MELATONIN: IS IT SAFE? PAGE 37

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MAY 2019

THE DAILY SHOW'S

# TREVOR NOAH

RAISES HIS VOICE TO HELP OTHERS

CUT YOUR RISK FOR FALLS • DADS GET THE BABY BLUES, TOO • SKIN CARE GIFTS FOR MOM



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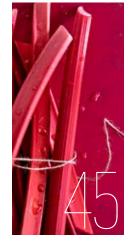
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or our cover star, The Daily Show host Trevor Noah, helping impoverished children have a better chance at life is one of his most important missions. As we learn in this issue, he credits his own success from growing up poor in South Africa to where he is now in part to his mother and the advice she gave him. As a parent, that's always heartwarming to hear. We give our kids lots of pointers and hope they listen to at least a small portion of it. When it comes to health, leading by example is always a good way to go. But as parents, we can't help offering our words of wisdom as well! For this issue, we asked our staff what they pass along to their own children.

Kristy Hammam
Editor in Chief
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FROM THE WEBMD TEAM

# What advice about healthy habits do you give your kids?



**DANI SIEGEL**WebMD Director, Editorial
Development Operations

I have always encouraged my son to get outside and play and to eat meals that include lean protein, vegetables, fruit, and water in order to power his body. Keeping the fridge stocked with healthy choices went a long way in helping him develop good eating habits.

I've quickly learned that advice shared with toddlers needs to be simple and fun. We talk and sing about what we can do to keep our bodies strong, brains smart, and hearts happy. Daniel the Tiger also helps sell the message when Mommy and Daddy aren't convincing enough.



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SHERA COLLINS
WebMD Video Producer

I try to teach my kids that you don't have to be the "best" at something to enjoy it. You can enjoy gymnastics even if you

don't make the team; you can run, even if you haven't won a race. I was too self-conscious as a kid to do sports that I wasn't great at. I wish I'd just learned to enjoy them!



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www.

Percentage by which a woman's odds of living into her 90s increases if she gives birth to her first child after age 25.

Percentage by which a woman's risk for type 2 diabetes goes down for each 12 months she breastfeeds. Her risk for breast cancer drops by 4.3% for each year of breastfeeding.

26%

Percentage by which ovarian cancer risk is lowered among women who've had children compared to those who haven't given birth.

Percentage by which women can lower their risk for multiple sclerosis by giving birth to one child. Having four children cuts the risk by 80%.



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45%

Percentage of adults ages 50 to 64 who worry they won't be able to afford health insurance in retirement.

SOURCE: National Poll on Healthy Aging IN THE NEWS

# Sleep supplement safety

Melatonin. You've likely heard of this popular supplement—maybe you're among the more than 3 million adults who take it (some half-million children do, too). But what do you really know about this hormone, marketed to aid sleep, cure insomnia, curb jet lag, and more? "A lot of people just take it right before they go to bed as if it were a sleeping pill. It's not that simple," one of our experts explains. Some research does show benefits and general safety with short-term use for some people—but long-term effects for just about

everybody are less well-known, and concerns about kids are real. One indication is the alarming spike in calls to poison centers in the last few years about melatonin use or misuse. Our report, "Homing in on Melatonin" (page 37), lays out what researchers know about this hormone—and what they don't, which on balance is a lot. Read this before you give melatonin a try or give it to your kids, and check in with your doctor for help with dosage and timing. A better night's sleep and your health are worth the extra effort.



# **DEPRESSION FOG**

Poor thinking skills and serious depression often go hand-in-hand. While researchers once thought that depression could cause a decline in thinking skills, a new study says otherwise. People who have a first-degree relative with major depressive disorder, but do not have depression themselves, perform more poorly on thinking

skills tests than people without a family history of depression. That was the result of an analysis of 54 studies of more than 8,000 first-degree relatives of people with major depressive disorder. The finding suggests that weak thinking skills could be a risk factor for depression rather than a consequence of it.

SOURCE: JAMA



## WOMEN: DON'T WAIT

Heart attacks are just as common for women as men, and fast treatment makes all the difference. Yet women wait 37 minutes longer to call for help when they have one. The delay could be because pain in the chest and left arm are the most recognized signs, but those symptoms are more common in men. Women, on the other hand, often feel back, shoulder, or stomach pain during a heart attack.

SOURCE: European Heart Journal: Acute Cardiovascular Care Upfront Upfront

## CANCER-CLOT CONNECTION

In the year leading up to a cancer diagnosis, older adults have an increased risk of stroke and heart attack, particularly the kind caused by a blood clot. according to a study of nearly 750,000 people. This discovery suggests that cancer, especially advancedstage cancers and lung and colon cancer at any stage, could increase risk for these clots. People who have a heart attack or stroke. the researchers say, should make sure they are up to date with their

cancer screenings. SOURCE: Blood

Number of children and adolescents who died between 1999 and 2016 from prescription and illicit opioid poisoningsan increase of almost 30%.

SOURCE: IAMA



## SPINACH BOOST

Do you prefer your spinach hidden in a smoothie rather than on your plate? Good, because that's the best way to get its antioxidant effects. Spinach is packed with the antioxidant lutein, which can reduce inflammation in the body. Food scientists prepared spinach in many different ways boiled, baked into a lasagna, fried, served raw in a salad, and blended into juices and smoothies. Heat destroyed the lutein. Blending the raw leaves released the most lutein for the body to absorb. Fat in the smoothie, from milk or yogurt, makes the lutein easier for the body to soak up.

SOURCE: Food Chemistry

## TEEN VAPING ON THE RISE

Teen vapers are on the rise. More than one in three high school seniors have vaped in the last month. That number was just above one in five last year. They say the devices are easier to get this year, too. More than 20% of teen vapers say they have vaped nicotine, compared to 11% last year. But teens may not know what they are vaping. The most popular devices don't offer nicotinefree options, and some labels are inaccurate.

SOURCE: University of Michigan



## 14%

Percentage of high school seniors who report binge drinking in the last two weeks. That's having five or more drinks in a row. That's down from almost 17% in 2017.

# **MATTERS**

one in 25 cancers worldwide, including breast, colorectal, esophageal, and pancreatic. Weight might also contribute to gallbladder, liver, and ovarian cancers and

SOURCE: University of Michigan

# WEIGHTY

Obesity causes nearly multiple myeloma.

SOURCE: CA: A Cancer Journal for Clinicians



# SCHOOL VS. SLEEP

Teenagers are chronically sleep-deprived. Going to bed earlier isn't the solution. The biological clock determines when people fall asleep. For teens, like it or not, that's later at night. So, when a Seattle school district pushed high school start times 55 minutes later, kids got 34 extra minutes of sleep every night, without changing their bedtime, and their grades went up by nearly 5%.

SOURCE: Science Advances

## LUCK OF THE DNA

How do some people live to 100 relatively disease-free? It could be in your DNA. Researchers studied DNA floating in the bloodstream—not the DNA inside cells—of people in their 20s, their 70s, and both healthy and unhealthy 100-somethings. The DNA developed irregularities with age, which the researchers saw in the samples from the folks in their 70s and the unhealthy centenarians. But the DNA of the healthy centenarians looked more like that of the 20-somethings than that of the other old-timers. The finding could help researchers understand what makes some people live longer—and better—than others.

SOURCE: Aging Cell

Annual cost of injuries caused by animals—that includes everything from dog bites to bee stings.

SOURCE: Trauma Surgery and Acute Care Ope



# A DRINK A DAY

The heart benefits of moderate drinking may apply to people with heart failure, too. Among 393 people with heart failure, the ones who drank seven or fewer alcoholic drinks per week outlived those who didn't drink at all. Limited drinking could increase good cholesterol and improve blood sugar control. Natural chemicals in beer and wine called polyphenols might increase the body's concentration of nitric oxide, which is important for blood vessel health. The benefits came from just one drink a day. The findings aren't a free pass for heavy drinking, which has many health consequences.



## PAIN TRICK

Gently stroking babies before medically necessary painful procedures, such as the heel stick test shortly after birth, reduces brain activity associated with pain during the procedure. The perfect stroke for pain reduction researchers found in an experiment, covers 3 centimeters (a little more than 1 inch) of a baby's skin per second.

SOURCE: Cell Press

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# SLEEP AWAY THE **CRAVINGS**

Sleep quality and weight regulation are tightly linked. In fact, just one lost night of sleep makes junk food more desirable, according to an MRI study of lean, healthy men's brains when offered junk food after a good night's sleep and after a sleepless night.

SOURCE: Canadian Medical

## TAKE THEM OUT

An estimated 1 million annual outpatient and emergency room visits are a result of serious eye infections from sleeping in contacts.

SOURCE: Annals of Emergency Medicine

## THE LONELIEST **NUMBERS**

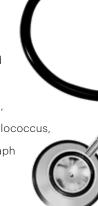
Three out of four people feel seriously lonely at any given time, according to a study of healthy people ages 27 to 101. Loneliness peaks in the 20s, 50s, and late 80s.

SOURCE: International Psychogeriatrics

# KEEP IT CLEAN

"Is that stethoscope clean, Doc?" A new study finds that the tool is a breeding ground for infectioncausing bacteria, including staphylococcus, the source of staph infections.

SOURCE: Infection Control and Hospital Epidemiology



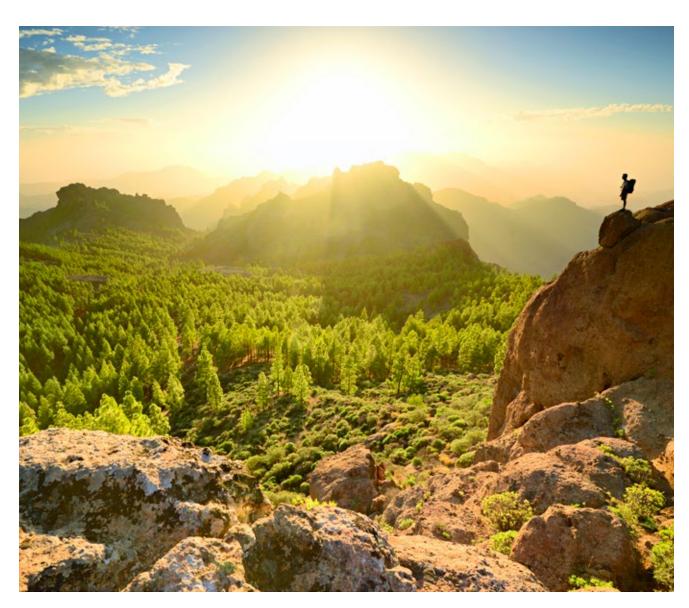
## **GO MED**

What makes the Mediterranean diet so good for your heart? In a 12-year study of nearly 26,000 women, those who stuck most closely to the diet were up to 28% less likely to have a heart attack or stroke. They also had lower levels of inflammation, better blood sugar control, and less body fat. The Mediterranean diet emphasizes vegetables, fruits, whole grains, legumes, and nuts; swaps butter for healthy fats such as olive and canola oils; substitutes spices for salt; reduces red meat to a few times a month; and includes fish or poultry at least twice a week.

SOURCE: JAMA



# Living



HEALTHY SPACES

# Green Is Good

WHETHER IT'S THE UNTAMED
WILDERNESS OR A NEIGHBORHOOD
PARK, SPENDING TIME IN GREEN
PLACES IS GOOD FOR YOUR
MENTAL WELL-BEING

RESEARCHERS AT THE INSTITUTE FOR GLOBAL HEALTH IN BARCELONA TRACKED 6,500 ADULTS AGES 45 TO 68 FOR 10 YEARS. During that time, the middle-aged and older adults took tests that measured short-term memory, reasoning, and vocabulary. Then the researchers used satellite images to measure the greenness of each person's neighborhood. The people who lived in the greenest areas showed the slowest decline in thinking skills over time. It could be, the researchers say, that green spaces promote healthy behavior. Spending more time in these places—especially exercising, socializing, or just releasing stress—might help preserve thinking skills as you age. —SONYA COLLINS



# Marriage Killer?

NEW RESEARCH SUGGESTS MONITORING WORK EMAILS AFTER HOURS CAN HARM PARTNERS' HEALTH AND RELATIONSHIP SATISFACTION

BY Lisa Marshall

REVIEWED BY Patricia A. Farrell, PhD, WebMD Medical Reviewer

WORRIED THAT YOUR AFTER-HOURS WORK EMAILS ARE DRIVING A WEDGE BETWEEN YOU AND YOUR SIGNIFICANT OTHER? You're probably right, new research confirms.

"We found that the more people check their work email, the more anxious they feel and the less satisfaction they feel with their overall health and marital relationship," said Liuba Belkin, PhD, associate professor of management at Lehigh University and co-author of the studies. "We also found that this anxiety and lack of satisfaction spills over to partners."

