottom Dip: Mix one can of black beans (drained, low-sodium) and one 12-ounce container of low-fat cottage cheese. Mix together with 3 plum tomatoes, diced, a half-can of corn, and fresh chopped cilantro and hot sauce to taste. Eat with veggies or whole-grain crackers. Enjoy a quarter-cup as a snack between breakfast and lunch, and quarter-cup as a snack between lunch and dinner.

#### Brazil Nuts and Raw Onions to Slim You Down All Over

Brazil nuts are a great source of L-arginine. Studies show that people with excess belly fat actually have less growth hormone, without which they can't properly distribute and break down fat. L-arginine is a super supplement that naturally boosts growth hormone levels and revs your metabolism, stimulating fat-burn all over. Raw onions are a natural diuretic, which can help to relieve bloating (cooking them will strip them of this property).

Slim All Over Side Dish: On your stove top, toast a quarter-cup of chopped Brazil nuts for about 2 minutes. Dice one raw onion. Add this mixture to quinoa, a whole grain and complete protein that is low on the glycemic index, a quality that helps to control the blood sugar spikes that lead to weight gain. Eat a half-cup of this as a side dish every night with dinner instead of any other starch.



#### MARINATED LOBSTER WITH CHIVES

1 tbsp Dijon mustard 3 tbsp fresh lemon juice 3 tbsp chopped fresh chives Salt and freshly ground pepper, to taste 1/2 cup olive oil

1lb fresh-cooked lobster meat

#### CORN AND BELL PEPPER SALAD

2 tbsps olive oil 2 cups fresh corn cut from the cob (or subsitute with canned or frozen)

1/2 cup diced green bell pepper 1 large clove garlic, minced 1/4 tspn ground cumin Salt and freshly ground pepper, to taste 2 green onions, thinly sliced 1 tspn fresh lemon juice, or

#### FINALLY ASSEMBLY

more to taste

1lb tomatoes, seeded and chopped
1/4 tspn sugar
1 tbsp olive oil
Salt and freshly ground pepper, to taste
2 avocados
2 tbsp lemon juice
Sprigs of parsley for garnish

www.finelobster.com



Can you believe that spring time is only a few weeks away? I don't know about you, but I think we made out rather easy this past winter. Well, with the warmer weather surely on its way, there couldn't be a more perfect time to begin a healthy bodybuilding lifestyle.