Belkin notes that in the past, strict physical boundaries existed between work and home life. But in the age of smartphones, those boundaries have largely been dissolved, enabling employers and employees to remain tethered on an electronic leash.

In one 2016 study of 365 adults, Belkin and her colleagues found that, on average, employees spend about one full extra day per week checking work-related email outside of normal office hours. Some respondents reported checking it as many as 40 additional hours.

Regardless of how much time they spent actually responding to them, the mere expectation by their employer to keep an eye on electronic messages boosted an employee's emotional exhaustion by requiring cognitively taxing "micro-role transitions between work and non-work domains."

"Even if employees make a conscious choice not to respond while they are with their family, there is always a chronic stressor in the back of their mind," Belkin says. "You are either checking messages or you are thinking about checking them."

In a follow-up study published in July, the researchers surveyed 142 full-time employees, as well as their bosses and romantic partners. The more their boss expected them to check electronic messages after hours, the more anxiety and less relationship satisfaction their partner felt.

"Unlike the employee, the significant other is relatively powerless to take direct action," the authors note, calling partner impact an underreported and "insidious downside" of electronic communication.

Belkin, who frequently checks electronic messages after hours herself, acknowledges that in the internet age it's hard not to. But she says employees can take several steps to protect their time—and relationships:

- •Ask your employer to establish a rotating on-call schedule, designating certain days or times that people must monitor electronic messages.
- Ask your employer to specify in emails whether immediate action is necessary or if a response can wait until work hours (often employees think they have to respond immediately when it's not really necessary).
- Establish strict, no-email times in which you turn off your phone. (Research shows that the mere presence of a smartphone in the room can reduce focus.) "Just not even having it in the vicinity during family time can help a lot," says Belkin.

#### BY THE NUMBERS

Number of hours per week, on average, that employees monitor work emails outside of office hours.



Percentage of employees who believe their company has high expectations of them to monitor work emails after hours.



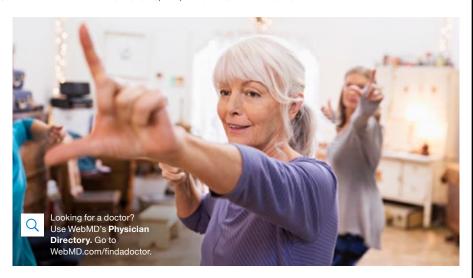
Percentage of employees who have a hard time detaching from work after hours.

# Reason to Relax

A NEW STUDY SUGGESTS STRESS PUTS WOMEN AT RISK OF DEVELOPING DIABETES

BY Kara Mayer Robinson

REVIEWED BY Brunilda Nazario, MD, WebMD Senior Medical Editor



## A STUDY FROM THE AMERICAN HEART ASSOCIATION FINDS THAT OLDER WOMEN

with mounting stress were almost twice as likely than women with little or no stress to develop diabetes.

When you're stressed, your body makes more hormones such as cortisol, growth hormone, glucagon, and adrenaline, which make your blood sugar levels go up, explains Nadia Ali, MD, an integrative medicine doctor in Wayne, Pennsylvania. This can lead to insulin resistance, which can trigger diabetes.

Stress also raises your blood pressure,

a known diabetes risk factor. And it can trigger anxiety, depression, and mental health problems, which make it harder to take good care of yourself. If you don't eat well and exercise, you're more likely to develop diabetes.

According to the study, both acute and chronic stress bump up your risk. Acute stress is when you suddenly find yourself in a traumatic or negative situation, like losing your job or having a serious accident. Chronic stress happens over a long period of time, such as when you have ongoing problems with work, finances, or relationships.

#### ASK YOUR DOCTOR

YOUR DOCTOR CAN HELP YOU UNDERSTAND YOUR RISK AND RECOMMEND STRATEGIES TO COPE WITH STRESS. NADIA ALI, MD, SUGGESTS STARTING WITH THESE QUESTIONS.

#### Q How does stress affect my body?

Your doctor may run tests to see how stress affects your insulin level, insulin resistance, and inflammation.

#### Q Do I have an underlying medical condition that needs to be monitored?

Your doctor can identify if there's something else at play and help you manage it.

# Q What lifestyle choices do you recommend?

If you're feeling stressed, your doctor may suggest specific changes to your diet and exercise program.

#### Q Should I see a therapist?

Your doctor can help you decide if it's best to get professional help—and help you find it.





# Know Your Own Mind

A NEW STUDY REVEALS VARYING HUMAN EXPERIENCES MAY ALTER THE ANATOMY OF THE INDIVIDUAL BRAIN, MAKING YOURS—OVER TIME—AS IDENTIFIABLE AS A FINGERPRINT

BY Lauren Paige Kennedy REVIEWED BY Neha Pathak, MD, WebMD Medical Editor

UNTIL RECENTLY, SCIENTISTS BELIEVED THAT HUMAN BRAINS WERE ANATOMICALLY INDISTINGUISHABLE. However, one recent study from the University of Edinburgh suggests men, on average, have slightly higher brain volume than women, even when corrected for body size—although researchers are hard-pressed to identify exactly which specific substructures within the brain might hold this extra volume. And women, on average, have thicker cortices than men, which are associated with higher cognitive test scores.

But examining a typical brain and being able to identify one from another based solely on its structure? Scientists didn't think it possible.

That notion is changing now with a new study conducted by a team of researchers at the University of Zurich (UZH). "We were able to confirm that the structure of people's brains is very individual," says the study's author, Lutz Jäncke, a UZH professor of neuropsychology. Jäncke says his team's research shows a combination of genetic and non-genetic influences affect not only brain functioning but also individual anatomy.

He and his team studied 200 healthy people who underwent MRI brain scans three times over the course of two years. They evaluated more than 450 features of brain anatomy, including volumes of gray and white matter, total brain volume, and thickness of the cortex—with interesting conclusions.

Jäncke notes that people with special skills, such as competitive chess players and professional athletes, showed unique characteristics in the regions of the brain that control for such gifts, clearly distinguishing them from the average person.

He adds that even short-term experiences—such as breaking an arm, resulting in its temporary immobility—can also alter the brain's physical characteristics, with a reduction in the thickness of the brain's cortex in the specific areas responsible for controlling that arm. "We suspect those experiences that have an effect on the brain interact with the genetic makeup, so that over the course of years every person develops a completely individual brain anatomy," Jäncke says.

# Baby Blues

NEW FATHERS DEVELOP DEPRESSION AT TWICE THE RATE OF OTHER MEN

BY Matt McMillen REVIEWED BY Michael W. Smith, MD, WebMD Chief Medical Editor

**DEPRESSION IN NEW DADS CAN HAVE LASTING** CONSEQUENCES FOR THE WHOLE FAMILY. A study by British researchers, released in December, revealed that fathers with postpartum depression raise daughters with higher risk of developing depression as teens.

Though researchers have begun to catch up with the reality of postpartum depression among men, the public remains largely unaware despite the numbers of men affected, says psychologist Darby Saxbe, PhD, an assistant professor of psychology at the University of Southern California.

"About 10% of new dads become depressed," says Saxbe. "That's about twice the rate of depression among other men."

Why new dads—or moms, for that matter -become depressed remains incompletely understood, but Saxbe's own research indicates that the most masculine of hormones-testosterone—plays a role. In a study published in 2017, Saxbe reported that men with lower levels of testosterone were more likely to have symptoms of depression, like feelings of helplessness, troubled sleep, faded interest in work and in activities they once liked, and a rise in irritability, anxiety, and anger, to name just a few.

Saxbe says that men's testosterone levels fluctuate over the course of pregnancy and during the postpartum period, and a drop can have some positive effects. Men with lower testosterone levels are less aggressive and feel

more invested in their relationships and family compared to men whose testosterone remains high. However, if it gets too low, depression risk rises. "You want it to be somewhere in the middle," says Saxbe.

It's too soon to say whether testosteronereplacement therapy might help new fathers avoid or recover from depression. Another unknown: Whether changes in testosterone levels could be used to help predict which fathers-to-be have an elevated risk of depression, a complicated disease that has many causes and triggers.

But, Saxbe says, men can help themselves, either to reduce their risk of depression or to help them feel better when they become depressed:

Maintain your social life. Stay close to loved ones. Strong friendships and family relationships provide invaluable support as you adapt to your new role.

Stay active. Join a gym, play sports with friends, or find some other way to work out regularly. Exercise improves your mood and may help balance your hormone levels.

**Sleep.** Tricky when you have a new baby, sleep is nevertheless essential to your mental health. Nap when the baby sleeps, catch up on weekends, do whatever it takes to prevent or reduce a sleep deficit.



#### **QUESTIONS** FOR YOUR **DOCTOR**

#### Q Am I depressed?

The symptoms of depression vary but often center around loss: loss of energy, loss of hope, loss of self-esteem, loss of interest (including interest in your newborn).

#### O Do I need treatment?

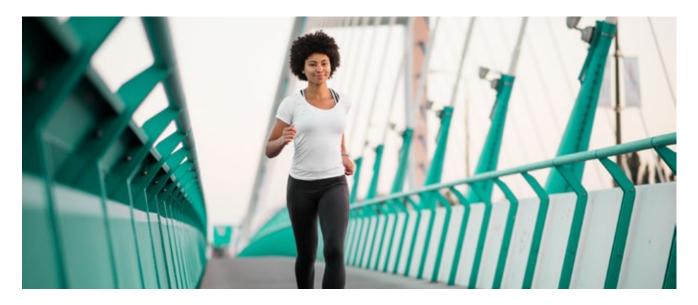
Self-care is essential, but your depression may require outside help, which may include cognitive behavioral therapy, an effective type of talk therapy, and/or antidepressant medication.

#### Q How long will this last?

That varies from man to man, and, unfortunately, postpartum depression may raise your risk of more depression down the road.

#### Q How might this affect my family?





# Business As Usual

SHOULD YOU SKIP WORKING OUT WHEN YOUR PERIOD COMES? NO WAY, SAYS OUR EXPERT. HERE'S WHY.

BY Kara Mayer Robinson

REVIEWED BY Brunilda Nazario, MD, WebMD Senior Medical Editor

#### UGH, THESE CRAMPS MAKE ME WANT TO CURL UP ON THE COUCH. IT'S BEST IF I SKIP THE GYM TODAY.

If this is you every 28 days or so, think again. Working out during your period can actually help you feel good. "Exercise is helpful for many of those disruptive and annoying period symptoms," says Sherry Ross, MD, OB/GYN at Providence Saint John's Health Center in Santa Monica.

For starters, exercise eases mood swings, lower back pain, and cramps. It can minimize bloating, water retention, weight gain, and fatigue. "The feel-good and mood-boosting endorphins and serotonin also help ease depression, social withdrawal, and stress experienced during certain times of the month," Ross says.

#### **Smart moves**

Unless you're losing a lot of blood, feeling dehydrated, dizzy, weak, depleted, or sick, it's better to continue your routine and work out rather than stay on the couch, says Ross. But you may need a few strategies to keep you going when you're not feeling up to snuff.

If you have heavy bleeding and cramping, try gentle, safe activities. Swap your high-octane gym workout for a long walk. Instead of rock climbing, try yoga (and now probably isn't the time to try a new form of training, especially if it's high-intensity). Yoga and Pilates are good choices when you have your period because they give you more energy and minimize cramps and bloating, says Ross. "My other favorites are brisk walking, jogging, swimming, and the elliptical machine," she says.

#### **Equip yourself**

Hook yourself up with the right products. "Wearing a sanitary pad could be bulky and messy," says Ross. Try a tampon or menstrual cup. If your flow is heavy, back it up with a thick panty liner.

Put in a new tampon before your workout and change it immediately after. No time for a post-workout shower? Apply a feminine vaginal wipe to the outside of your vagina to remove unwanted bacteria.

When you're not working out, take ibuprofen and apply a hot water bottle to your stomach. This can soothe your cramps and headaches so you can get moving later.

"Listen to your body," says Ross. If you feel tired, weak, nauseous, and dizzy, take a day off. But try to be active at least 30 to 45 minutes, four to seven times a week, she says—"It may be the best way to avoid physical and emotional upheaval" during your period.

## 4 TIPS

EXERCISE IS GOOD FOR YOU, EVEN DURING YOUR PERIOD. TRY THESE TIPS FROM SHERRY ROSS, MD, TO MAKE IT AS SEAMLESS AS POSSIBLE.

#### 1 GET COMFY

Dress comfortably and keep it simple. Pick fabrics like nylon, spandex, and polyester, which are comfy, nonabsorbent, and flexible.

## 2. ADD BREATHING EXERCISES

Do breathing exercises before you work out. Not only will this ease you into exercise, it can help with anxiety, depression, and emotional roadblocks.

#### 7 TAKE CARE

• Make sure you're well hydrated before, during, and after your workout. If you have to stop midway to change a tampon or sanitary napkin, do it.

#### **TUNE IN**

Listen to your body. Don't pressure yourself or overexert yourself. Lean in to your strengths and weaknesses—and know when to say when.

# Beauty



SKIN CARE

# Coconut Cure-All

TRY COCONUT OIL AS A FACE WASH, HAIR CONDITIONER, AND MUCH MORE

#### COCONUT OIL ISN'T JUST MAKING WAVES AS A GOOD-FOR-YOU FOOD.

The natural ingredient, made of fatty acids including bacteria-blocking linoleic acid and moisture-boosting lauric acid, is also a beauty basic that works wonders on most skin and hair types. "If you have very dry skin, use it on top of a humectant to lock in hydration," says Michelle Henry, MD, a New York City dermatologist. However, use caution if you have an oily or sensitive complexion as coconut oil can lead to blocked pores or irritation and, in some people, skin allergies. Dandruff or flaky scalp got you down? Use the oil in the evening as a hair treatment that you can leave in or rinse out, adds Rhonda Klein, MD, a dermatologist in Westport, Connecticut. "Some people even swear by coconut oil as a lubricant for shaving," she adds. —AYREN JACKSON-CANNADY

# Pretty

CHECK OUT THESE PRO GIFT PICKS THAT MOMS WILL LOVE WELL BEYOND MOTHER'S DAY FROM SUSAN BARD, MD, **DERMATOLOGIST AT VIVE DERMATOLOGY IN BROOKLYN** 

BY Ayren Jackson-Cannady REVIEWED BY Karyn Grossman, MD, WebMD Medical Reviewer

Check out the Women's Health Message Board at WebMD.com



#### Clarisonic Mia Prima Sonic Facial Cleansing Brush, \$99

"Give her the gift of time with this ultrasonic face brush that gently cleanses and exfoliates to simplify mom's skin-care routine while clearing the way for her serums and treatments to work more effectively."

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eye light



#### SkinCeuticals A.G.E. Eye Complex, \$98

LID SYSTEM SMOOTH

"Containing caffeine, this stimulates circulation to help minimize dark circles, puffiness, and fine lines so you see results quickly."

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Colorescience sunforgestable Brush.on

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# Scar reatments

CONGRATULATIONS—YOU HAVE A SCAR. THAT'S A SIGN YOUR BODY IS DOING WHAT IT'S SUPPOSED TO. BUT TREATMENTS CAN HELP MINIMIZE ITS APPEARANCE.

BY Kara Mayer Robinson

REVIEWED BY Mohiba K. Tareen, MD. WebMD Medical Reviewer

A SCAR IS YOUR BODY'S WAY OF HEALING A WOUND. It creates new collagen to repair damaged tissue from an injury. But because it's different from collagen you were born with, it may look and feel different. It may be raised, depressed, white, red, brown, pink, or silver.

While a scar may be a good conversation starter—"I fell off my bike when I was 5!"—sometimes it's better not to have a reminder of what you've been through. We asked Tanya Kormeili, MD, a dermatologist in Santa Monica, California, to shed light on scars and explain how to minimize their appearance.

#### Q What causes most scars?

KORMEILI Scars are the direct result of injury to the skin, usually down to at least the dermis, or second level. Surgery, burns, or injuries from accidents can do that. Some types of acne, like deep lesions, can also cause scarring.

#### Q Can over-the-counter creams and treatments make a scar look better?

**KORMEILI** There's conflicting data about most products. There's no concrete evidence that vitamins applied topically, like vitamin E or C, can improve wound healing. Silicone sheets may help with wounds that tend to get raised, but they do little for wounds that heal with depression or icepick marks.

#### Q How do dermatologists treat scars?

**KORMEILI** No two scars are the same, so we use a variety of creams, injections, and lasers based on their appearance. I may use one type of laser to treat the redness, one type of laser to treat the white line, and inject it with PRP (platelet-rich plasma) or cortisone to guide the healing process. For surgeries, we use the best sutures and surgical techniques to minimize scarring. I use a protocol of creams for burns to guide the healing process.

#### Q What's the newest innovation in treatment?

**KORMEILI** There's a great deal of research for skin-care products with peptides. Some peptides may help generate new collagen, which helps wounds heal. Because most over-the-counter cosmetic products aren't under FDA control, it's hard to know which have the best effect.

#### Q When should I see a doctor?

KORMEILI When you have a medical issue with your skin or something isn't healing, see a doctor. If you have acne, get medical treatment before it scars you. If you burn yourself, have a dermatologist help. Ask for surgical scar treatment after surgery. It's less expensive to get professional help early than to wait until the damage is permanent to find a solution.

#### AN OUNCE OF PREVENTION

STOP A SCAR BEFORE IT SETTLES IN WITH THESE TIPS FROM DERMATOLOGIST TANYA KORMEILI, MD. HANDS OFF. Don't pick at your scabs or acne. Nail marks and repeated trauma can cause more scarring.

KEEP IT CLEAN. Take good care of your injury. If you don't keep the area clean, it may become infected.

COVER UP. Keep your scar covered to boost the healing process. Avoid exposing a fresh scar to the sun.

GET HELP. If your scar isn't healing well, get professional help. A dermatologist will take a look to see what it needs to get better.



# Behind the Mask

HERE'S YOUR CHEAT SHEET TO FINDING THE BEST FACIAL MASK FOR YOUR SKIN CONCERNS— STRAIGHT FROM THE PROS

BY Liesa Goins REVIEWED BY Mohiba K. Tareen, MD, WebMD Medical Reviewer

ONCE A BEHIND-CLOSED-DOORS **BEAUTY RITUAL**, masking has become something that celebrities, including Bella Hadid and Lady Gaga, broadcast on social media and even wear during flights.

"I think masks have become so popular because in today's world it's all about instant gratification and self-care," says Carolyn Jacob, MD, a dermatologist in Chicago and an associate clinical instructor at Northwestern School of Medicine. "In as little as 10 minutes we can feel like we are doing something good for ourselves while getting the satisfaction of doing something good for our skin."

The attention masks are getting may be new, but they've been an essential part of a skin-care regimen since selfies have had hieroglyphics for captions. "Although masks have been around for centuries, manufacturers have now developed newer technologies and newer skin-care ingredients, so patients are finding that masks can be an effective way to deliver ingredients to the skin," says Rajani Katta, MD, a dermatologist in Houston and a clinical professor of dermatology at the University of Texas McGovern Medical School in Houston. "Plus, they're just fun to use."

With their popularity comes an overwhelming array of choices. Since there are so many formulas designed to treat just about any skin complaint, we asked experts

how to find the right option for you based on your concern. Where you decide to wear your mask, though, is totally up to you.

#### **SKIN COMPLAINT: OILINESS AND BREAKOUTS**

Ingredient to look for: Kaolin clay

"Clay masks are good for anyone who has acne concerns or oily skin because kaolin absorbs sebum from the skin," says Kelly Dobos, a cosmetics chemist in Cleveland. "Sebum plugs up pores and is the food for bacteria, which cause the inflammation and destruction of the follicle in acne and acne scarring," Jacob adds. So targeting sebum at the source helps stop the cycle of breakouts. Plus, absorbing oil from the skin also reduces shine and helps the pores look smaller.

**EXPERT PICK:** Dobos likes Glamglow Supermud Clearing Treatment, \$59. It contains a blend of kaolin clay and exfoliating alpha and beta hydroxy acids to keep pores clear and soften skin.

## SKIN COMPLAINT: DRYNESS

Ingredients to look for: hyaluronic acid, glycerin

"Masks in general are especially good at hydrating," Dobos says. "And sheet masks are especially efficient at moisturizing. They increase the amount of time hydrating ingredients come into contact with your skin—the fibers have an occlusive quality and hold moisture in longer." Another perk of hydrating masks is that they help plump fine lines, Jacob says, so they have an anti-aging effect.

**EXPERT PICK:** Dobos recommends Glow Recipe Watermelon Glow Sleeping

Mask, \$45, to quench dehydrated skin. "The second ingredient is sodium hyaluronic, a derivative of hyaluronic acid-a humectant that can hold 1,000 times its weight in water and draw moisture into the skin."

## SKIN COMPLAINT: DULLNESS

Ingredients to look for: alpha hydroxy acids, vitamin C

A layer of dulling skin cells can cause a lackluster complexion, so the gentle exfoliating benefits of alpha hydroxy acids (AHAs) like glycolic, lactic, and citric acids can slough away the surface cells and reveal fresher skin, explains Yoon-Soo Cindy Bae, MD, a board-certified dermatologist in New York City and a clinical assistant professor of dermatology at the New York University School of Medicine. She also suggests looking for vitamin C as an ingredient because it will affect the production of melanin to help brighten and even skin pigmentation.

**EXPERT PICK:** Bae likes the AHAs packed in the Aveeno Positively Radiant MaxGlow Peel Off Exfoliating Face Mask, \$10.

#### SKIN COMPLAINT: SENSITIVITY AND IRRITATION

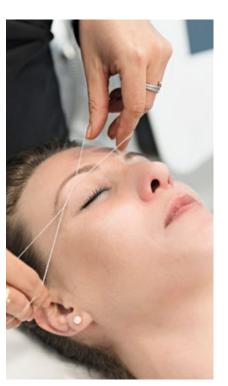
Ingredients to look for: antiinflammatory agents

Masks packed with soothing ingredients can help calm irritation and redness as long as you opt for mild, gentle formulas. "Masks can be great after certain laser procedures," Bae says. "The hydrating and cooling benefits can help heal the skin after a procedure."

Celebrity facialist Joanna Vargas says one of the best options comes straight from the kitchen. She mixes 2 tablespoons oatmeal, 1 tablespoon honey, 1 tablespoon Greek yogurt, and 1 teaspoon apple cider vinegar as a natural anti-inflammatory remedy for any skin type.

Continued on page 21

#### THE SCOOP



WHEN IT COMES TO SHAPING UP YOUR BROWS, YOU HAVE PLENTY OF OPTIONS. HERE'S HOW TO FIND THE BEST ONE FOR YOU.

#### WAXING

*Pros:* In a hurry? This is the quickest way to clean up your brows. "You're able to remove a good amount of hair all at once, and it comes out from the root," says celebrity brow artist and expert Giselle Soto.

Cons: Waxing may cause redness—and sometimes swellingdepending on the sensitivity of your skin. Unfortunately, waxing isn't an option for any individual who uses doctor prescribed skin medications or overthe-counter products such as Accutane, Retin-A, or a retinol

#### **TWEEZING**

Pros: For a straight and crisp brow line. tweezing is the way to go. Tweezers can grasp thick or thin hairs with unrivaled precision.

Cons: Tweezing can be tedious as you can only tweeze one hair at a time. Therefore, if you selftweeze, you may find yourself shaping your eyebrows in the mirror for nearly an hour.

#### **THREADING**

Pros: Threading. in which a string is used to pull out facial hairs individually or in small groups, can be just as precise as tweezing if done correctly. It's also one of the most affordable options for brow shaping.

Cons: On top of being one of the most painful options for brow grooming, a license or certification is not required to do threading.

#### **MICROBLADING**

Pros: Microblading. which is essentially a semi-permanent tattoo, helps fill in any brow holes or gaps. "This method, which lasts six months to one year is great if you're an 'on the go' person because you won't need to worry about taking an extra 20 to 25 minutes filling in your eyebrows with makeup," says Soto.

> Cons: Results vary by skin type. Risks include potential scar tissue and future follicle damage.

WEBMD.COM

# NO MATTER YOUR SKIN GOALS, YOU ALWAYS NEED TO FOLLOW DIRECTIONS.

EXPERT PICK: Jacob says the thermal spring water in the Avène Soothing Sheet Mask, \$9.50, is a soothing staple for softening and calming skin.

Since most of us have some combination of skin complaints, Dobos suggests a multi-masking strategy—applying mask formulas targeted to different zones of the skin. So apply a hydrating mask to the cheeks that tend to be drier and a clay mask to the oilier areas of the nose and chin, for example.

#### **BOTTOM LINE**

No matter your skin goals, you always need to follow directions, Katta says: "While masks can help increase the penetration of active ingredients into the skin, that means that if they're not used correctly they can also increase your risk of irritation and redness." Take note of instructions on how long to leave the mask on and how to remove it to ensure you'll have skin you'll want to show off once you are unmasked.

#### **DIRTY SECRET**

"I don't wash my pillowcases frequently. How bad is that?"



#### **AGING FACTORS**

"I believe four factors aside from genetics contribute to unwanted aging changes—pollution, irritants, light, and climate. Pillowcases collect irritating dust mites and other pollution particles in the air, two factors linked to signs of aging. Plus, multiple studies show that pollution particles are a major cause of wrinkles and age spots."

#### **FLIP AND SWAP**

"I suggest turning over your pillowcase every other day and using a new one every fourth day. Washing in a detergent that helps remove dust mites is also key. I like All Free Clear because it doesn't contain irritating dyes or fragrances."

#### -Loretta Ciraldo, MD, dermatologist, Miami

#### **FRESH FACE**

"Washing your face morning and night can help combat the issues connected to pillowcase debris. Before bed, make sure your skin is free of makeup and dirt from your environment and do a gentle cleanse first thing when you wake up to ensure you're removing any residue from your pillowcase."

#### **LINEN LINEUP**

"Some people may develop red pimples due to irritation from bed linens. In this case, consider switching to a 400-thread count cotton, sateen, or silk case to prevent friction that can irritate these breakouts."

#### AISLE DO

## CUTICLE CARE

TO SCORE A PRO MANICURE AT HOME, START BY SPRUCING UP YOUR CUTICLES. TAKE YOUR NAILS FROM "EH" TO EXTRA SPECIAL WITH THESE EXPERT-APPROVED PRODUCTS.



#### PRODUCT PICK SPA RITUAL CUTI-CLEAN (\$17)

"This makes the skin soft and easy to push, and it also helps with any staining on the nail plate. Bonus: Spa Ritual is vegan, so everything is super natural." Kimmie Kyees manicurist, St. Petersburg, Florida



#### PRODUCT PICK

#### WELEDA SKIN FOOD HAND CREAM (\$13)

"Rich and beeswax-based, this is a great product for the driest areas of skin like hands, feet, elbows, and knees. It's thick but glides on perfectly and just works. Plus, it smells divine."

Erica Marton celebrity manicurist, St. Petersburg, Florida



#### PRODUCT PICK

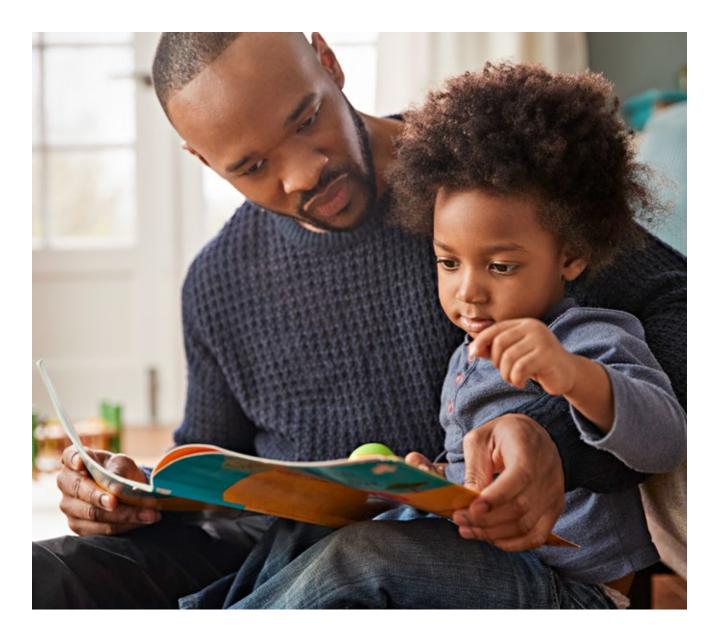
#### **VASELINE JELLY** (\$4)

"This really is one of the best moisturizers money can buy, and it keeps the skin barrier healthy. It also doubles as a wound healer for scrapes on the go and is an amazing cuticle softener."

Mona Gohara, MD associate clinical professor of dermatology, Yale University

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# Family



RELATIONSHIPS

# Quality Time

PROVIDE YOUR CHILDREN WITH WARMTH AND ATTENTION TO HELP THEM FLOURISH THROUGHOUT THEIR LIVES HARVARD RESEARCHERS ASKED NEARLY 4,000 MIDDLE-AGE ADULTS TO ASSESS AND SCORE THEIR CHILDHOOD RELATIONSHIPS WITH THEIR PARENTS—did they spend quality time with you? Were they there for you when you needed them? Did they understand your worries and problems? Did they teach you about life? Then they evaluated how well the adults felt they were doing in their own lives. They learned that depression and substance abuse occurred much less frequently among adults whose parents had been more loving, affectionate, supportive, and communicative. In fact, their children grew up much more likely to thrive emotionally, psychologically, and socially. The lesson: Spend quality time with your children now, and, this research reveals, they will continue to benefit long after they leave your nest. —MATT McMILLEN

# Search for the slideshow Looking and Feeling Your Best During Pregnancy at WebMD.com.

# Breaking Bad

THESE FIVE BAD HABITS COULD THREATEN YOUR PREGNANCY AND UNDERMINE YOUR BABY'S FUTURE HEALTH—HERE'S HOW TO BREAK THEM

BY Stephanie Watson REVIEWED BY Nivin C.S. Todd. MD. WebMD Medical Reviewer

BAD HABITS ARE HARD TO BREAK, BUT PREGNANCY IS A POWERFUL MOTIVATOR. These five behaviors pose risks to your baby—and you.

#### Smoking

Smoking is unhealthy at any stage of life, but especially when you're breathing for two. This bad habit has been linked to miscarriage, birth defects, and premature birth.

Pregnant women are "incredibly good at quitting" because they're so motivated, says Michelle Moniz, MD, assistant professor of obstetrics and gynecology at the University of Michigan. Counseling, group therapy, and medications can help you stop.

Smoking pot is risky, too. Marijuana and other street drugs (like heroin and ecstasy) can contribute to miscarriage, stillbirth, birth defects, and a host of other pregnancy complications.

#### Drinking alcohol

Each drink you consume travels through the umbilical cord to your baby. In large amounts, alcohol can cause a collection of physical and intellectual disabilities known as fetal alcohol spectrum disorders.

You might have heard European women enjoy the occasional glass of wine during pregnancy, but Moniz cautions that any alcohol is a bad idea.

"There is no known safe amount of alcohol in pregnancy," she says. Ideally, cut back even earlier, before you are trying to conceive.

#### Overeating

Pregnancy never justifies calorie overload. "You might be eating for two, but one of you is the size of a gummy bear," Moniz says.

Pregnant women need just 200 to 300 extra calories per day. Too much weight gain can lead to high blood pressure, gestational diabetes, and a larger than normal baby. It also increases your child's risk of being overweight or obese in adulthood.

"Women should track their own weight during pregnancy to make sure they're not excessively gaining," says Wendy Bennett, MD, associate professor of medicine at Johns Hopkins Medicine. Adjust your diet and exercise as needed to keep weight gain under control.

#### Bingeing on sugar

You and your baby need sugar (glucose) for fuel. Yet eating too much sugar—or starchy foods like bread and pasta that your body turns into sugar—contributes to weight gain and gestational diabetes.

Moms with gestational diabetes deliver large babies who have a higher risk for type 2 diabetes when they grow up. Talk to a dietitian if you're concerned about your pregnancy diet.

#### Being a couch potato

Your larger size is no reason to stop moving. In fact, exercise helps you stay at a healthy weight and relieves pregnancy symptoms like constipation and back pain.

Staying in shape can also make labor less laborious. "Exercise is one way to prepare your body, and your baby, for the process," Moniz says. Just avoid lying on your back late in pregnancy and engaging in activities—like horseback riding or contact sports—that could lead to a fall or other injury.

# BY THE NUMBERS

25 to Sannod

How much women should gain if they started their pregnancy at a healthy weight. Those who start out overweight should gain less, about 15 to 25 pounds.

46%

Percentage of smokers who quit just before or during their pregnancy.

150

How many minutes of moderate-intensity exercise pregnant women need each week.

87%

Percentage of women who drank alcohol before their pregnancy but stopped drinking once they were pregnant.



# Don't Walk

DESPITE WARNINGS AGAINST BABY WALKERS, SOME FAMILIES STILL USE THEM. HERE'S A LOOK AT WHY THEY'RE DANGEROUS.

BY Erin O'Donnell REVIEWED BY Hansa Bhargava, MD, WebMD Senior Medical Editor



IT SEEMS LIKE A FUN IDEA: Sitting your infant in a baby walker to give him a new way to scoot around your home. But a recent study found that an estimated 2,000 babies visit emergency rooms each year with walker-related injuries—often to the head and neck—after toppling down stairs.

Even when they're on level ground, walkers allow young babies to reach hot stoves, steaming mugs of coffee, appliance cords, and poisons, or to fall into pools before they fully understand these dangers, explains Gary A. Smith, MD, DrPH, director of the Center for Injury Research and Policy at Nationwide Children's Hospital in Columbus, Ohio, who led the study on walker injuries.

"The device is inherently dangerous by design, and for that reason simply shouldn't be on the market," Smith says. The American Academy of Pediatrics has called for a ban on the manufacture and sale of baby walkers, which are still sold in the U.S.

Smith's research does reveal some good news—the number of walker-related injuries has declined dramatically since 1990, when more than 20,000 children visited emergency rooms due to walkers. In the following decade, companies began making stationary activity centers without wheels. And voluntary federal standards established in 1997 by the Consumer Product Safety Commission (CPSC) led companies to make wheeled walkers wider than typical doorways, or to manufacture them with a brake that halts the wheels if they drop over the edge of a step. The CPSC added stricter standards in 2010, preventing companies from importing walkers without those safety features.

Although these rules reduced the number of injuries, babies are still getting hurt. "The thing that gets my attention is that there's a very high proportion of really severe injuries," Smith says. These include skull fractures, concussions, and burns to the head and neck. Strong babies can override the brake to push themselves down stairs, and walkers zip around at lightning speed. "A child can move up to four feet a second in a mobile baby walker," says Smith.

Smith acknowledges that well-meaning parents use walkers because they want to keep their infants stimulated and entertained. They believe babies will be safe if they just supervise them closely. (They might also think that walkers will help babies learn to walk, which is untrue, he adds.) But Smith says he has met attentive, conscientious parents who were stunned by their child's walker accident. "It doesn't matter if you're standing right there," he says. "Kids are going to move so quickly that you don't have time to react before they're down the stairs."



Search for the article **Baby Safety** at WebMD.com.

#### 4 TIPS

PARENTS MAY BE
TEMPTED TO PURCHASE
BABY WALKERS "TO
KEEP THEIR CHILDREN
CHALLENGED, HAPPY,
AND ENGAGED," SAYS
GARY A. SMITH, MD,
DrPH. HERE ARE BETTER
WAYS TO KEEP YOUR
LITTLE ONE OCCUPIED
AND INJURY-FREE.

## 1. TUMMY

Smith is a fan of placing your infant on her belly on the floor for short periods. This gives her practice lifting her head, rolling over, pushing up on her hands and knees, and even starting to crawl.

## 2. STATIONARY ACTIVITY CENTERS

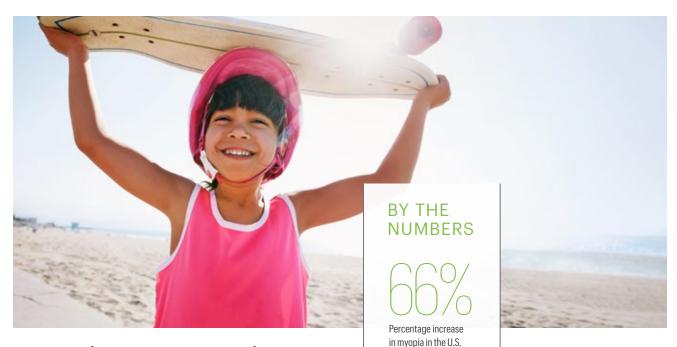
These toys are usually shaped like traditional baby walkers but lack wheels and keep your infant in one spot. The seats often swivel or allow baby to bounce around.

3. To keep baby contained for a little while, consider a playpen (sometimes called a "play yard"). Never leave baby in a mesh-sided playpen with the side lowered, though. And if the playpen has a raised changing table insert, remove it before putting

## 4 HIGH CHAIRS

baby in to play.

Need to keep baby busy while you make dinner? The American Academy of Pediatrics suggests strapping older babies into a high chair to play with toys placed on the tray.



# Look Outside

IF YOUR CHILD HAS MYOPIA, A SIMPLE FIX MAY HELP CURB MORE SERIOUS VISION PROBLEMS DOWN THE ROAD

BY Gina Shaw

REVIEWED BY Hansa Bhargava, MD, WebMD Senior Medical Editor

HAVE YOU BEEN TOLD THAT YOUR CHILD NEEDS GLASSES? Health experts estimate that almost half the U.S. population—42%—is myopic (nearsighted), a figure that has almost doubled over the past three decades. But being nearsighted is more than just an inconvenience, it can pose long-term hazards.

While glasses, contact lenses, and surgery can correct the effects of myopia and allow clear distance vision, they treat the symptoms of the condition, not the underlying defect—a slightly elongated eyeball in which the lens focuses light in front of the retina, rather than directly on it.

"When the eye becomes longer, the tissue of the retina and the structures supporting the optic nerve stretch and become thinner," says Andrei Tkatchenko, MD, PhD, associate professor of ophthalmic sciences at Columbia University Irving Medical Center in New York. "This thinning increases the risk of retinal detachment, cataracts, glaucoma, and even blindness. The faster myopia progresses and the more the prescription increases, the greater the risk of these diseases."

Children with nearsighted parents are more likely to be nearsighted themselves, and scientists have identified a large number of myopia-related genes. But genes usually interact with a person's environment to cause disease. The primary environmental factor linked to myopia is close-up work such as reading or working on a computer or smart device. "Over the past three decades, the level of near work has significantly increased in most of the world," says Tkatchenko.

50%

between the early

1970s and early 2000s.

Percentage of the world's population that will develop myopia by 2050.

 $4_{to}$ 

Number of adults in the U.S. who have myopia.

125

Number of daily hours of outdoor time needed to reduce a child's risk of developing myopia by 50%.



Search for the video How to Check Your Child's Vision at WebMD.com.

Can the progression of myopia be slowed or even halted to prevent long-term complications? Tkatchenko says yes: "There is a clearly defined treatable period between ages 8 and 25 during which there is the greatest progression of myopia, and myopia control is most effective during those years." He and other researchers are studying special contact lenses and eye drops for the treatment of myopia, but they have not yet officially been approved in the U.S.

One simple prescription could protect your child from developing myopia in the first place, however: spending time outside. "A number of studies have shown that outside activities suppress the development of myopia," says Tkatchenko. Scientists aren't sure why this happens, but one theory is that outdoor light stimulates the release of chemicals that signal the eye to slow its growth to a normal rate.

"Go outside and play. That's the best thing parents can tell their children to help prevent myopia," says Tkatchenko.



# Say 'Just Not Yet'

WITH LEGALIZATION SWEEPING THE NATION, EXPERTS WARN THAT TEENS ARE UNIQUELY VULNERABLE TO MARIJUANA'S ADVERSE EFFECTS

BY Lisa Marshall REVIEWED BY Hansa Bhargava, MD, WebMD Senior Medical Editor

IN 1982, THEN-FIRST LADY NANCY REAGAN LAUNCHED A NOW-FAMOUS CAMPAIGN URGING TEENS TO "JUST SAY NO" TO MARIJUANA AND OTHER DRUGS. Today, with more states legalizing weed for medicinal and recreational purposes, some health professionals—concerned about its lasting impacts on the developing teen brain—send a different message: "Just not yet."

"There is a growing assumption among teens that if marijuana is legal for adults, it can't be bad for you. We know that's not necessarily true. When you start using it matters," says Staci Gruber, an associate professor of psychiatry at Harvard Medical School and director of the Marijuana Investigations for Neuroscientific Discovery (MIND) lab. "Just Not Yet' conveys the message that you should give your brain a chance to be more fully developed before you expose it to something that could change its trajectory."

#### Increasing acceptance. increasing concern

Teens are more inclined to try pot today than they have been in decades, with 24% of 8th, 10th, and 12th graders already using it and one in four high school seniors saying they would try it or use it more if it were legal in their state, according to a 2018 national survey.

More parents are also using pot around their kids, either recreationally or medicinally, and perceptions of risk among both adults and youth have been declining for years, research shows. That concerns Seth Ammerman, MD, a clinical professor in the division of adolescent medicine at Stanford. He says that while cannabis can be relatively safe and therapeutic for adults when used responsibly, its hazards—particularly for young people—are real. "What is benign for the parent is not necessarily benign for the adolescent," says Ammerman.

The brain is still taking shape well into the 20s, with the prefrontal cortex—the region involved in decision-making, planning, problem-solving, and controlling impulses—developing last. Using marijuana during this vulnerable time can impact that development, research suggests.

For instance, brain imaging studies show that people who started using marijuana regularly before age 16 have less developed white matter, the nerve fibers that transmit messages from one area of the brain to another. One recent animal study showed that exposure to the equivalent of about a joint a day during adolescence can stunt development of key brain circuits that influence the ability to make decisions later on.

"It appears to alter how the brain is wired, and then you are stuck with it," says lead author Jamie Roitman, an associate professor of psychology with the University of Illinois at Chicago. People who start using marijuana frequently as teens also behave more impulsively and tend to score worse on cognitive tests than non-users or those who started using marijuana later. A few small studies have shown they



#### BY THE NUMBERS

Number of states. along with the District of Columbia, that have legalized recreational marijuana. Medicinal marijuana is legal in 33 states.

The average percentage of tetrahydrocannabinol (THC) in mariiuana today. In 1980, it hovered around 4%.

Percentage of people who experiment with marijuana who become dependent. This rises to 17% among those who start using as teens and 25% to 50% for teens who smoke daily.

Percentage of high school seniors who use marijuana. So do 26% of 10th graders and 10% of 8th graders.

Age at which the brain is mostly

done developing

are more prone to depression and psychosis.

Addiction is another concern. "The earlier one starts using any substance, whether its nicotine or alcohol or THC, the more likely they are to develop a problem with it," says Ammerman.

#### Not your parents' weed

Ammerman notes that marijuana available to teen's today is far more potent than that available a generation ago. With the advent of edibles and marijuana concentrates like "shatter" and "butter," potency can get even higher, likely boosting the risk of adverse effects.

He says he is often asked by both parents and teens to prescribe medicinal marijuana for adolescents. After weighing benefits versus risks, he typically doesn't recommend it. "While it has been shown to be helpful for adults in addressing some symptoms, there is virtually no research on its use in the adolescent population yet, so appropriate dosing, effects, and side effects are still unknown."

What should parents even those who use marijuana themselves-tell their kids? Wait. "Messages of 'Just Say No' or complete abstinence don't work. We know that from history," says Gruber. "We are just saying hold off. It's a better longterm strategy for your brain."

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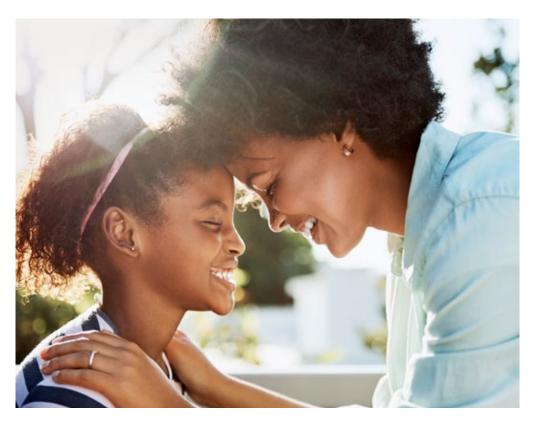
# Kids in Kind

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ALTHOUGH SOME STUDIES SUGGEST WE'RE HARD-WIRED TO HELP OTHERS, THESE CO-AUTHORS INSIST PARENTS MUST MODEL EMPATHY TO INSTILL KINDNESS IN THEIR KIDS

**BY** Lauren Paige Kennedy

REVIEWED BY Roy Benaroch, MD, WebMD Medical Reviewer



MAYBE YOU'VE NOTICED A KINDNESS DEFICIT IN OUR CULTURE in the way everyday niceties seem to have been replaced with yawning indifference: The stranger who mindlessly allows a door to slam in your face. The children who fail to lift their heads from their screens when you first arrive for a visit. Or the friends who never fail to interrupt you as you recount a story, a bit too anxious to make something about you entirely about them.

Does our modern era have too little empathy and other-orientation? Are we doing enough to model kindness to our kids so they grow up in a world of connection and support, rather than narcissistic alienation?

The answers are yes and no, say psychologist **Dale Atkins, PhD**, and social worker **Amanda Salzhauer, MSW**, co-authors of *The Kindness Advantage: Cultivating Compassionate and Connected Children*, a new guide for parents who wish to combat the rise of self-centeredness while

promoting the importance of helping others.

Atkins and Salzhauer cite multiple studies in the book. One reveals how babies as young as 3 months prefer images of "helpers" far more than they like images of "hinderers," suggesting human nature is to be empathetic, social, and kind. But other research documents evidence of a growing empathy gap among young people, with a generation of teenagers who now prefer communicating remotely via text rather than face-to-face.

Here, the co-authors advise parents on how to raise kind kids who hold pressing concerns greater than themselves.

Q Is your book for parents of young children? Can it help those with tweens and teens? SALZHAUER: We encourage parents to read this book when their children are very young, almost as an intervention, before older children and young adults become set in their ways. However, much of

# BY THE NUMBERS

40%

Percentage drop in empathy of college students who hit campus after 2000 compared to those who came before them, according to a study by University of Michigan that drew data from more than 14.000 students.

4.4 vs. 5.4

Happiness rating in toddlers who were given a treat as compared to those who gave away the same treat to a puppet, according to a scoring system used in a recent study by researchers at the University of British Columbia, Vancouver.

Number of improved health outcomes reported in people who regularly spend time volunteering, according to a 2018 study out of City University of Hong Kong. the content is relevant to parents of middle and high school students, too, including our recommended reading for fiction and nonfiction. We provide specific questions to ask your kids when you're watching a movie or the news together to organically start a conversation about kindness.

Q What behaviors in young people are you witnessing that you believe need correcting? ATKINS: They're on their phones a lot and not being sensitive to their environments—like not observing someone who might be in need. It's not just in kids. One of the things I see in my own practice among the newly married is [one or both spouses] not being able to listen, or to have the ability to pay attention to another person's story without needing to rush through it [to prove] they're right.

## Q Are there greater societal ramifications of a kindness deficit?

ATKINS: You see it when someone else is not willing to see a different point of view—or, on the job, not respecting others from different backgrounds or age cohorts and not believing we have a lot to gain from other people. The antidote is to perform acts of kindness, as a study with 9- to 11-year-olds demonstrates. The kids who regularly performed kind acts experienced positive changes in academics and social relationships, and they were more inclusive of other children and less likely to be bullied. The development of social competency is very important.

Q Is technology making us less kind? SALZHAUER: Lesson number one is that regardless of age, our kids and grandchildren are watching and listening to everything we do. They're soaking in it. We ask parents to think about what kind of kindness role model they want to be for their children. Kids do need sensitivity training about how to use social media, absolutely. But good is happening as well: Kids in other parts of the country who don't have people they can connect with in their schools or communities can find that online, which is tremendously valuable.

## Q You suggest that volunteering is important. Why?

ATKINS: Kids who participate in community service programs are other-oriented and have positive results in their attitudes about themselves—not egotistical, but positive—and toward school learning. They're more civically engaged, with improved academics. We have enough info on this now to say, 'Hey, wait a minute. We notice this [kindness deficit] with older kids. How are we going to change this with the younger kids coming up now?'

#### • Are there other tips you can offer?

SALZHAUER: We suggest parents make a kindness chart. So many of us use behavior modification charts in our parenting. Doing the same for kindness can be incredibly valuable. Have your child make a chart and decorate it, hang it up on the fridge, and at dinnertime ask, 'What did you do that was kind today? What did other people do for you that was kind?' Help them notice when other people are being kind to them and ask how that makes them feel. Then, put it on the chart.

ATKINS: Also, when we talk about kindness, especially to parents of young children, we need to support their being kind to themselves. They can model kindness more truthfully. It's hard to be kind to others if you feel drained and have nothing to give.

# ASK THE AUTHORS

#### IS EMPATHY LITERALLY TAUGHT?

"Yes," says Atkins. "You need to say out loud to your kids: 'These are our values as a family. This is what we do. This is how we behave.""

## HOW CAN PARENTS HANDLE BULLIES?

With empathy, says Salzhauer. "Ask your child: 'What might be going on with that kid? Why are they having a hard time?' Teach them to maintain empathy while remaining firm and strong."

# IS KINDNESS A DIFFERENT FORM OF SUCCESS?

"We so often praise kids' academic or athletic achievements and forget to acknowledge their kind acts," Salzhauer says. "Positively reinforce kind behaviors."

# SO, SHOULD YOU "CATCH" YOUR KID BEING KIND?

Most definitely. "Let your child know you appreciate the kindness you're trying to nurture: 'You really felt for that little boy at school who was nervous on his first day. That was nice you went and walked with him," says Atkins.







# Pet Prosthetics

CUSTOM MEDICAL DEVICES GIVE HANDICAPPED DOGS A NEW LEASH ON LIFE

BY Jodi Helmer

REVIEWED BY Will Draper, DVM, WebMD Medical Reviewer

LONG WALKS IN THE PARK AND GAMES OF FETCH CAN BE MORE CHALLENGING FOR DOGS MISSING PARTS OF THEIR LIMBS due to birth defects, illnesses, or injuries.

While dogs can get along with three legs, veterinarian Denis Marcellin-Little, DEDV, DACVS, section chief of small animal orthopedic surgery at the University of California, Davis, notes that "When a dog is missing a limb, it doesn't just affect that limb, it affects their mobility and the biomechanics of the rest of their body."

For dogs that lose part of a limb after a car accident or cancer, prosthetics are an option. The custom-fitted medical devices prevent dogs from overusing their other limbs and joints to compensate for their missing leg.

For a dog to be a good candidate for a prosthesis, the amputation must be below the joint (because pet prosthetics lack moving joints). Puppies can do well with a prosthesis but will need to be fitted for a new device often to accommodate their fast-growing bodies.

To create a prosthetic, veterinarians take a plaster mold of the amputation site and create the prosthetic from materials such as medical-grade plastic and foam. Some vets prefer a CT scan of the site for more precise measurements; the information can be sent to a 3D printer to make a bionic limb.

Significant attention is paid to ensure a proper fit. Marcellin-Little notes that if prosthetics are too loose or rub on the skin, dogs will avoid using the limb altogether, rendering a prosthetic useless.

Dogs will require several sessions of physical therapy to acclimate to life with their prosthetic limb. "You can't pop it on and send the dog out for a run," Marcellin-Little says. "Your dog has to learn to stand, then walk, then run. Recovery happens in stages."

With the right fit and proper after-care, Marcellin-Little believes prosthetics can provide the improved stability and mobility that a dog needs to participate in endless games of fetch.

#### **ASK YOUR VET**

IS A PROSTHESIS THE RIGHT CHOICE? AMPUTATION MIGHT BE A BETTER OPTION IF TOO MUCH OF A LIMB IS MISSING OR THE SITE IS PAINFUL OR INFECTED, SAYS DENIS MARCELLIN-LITTLE, DEDV, DACVS.

#### Q Is my dog a good candidate?

A calm dog that will allow you to put the device on, take it off, and check the amputation site for signs of irritation is a better candidate for a prosthetic than a dog that hates being handled.

#### O Are local resources available?

Veterinary prosthetists can be hard to find. "You might have to travel long distances to find someone with experience fitting pets for prosthetics," Marcellin-Little says. Ask your veterinarian for a referral.

#### Q How can I help?

A dog with a prosthesis requires extra attention. You'll need to clean the prosthetic with mild soap and water, check it for signs of wear and tear, and monitor the fit, upgrading if it becomes too loose or too tight.

# LESSOIS BY LAUREN PAIGE KENNEDY

REVIEWED BY NEHA PATHAK, MD WEBMD MEDICAL EDITOR WEBMD.COM

AFTER VOCAL CORD SURGERY, THE DAILY SHOW HOST TREVOR NOAH CONTINUES SPEAKING OUT TO HELP THOSE IN EXTREME POVERTY

That voice. So polished, with its instantly recognizable South African lilt, issuing a combination of wit and wisdom that's launched comedian Trevor Noah to stardom on Comedy Central's *The Daily Show*.

Recently, his show has given him a platform (even if he was temporarily silenced last year with a bruised vocal cord that required surgery) to highlight the physical health and educational needs of the disadvantaged in his home country and around the globe.

For this performer, talking isn't just a big thing—it's everything. As a poor kid growing up in Soweto during the waning days of apartheid, Noah talked himself out of countless small scrapes, low-level street hustles, and even serious jail time. And then he talked his way into local DJ jobs, cable access TV, and, eventually, the U.S. entertainment industry.

He credits his mother Patricia—for whom he named one of his nine popular comedy tours—with instilling in him a deep reverence for education. Noah says its impact has made the difference between finding success and settling for scraping by.

"My mother didn't have much money for toys or even food," he says. "But the one thing she always made sure we had enough of was some sort of sustenance for the mind. She always bought me books. She made sure education was the one thing I had access to, at all costs to the family."

#### THE LUCK OF OPPORTUNITY

Noah knows how fortunate he's been. "Luck is the difference between a police officer who gives you a warning and one who gives you a ticket," he says. "Between getting a job interview with someone who's in a good mood versus a bad mood. We can only put so much effort into the things we do. But you have to be in the position to exercise your luck. That means working hard—so you're ready to receive the luck when it happens."











TOP: WITH FELLOW 2017 GLAAD MEDIA AWARD WINNER ANGELICA ROSS.

MIDDLE LEFT: ON THE SET OF THE DAILY SHOW.

MIDDLE RIGHT: NOAH ACCEPTS THE BEST HOST AWARD AT THE 2017 MTV MOVIE AND TV AWARDS.

BOTTOM: NOAH TOOK THE DAILY SHOW ON THE ROAD IN 2017. He cites his current gig as an example. "Me being on *The Daily Show*? It was luck that [former host] Jon Stewart saw my comedy on YouTube. But I had to put my clips on the internet in the first place. I had to record those clips and make sure they were of good quality," he says. "I was lucky YouTube existed and that Jon put my name forward to host. But I worked hard to get the job and to keep the job. So luck and hard work are a beautiful dance that I try to live in life."

He wants others to have the luck of opportunity, too. And to meet it, head on. Which is why in 2018 he launched the Trevor Noah Foundation (TNF), whose mission is to provide underprivileged South African children with psychological support, education, life skills, and improved employment prospects.

"Education can be the one thing that changes the trajectory of human lives—from humble beginnings to ones where they can support themselves and their families," says Noah, the best-selling author of the memoir Born a Crime: Stories From a South African Childhood. "I wanted to get involved in a sustainable way. Not just a charity, but to ask, 'How can schools sustain themselves more efficiently? How can we empower teachers and students?' People focus on the kids, forgetting that teachers are often the most underappreciated, underpaid people in the world. And yet everybody's children needs them."

For this reason, TNF partners with Microsoft to provide schools with technology, researches and launches innovative curriculums, and supports educators to work to achieve a 100% student transition rate from high school to a university or a technical or vocational institution. These efforts help to forge new generations of young people who are eager to contribute to, and better, the world.

#### **SPEAKING UP**

Noah also hosted the Global Citizen Festival: Mandela 100 event in Johannesburg this past December, which raised a whopping \$7 billion to eradicate extreme poverty and increase access to education and clean water for the world's neediest people.

He was thrilled to be asked to work the stage to honor what would have been the late South African revolutionary, political leader, and philanthropist Nelson Mandela's 100th birthday. Of course, an all-star lineup of performers—including Jay Z, Beyoncé, Chris Martin, and Pharrell Williams—was quite the draw, too. He also knew fans would welcome him as

a hometown hero. Johannesburg is just 25 miles from his old neighborhood in Soweto.

"I'll make any excuse to go home," he jokes, admitting this particular excuse was perhaps better than most. Still, it's tough to host such an event when you've literally lost your voice, especially when your doctor discourages the rigors of travel—or even speaking—due to a badly bruised vocal cord.

"I had symptoms for about six weeks" prior to the festival, he says, which included hoarseness. He soon learned he'd developed a polyp on one of his cords. "It was hemorrhaging and inflamed," he adds.

Feeling hoarse is the most common symptom among people who develop polyps on one (or more) vocal cord, says Milan R. Amin, MD, who specializes in laryngology, voice, otolaryngology, and head and neck surgery at NYU Langone Voice Center. He says they're often found in people who rely upon their voices for a living. Not only famous singers, actors, and comedians, but everyday lawyers and teachers, too.

"A polyp is a benign growth at the edge of the vocal cord," Amin explains. "We have blood vessels embedded in our cords. From the pressure generated to produce sound, those vessels are sheered or pushed laterally. With enough force you can tear the vocal cord and get a hemorrhage. What we think happens is after a single or repeated hemorrhage, you wind up with a blood blister, which, over time, forms into a polyp."

Left untreated, polyps (or lesions) can grow larger or deeper and lead to a worsening of symptoms, he says. Noah's symptoms got so severe he was told he needed surgery to remove the polyp—and total vocal rest. Being a man who's made a habit of meeting luck with hard work, he figured it out.

To keep his day job on track and his voice fully silenced, Noah recruited his fellow cast members on *The Daily Show* to share his faux news desk and speak for him, as he comically, if mutely, oversaw their efforts. Hilarity ensued. (The bit even went viral.)

He made the concert, too, opting to rest his voice as much as possible before and after hosting the big event. He and his doctor

# Strike a Cord

Comedian Trevor Noah revealed how he was scheduled to have surgery to remove a polyp from his vocal cord just hours after conducting this interview. "For the good of the cover!" he joked at the time. Milan R. Amin, MD, a surgeon at NYU Langone Voice Center, explains what to expect from such a procedure.

#### **SIZE MATTERS**

"Larger polyps tend to have been there for longer periods of time," says the surgeon. "We're often more aggressive surgically with those, because they're harder to resolve through nonsurgical means. We can often be more conservative with smaller polyps that have only recently developed: voice rest, steroids, and some form of voice therapy."

#### **CHANGE OF BEHAVIOR**

Amin adds, "The majority of my patients are not librarians. They're outgoing and talkative. And not necessarily aware of how much pressure they're putting on their vocal cords on a daily basis. Voice therapy teaches them awareness and helps them with the production of sound so they're producing it more efficiently to create less trauma."

## IN-OFFICE OR OPERATING ROOM

"With relatively small polyps, you can treat them in the office. We use a laser to burn off the polyp using a local anesthetic. We do this regularly, with good outcomes," Amin explains.

"For larger polyps, we may use the operating room," he says. "Patients may do pre-operative voice therapy

and vocal rest first, and they may take steroids to decrease the size of the polyp as much as possible before surgery, because inflammation can potentially harm the healing process. Patients go under general anesthesia. Using magnification and tiny instruments, we remove the polyp. The patient goes home that same day."

#### **SCAR TISSUE**

"The concern after surgery is that the vocal cords heal and remain soft," he says. "That's how we get vibration. We blow air past the vocal cord and it vibrates. If it heals with stiffness, or scarring, you can lose vibration, which can change your vocal quality or affect the ability of singers to hit high pitches." Amin notes that surface polyps have a lower risk for developing post-op scar tissue than deeper lesions, which must be dug out.

#### **RECOVERY**

Recovery time is two days of total silence and 10 days of modified vocal rest, says Amin. He suggests taking two weeks before returning to everyday voice use and then avoid raising the voice or yelling as much as possible going forward. Once you've had a polyp, "you're considered at increased risk for developing another one," he says.

scheduled the surgical procedure over the holidays last year, when Comedy Central was already due to go on hiatus. He knew he could use the already sanctioned time off to recover, then start the New Year off and running. Or in his case, speaking.

"It was way too important to miss!" he says now of Global Citizen. "It raised billions in commitments from governments and organizations from around the world." (And hanging out with Beyoncé, backstage? That was pretty good, too.)

#### **LEARNING TO LISTEN**

The challenge, then, for a go-getter like Noah is to agree to slow down. Post-surgery, he was told he needed two full days of complete vocal rest (meaning no talking at all), followed by 10 days of modified rest (a laugh here and there, maybe, but not much more).

Rehab was also required—special techniques that teach Noah and other patients like him how to put less stress on their vocal cords when they speak—as was a commitment to learning how not to physically strain the voice. This can mean avoiding loud restaurants or shouting into a microphone—and perhaps putting the brakes on at least some of his many voice-related projects to take some much needed downtime.

But look who's already talking now. In addition to his *Daily Show* duties, Noah is currently touring across the U.S. and Canada with his latest standup effort, Loud and Clear. And, after his first foray into films as the AI computer system voice "Griot" in the 2018 blockbuster *Black Panther*, he's recruited Oscar-winning actress Lupita Nyong'o to help turn his successful memoir, *Born a Crime*, into a movie. (She's playing his mother and serving as producer.)

He's already writing his book's follow-up, for which his publisher is clambering for pages. ("I'm working on it!" he good-naturedly reassures. "I'm taking my time and enjoying not knowing, exactly, what it will be.") And, once again, he's prepping for its Audible version. Noah's voice work on his debut was the highest-rated audiobook in 2016 and continues to be a top-selling title.

Still, the comedian's recent issues with his much sought-after voice have told him something—and he swears he's listening. "The body has a fascinating way of knowing what you need, even if you ignore it," he says. "Sometimes, I think sickness or injury is the body's way of forcing it to rest. It's a humble reminder to myself to not always be pushing so hard—to take the time to recharge and reset."

From Noah's lips to his fans' many ears: "I'm exercising now! And trying to be as healthy as possible."

"LUCK AND
HARD WORK
ARE A BEAUTIFUL
DANCE THAT I
TRY TO LIVE
IN LIFE."





sabel Wazny had tried everything to get to sleep.

A lifelong night owl whose sleeplessness worsened as she aged, she sipped chamomile tea, popped antihistamines, and listened to relaxation tapes before bed—all to no avail. Some days she'd call in sick to her job, afraid she couldn't drive safely. After she retired from work, she started staying up all night.

"There's no one to talk to at 3 a.m., and when you sleep all day, it's hard on your social life. I was getting really depressed," says Wazny, 63, who lives in British Columbia. When she asked her doctor for sleeping pills, she recommended melatonin instead. Today, her life has turned around.

"I have never had such a regular pattern of sleep in all my adult life," she says. "I wish I had known about this 30 years ago."

Wazny is among a growing number of sleep-deprived people turning to a once-little-known hormone, often referred to as the "sleep hormone," for relief for themselves and their families.

More than 3 million adults and close to a half-million children take it, and that number is expected to grow as more sleep-deprived families clamor for cheap "natural" remedies and companies roll out everything from melatonin teas to mouth sprays to animal-shape gummies.

But with such growth have come concerns that consumers have a view of the potent, complex hormone that's too simple. In March 2018, three



# \$425 MILLION

AMOUNT U.S. CONSUMERS SPENT ON MELATONIN SUPPLEMENTS IN 2018. THAT'S UP FROM \$259 MILLION IN 2012.

workers at a day care in Illinois were arrested for slipping melatonin gummies to 2-year-olds to hasten their naps. When questioned by police, they said they assumed it was safe since it was sold over the counter.

The growing use, or misuse, is showing up in other ways. Calls to poison control centers about melatonin have skyrocketed. There was an 86% increase in calls about children exposed to melatonin from 2014 to 2018, according to the American Association of Poison Control Centers.

"People think of it as a vitamin, but in reality, melatonin is a hormone," says Craig Canapari, MD, director of the Pediatric Sleep Center at the Yale School of Medicine. "Amid the mania for 'natural treatments,' that gets overlooked."

Taken at the right time, in the right dose, melatonin can, indeed, repair a sleep schedule thrown off kilter by jet lag, a long weekend filled with late nights, or certain circadian rhythm disorders. And for some people, it *can* have a mild hypnotic effect.

But as a remedy for general sleeplessness, it has its limits. And when it comes to use in children, concerns abound. Melatonin supplements appear to be safe when used short-term; less is known about long-term safety.

"A lot of people just take it right before they go to bed as if it were a sleeping pill," says Michael Breus, PhD, a California-based clinical psychologist who specializes in sleep disorders. "It's not that simple."

#### **WORKS FOR SOME. NOT FOR OTHERS**

Discovered in 1958, melatonin is a hormone that the body makes to help regulate the circadian rhythm, or natural body clock. Light is the switch that controls it: As daylight fades, levels of melatonin begin to rise about one to three hours before bedtime, nudging us to become sleepy. In the morning, when light hits the eyes, it signals the brain to halt melatonin production, and we grow alert. "Melatonin is a sleep regulator, not a sleep initiator," says Breus, author of *The Power of When*.

Since the 1980s, dietary supplement makers have billed melatonin made

in a lab as a promising sleep aid. But studies show its effects on occasional insomnia for the general public are mild at best. One review of 15 studies involving 284 otherwise healthy adults found that those who took melatonin before bed fell asleep 3.9 minutes faster on average and slept 13 minutes longer. Another, of 19 studies involving 1,700 people, found that melatonin users fell asleep seven minutes faster on average and slept eight minutes longer.

"When you are already making melatonin naturally at night, taking a little bit more is kind of like spitting in the ocean. It doesn't do much," says Cathy Goldstein, MD, an assistant professor of neurology at the University of Michigan Sleep Medicine Clinic.

Alfred Lewy, MD, professor emeritus at Oregon Health & Science University and a pioneer in melatonin research, says he has found that a larger dose (3 milligrams or more) can have a hypnotic effect on about one-third of people who take it, making them feel sleepy. "It works for some people, but not for others," he says. "You just have to try it and find out which one you are."

#### SHIFTING THE BODY CLOCK

Experts do agree that taking melatonin supplements can have a big effect on treating circadian rhythm disorders like delayed sleep-wake phase disorder, in which the body's natural melatonin levels fail to rise at a normal time, making it hard to fall asleep and hard to wake up in the morning.

One study, published last year in the journal *PLOS Medicine*, looked at 116 men with the disorder and found that those who took 0.5 milligrams of fast-release melatonin one hour before their desired bedtime at least five nights per week fell asleep 34 minutes earlier on average, slept more soundly, and saw their sleep patterns normalize after four weeks.

"Say you are an extreme night owl who only begins to feel sleepy at 4 a.m. and likes to sleep until noon. You could take low-dose melatonin (0.5 milligrams) at 11 p.m., well before your natural melatonin kicks in. Not only will it help you feel sleepy earlier, it will start to pull your internal clock earlier too," says Goldstein.

Melatonin also works great for jet lag from eastward travel, says Breus, who personally takes 0.5 milligrams of melatonin 90 minutes before bedtime in the place he's traveling to.

After a weekend of staying up late and



sleeping in, a low (0.3 milligram) dose of melatonin late Sunday afternoon can also help you get to sleep at a regular hour and avoid the "Monday morning blues" that often happen when your days off disrupt your body clock, says Lewy. (Caution: If you are one of those people melatonin makes sleepy, don't drive after taking it.)

His research also suggests that for some people, as little as 0.3 milligrams of melatonin daily in the late afternoon may ease symptoms of winter depression brought on by shorter days and shifting circadian rhythms. But because a small number of people respond better when taking the melatonin in the morning, he only recommends its use for this purpose under a doctor's guidance.

"The challenge with melatonin is that it's complicated. If you take it at the wrong time, it can shift your body clock in the wrong direction, and that can cause problems," Lewy says.

#### IS IT SAFE FOR KIDS?

Melatonin is the second most-used natural product for children. Studies show that it



PERCENTAGE OF ADULTS WHO HAVE TROUBLE SLEEPING AT LEAST ONCE A WEEK.

can also help children with autism spectrum disorder (ASD), who tend to have lower levels of melatonin, and children with ADHD, who tend to have trouble falling asleep and staying asleep.

One recent study of 125 children and teens with ASD found that those who took larger doses—from 2 milligrams to 5 milligrams—of prolonged-release melatonin for 13 weeks were sleeping about an hour longer per night, with fewer sleep disturbances, by the end of the study.

"It's generally safe, it's not habit forming, and people don't really develop a tolerance for it," Canapari says. "It is my first-path sleep medication for children who need it."

But other researchers say they're concerned about its safety.

In 2015, researchers from Australia published a study pointing to research that linked melatonin use on rodents to changes in the onset of puberty. The report also notes that in the early 1990s, scientists were looking into high doses of melatonin as possible human birth control because of the way it could affect the reproductive system.

"Considering the small advances melatonin provides to the timing of sleep, and considering what we know about how melatonin works in the body, it is not worth the risk to child and adolescent safety," warned lead author David Kennaway, head of the Circadian Physiology Laboratory at the University of Adelaide's Robinson Research Institute.

Canapari notes that the findings were in animals, and no research has shown similar effects in children. But there is little research on melatonin's safety in young children. So if his patients are taking the hormone nightly for a long time, he follows them closely to be sure no unusual hormonal changes arise.

He also advises against giving melatonin—or any other sleep medication—to a child under 2. And he urges parents struggling with routine bedtime restlessness to reach for other tools—dimming the lights at night, banning electronic use an hour before bedtime, setting a bedtime routine—before reaching for melatonin. "Families need to make sleep a priority and not just try to medicate their way out of the problem," he says.

## NOT ALL MELATONIN IS CREATED EQUALLY

While short-term use of melatonin in adults is generally considered safe, taking too much can lead to bad dreams and grogginess the next day, notes Breus. It can also make some drugs less effective, including high blood pressure medications and, potentially, birth control pills. And some research has suggested it can make people with seizure disorders more likely to have them, so they should always consult with a doctor before trying it, says Canapari.

Because dietary supplements are not regulated as much as prescription drugs, quality can vary wildly from bottle to bottle. One recent study found that 71% of melatonin supplements surveyed did not contain exactly what twas listed on the label: Some had more than four times as much melatonin as they claimed, and 26% contained the powerful neurotransmitter serotonin.

"When it comes to product quality, it's a bit like the Wild West out there," says Canapari. And different people require different doses, he says, noting that more is

20%

PERCENTAGE OF ADULTS
WHO HAVE TRIED A
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not necessarily better. He suggests people start with a low dose and gradually increase it if it doesn't work. On the flip side, "I've had patients who were taking a higher dose, I lowered it, and they did better," he says.

Canapari notes that unlike with sleeping pills, it's hard to overdose on melatonin. But taking too much can make you feel sick.

Parents often called poison control after their children got into the hormone mistakenly or took too much. That can lead to nausea, diarrhea, headaches, changes in mood, lasting sleepiness the next day, and bed-wetting.

The bottom line: For adults with body clocks thrown off for one reason or another, and for sleepless children with autism and ADHD, it is worth trying, experts say. Just choose your brand wisely, work with a doctor to get the dose and timing right, and once your sleep schedule is back on track, stop taking it.

"We really don't know yet if it's safe to take long-term," says Goldstein.

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very parent has stories about a moment their 2-year-old surprised them.

Silvia Thoet is amazed that her 21-month-old bilingual daughter already understands that her parents talk to her in two different languages. "My husband doesn't speak Spanish. I noticed that she knows that already because when she talks to him in Spanish, she immediately corrects herself and talks to him in English," she says. "It's amazing."

Karly McBride was astounded when her 21-month-old daughter got upset with her aunt, who was using the same kind of blue water bottle she normally sees her mother drinking from. "She thought my sister took my water bottle, and she kept taking it from her," says McBride. "She'd give it to me and say, 'Mommy's cup."

The surprising moment for Danette Zeh came in the middle of the night when her 2-year-old son woke her up by roaring loudly

distinguish between leaders, whose power comes from the respect of others, and bullies, who are powerful because people fear them. The toddlers had different expectations about how people will respond to the two. "This really is pretty sophisticated thinking," Margoni says.

#### LEADERS **VS.** BULLIES

In the study, 21-month-old children watched cartoon characters in a variety of scenarios in which a leader or a bully gave orders to other characters. Researchers interpreted results based on where toddlers looked and what drew their attention—an approach often used when children can't talk.

They found that when the leader gave the order, the toddlers expected the other cartoon characters to obey, even when the leader had left the scene. But when the bully gave the order, the toddlers didn't have an expectation of how the cartoon characters would behave. Only when the bully stayed around after giving the order did the study subject expect the characters to obey, to avoid being harmed.

Margoni says this shows children understand that leaders are expected to be obeyed even when they aren't in the room, but bullies are expected to be obeyed only as long as objects and using that information to change their behavior when others are watching is quite sophisticated."

Botto conducted experiments on more than 100 children between the ages of 14 and 24 months. Using a remote-controlled robot toy, researchers saw if there were differences in how children acted when they were observed by an adult and when that adult turned away and pretended to read a magazine. They found that toddlers were less inhibited while playing with the toy when they weren't being watched and appeared more embarrassed when they were seen.

These and other exercises with similar findings mean that toddlers "take into consideration the other person's evaluation in relation to their own behavior," explains Philippe Rochat, PhD, a professor of psychology at Emory University and second author on the paper.

"When you look at a 15-month-old or 24-month-old, they may seem like they are in their own little world," Botto says. "But our research shows they are very attentive to others, their behavior, and their preferences, and they are using this information to regulate their own behavior."

# THEY ARE **VERY ATTENTIVE TO** OTHERS AND THEY ARE USING THIS INFORMATION TO REGULATE THEIR OWN BEHAVIOR.

next to the bed where she and her husband were fast asleep. "He told us he was a baby T. rex and that they are nocturnal hunters," Zeh recalls. She thinks the young boy learned the word "nocturnal" from a National Geographic documentary the family had been watching.

It's not just parents who are amazed by what 2-year-olds know. More and more, researchers are, too. New studies on toddlers reveal more interesting insights into just what a 2-year-old knows.

"Infants' understanding of the social world is much more sophisticated than was previously thought," says Francesco Margoni, PhD, a post-doctorate researcher at the University of Trento in Italy. He's the lead author of a study published last year that found that 21-month-olds are able to

they remain present and can enforce their demands. Still, researchers stress this doesn't mean 21-month-olds necessarily have the impulse control to behave this way.

It does suggest, Margoni says, that "infants understand something about how authority figures should be treated—and about the obedience that is owed to them-and this is something that parents and caregivers can build on when interacting with children, by reminding them of what they already know."

Another study published last fall finds that by the time children are 24 months old, they know when people are judging them and are capable of changing their behavior to get a positive response from their evaluator.

"Prior to this study, most researchers would propose that this ability would emerge around 4 years of age," says lead author Sara Valencia Botto, a PhD candidate at Emory University in Atlanta. "The fact that 14- to 24-month-olds are encoding other people's reactions to behaviors and

#### WHAT ELSE CAN 2-YEAR-OLDS DO?

According to the CDC, 2-year-olds' milestones include mimicking people, showing independence and defiance, following instructions, and repeating words that are overheard. Karen Hamilton, a preschool music and yoga teacher, says she has routinely seen this and more while teaching 2-year-olds yoga poses and songs involving words and sign language.

"They surprise me all the time," she says. "I'm always so amazed at what they pick up. They soak up everything. I love watching 2-vear-olds grow."

Research shows that around the age of 18 months to 24 months, children start helping, answering and responding to requests, and cooperating. Other studies show that 2-year-olds prefer people with helpful actions over harmful ones, that they can actively cooperate toward shared goals, and that they understand the difference between trying to do something and just pretending to do it while playing.

Henry Wellman, PhD, a developmental psychologist at the University of Michigan, has specialized in children's cognitive development for 30 years. His research has shown that 2-year-olds pick up on other people's preferences, understand others' desires and emotions, know the appropriate name or word for many objects, and can tell when someone says it incorrectly—and even correct them. He says he and his team have also discovered that there is a universal environment that helps children come to understand the world, but differences in those environments can affect the speed with which children learn.

"We used to target 4- and 5-year-olds with our research because we thought they were the ones we had been mischaracterizing in terms of what they know. But over the years, research has proceeded to younger and younger kids," Wellman says. "Two-year-olds can have really interesting and surprising ideas—and not necessarily the same ideas we would have."

#### THE VALUE OF VIDEO CHAT

Guidelines from the American Academy of Pediatrics urge parents and caregivers to

avoid digital media use for children younger than 24 months old—except for video chatting. The group says young children need "hands-on exploration and social interaction with trusted caregivers to develop their cognitive, language, motor, and social-emotional skills."

While the group believes the benefits of media are limited for those under 2, its guidelines do point out that emerging evidence shows children can learn words while live video-chatting with a responsive adult.

Lauren J. Myers, PhD, has focused much of her research on this. One study published in 2017 by the assistant professor of psychology and her team at Lafayette College in Pennsylvania found that starting around 17 months, children could form relationships with a new person over video chat and learn from that person when the discussions were on video chat-but not when they were pre-recorded.

"Live video chat mattered," Myers says. "Children recognized and preferred the person they had video-chatted with but did not prefer the person that was prerecorded. They behaved in a more interactive, back-andforth manner with the person who could see and hear them on video chat. They would try to do that with the prerecorded person, but they realized it didn't match up quite as well."

Even so, in another study published in February 2018, Myers and her team report that children ultimately learn more from someone in the room with them than from a person on the other end of a video chat. In this study, adults in the room with a child would either engage or ignore a person on the video chat, and researchers found that toddlers would mimic whatever the adult in the room with them did.

"Children at this age love imitating adults, and they are very astute observers of their social worlds. But what children really used as their source of information was the adult sitting next to them," Myers says. "It speaks to the importance of really observing your children sensitively and not assuming they necessarily understand that the grandma on the screen is the same one who comes to visit."

Myers says the bottom line is that 2-yearolds are smart and can pick up on subtle social cues. But more than anything, they learn from the adults around them.

"Caregivers are really important," she says. "Children need their adults to help them unpack and understand how they should act and react. They are really looking for guidance from the adults in their world."



VIDEO CHATTING IS ONE TYPE OF SCREEN TIME that experts say is okay in moderation for children younger than 2. Even so, researchers say you can optimize this experience for young children. Lauren J. Myers, PhD, an assistant professor in the psychology department at Lafayette College in Easton, Pennsylvania, highlights tips based on the latest research on using video chat with young children.

on the screen.

## AND EXPLAIN

Explain what is happening to help children link screen-based experiences to live experiences. Example: "See that cat? We saw that cat at Grandma's for Thanksgiving."

#### INTERACT, SHARE, AND ENGAGE

When adults use video chat, they have a conversation. But doing things with children is important when using this technology. Try interacting with a shared object on both ends of the conversation-like both taking bites of an apple, imitating each other with the same toy, or reading the same book aloud together.

## **WATCH THE**

Your child will engage best in video chat if they aren't tired. So avoid calls around naptime or bedtime and pay attention to the length of the call Research often tests children in bouts of 20 minutes or less. although five minutes may be enough for really young children.

For more tips, Myers recommends the free resource Screen Sense (at zerotothree.org)

GOOD FOR YOU



# Ruby Red

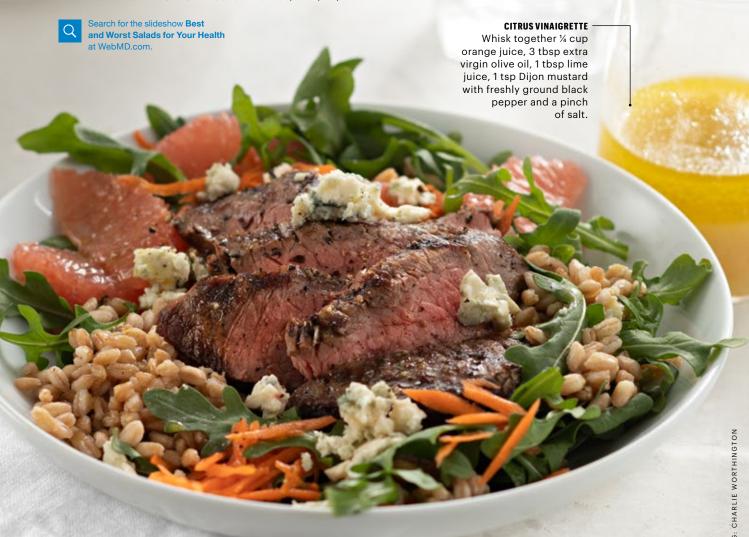
SHAKE UP YOUR PLATE WITH RHUBARB'S TASTY TART FLAVOR

GIVEN ITS STARRING ROLE IN PIES, it's a sweet surprise that rhubarb is in fact a vegetable. This relative of buckwheat brims with an intense tart flavor and multiple bone-protecting nutrients, including 10% of an adult's daily value of calcium, 16% of vitamin C, and 45% of vitamin K. It also aids digestion, offering 9% of an adult's daily value of fiber. Just don't forget: Rhubarb's stalks are edible, but its leaves are toxic, so remove them before you start chopping. Simmer rhubarb pieces with strawberries, ginger, and honey, and spoon this compote over yogurt or whole-grain pancakes. Add rhubarb to salsas. Or wake up your palate with the tart crunch of rhubarb pickles. —ERIN O'DONNELL

# Salad

LIGHTEN UP YOUR PLATE WITH SATISFYING ENTRÉE SALADS. START WITH CLEAN, CRISP GREENS, ADD A POP OF PROTEIN, AND TOP WITH A DELECTABLE DRESSING

BY Erin O'Donnell RECIPES BY Kathleen Zelman, MPH, RD, LD



#### THE HEALTHY STEAK LOVER

## Steak, Farro, and Grapefruit Salad

This salad tops zingy arugula with succulent steak. We use flank steak here, but skirt steak and beef tenderloin also work well. The recipe also calls for farro, a hearty Mediterranean grain with a nutty flavor, available in large supermarkets.

**THE MIX** 4 cups arugula leaves + 12 oz beef flank steak, carrot, pink grapefruit, cooked farro, blue cheese crumbles

**MAKE IT** Preheat grill or grill pan to medium-high heat. Season steak with salt and pepper; reduce grill temperature to medium. Place meat on the rack directly over medium heat or on the grill pan. Grill for 17 to 21 minutes or until an instant-read thermometer inserted in the center registers 145°F for medium-rare doneness or 160°F for medium doneness. Thinly slice meat against the grain. In a large bowl, prepare Citrus Vinaigrette (recipe above). Add arugula, julienned carrots, grapefruit segments, and farro and toss to combine. Divide greens mixture among four plates. Top with sliced beef and garnish with blue cheese. **SERVES 4** 

PER SERVING (ABOUT 1½ CUP SALAD WITH 3 0 Z BEEF) | 485 calories, 24 g protein, 22 g carbohydrate, 34 g fat (10 g saturated fat), 75 mg cholesterol, 3 g fiber, 7 g sugar, 427 mg sodium. Calories from fat: 61%



#### **TAKE-OUT ALTERNATIVE**

#### **Shrimp Pad Thai Salad**

This crunchy salad features the flavors of the takeout favorite pad Thai. The recipe calls for a bottled Asian salad dressing; look for brands that include ginger and soy sauce.

**THE MIX** 1 head Napa cabbage, shredded + 1 lb cooked, deveined shrimp, carrots, snow peas, red sweet pepper, bean sprouts, fresh cilantro, bottled Thai salad dressing, roasted unsalted peanuts, green onions

**MAKE IT** In a large bowl, toss together shredded cabbage, snow peas, chopped red pepper, bean sprouts, and cilantro with ¼ cup dressing to combine. Divide cabbage mixture among four plates. Top each with shrimp, chopped peanuts, and chopped green onions. **SERVES 4** 

PER SERVING (ABOUT 1½ CUP SALAD WITH 4 0Z SHRIMP) | 310 calories, 29 g protein, 17 g carbohydrate, 15 g fat (0 g saturated fat), 170 mg cholesterol, 4 g fiber, 6 g sugar, 420 mg sodium. Calories from fat: 58%



# Tofu, Baby Kale, Yellow Beets, and Roasted Tomato Salad

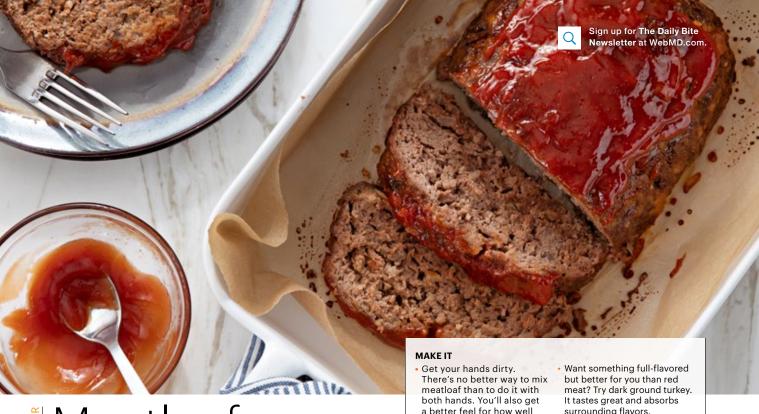
Roasting yellow beets and Roma tomatoes for this salad intensifies their flavor. Wrap each beet in foil. Halve the tomatoes, drizzle with olive oil, and place them cut side up in a pan. Roast tomatoes and beets at 375°F for 25 to 30 minutes or until skins brown and wrinkle for tomatoes and 50 to 60 minutes or until tender for beets. Let beets cool until able to handle. Slip skin off with the foil or a paper towel.

**THE MIX** 4 cups baby kale + olive oil, 14 oz extra firm tofu, roasted yellow beets, roasted Roma tomatoes, red onion, roasted pumpkin seeds

make IT Heat a large nonstick skillet to medium. Add 3 tbsp olive oil. Cut tofu into 1-inch cubes and add to oil. Cook for 10 to 12 minutes or until crisp and golden, turning once halfway through cooking. Remove tofu from oil and place on a paper towel. In a large bowl, prepare Citrus Vinaigrette (recipe above left). Add kale, beet wedges, tomatoes, and sliced red onion and toss. Divide salad onto four plates, top with tofu, and garnish with pumpkin seeds. SERVES 4

PER SERVING (ABOUT 1½ CUPS SALAD WITH 3½ OZ TOFU) | 532 calories, 22 g protein, 35 g carbohydrate, 38 g fat (6 g saturated fat), 0 mg cholesterol, 11 g fiber, 14 g sugar, 324 mg sodium. Calories from fat: 62%





# Meatloaf

THIS COMFORT FOOD CLASSIC CHECKS ALL THE BOXES: SIMPLE TO PREPARE, ADAPTABLE TO WHAT'S ON HAND. AND-DONE RIGHT-ALWAYS SATISFYING

BY Matt McMillen

REVIEWED BY Hansa Bhargava, MD, WebMD Senior Medical Editor

**NEW YORK TIMES REPORTER JENNIFER STEINHAUER KNOWS** MEATLOAF. Along with her colleague Frank Bruni, she wrote a book on the subject: A Meatloaf in Every Oven. "It's very versatile," says Steinhauer. "You can over-complicate it if you like, but at its base, it's a very easy dish. You don't need a lot of cooking skills, and you can improvise using what's in your fridge."

- a better feel for how well it holds together. Just be sure to wash up thoroughly before and after.
- Onion is one of meatloaf's foundations, but don't just chop it and toss it in. Sauté it first for much more flavor.
- · Breadcrumbs are a classic binder, but consider other starchy add-ins like cooked rice, oatmeal, farro, or even crushed saltines.
- You don't want bland meatloaf, so test your seasonings before you bake: Take a small piece, sauté it like a hamburger, and taste.

- surrounding flavors.
- It may be meatloaf, but you don't need to use a loaf pan. Try baking it in a cast iron skillet or a 9x13-inch baking pan for easier access to pan juices to baste as you bake or to spoon over slices once out of the oven.
- Use a thermometer to determine whether it's done. Different meats require different minimum temperatures to be safe to serve.
- · Let your meatloaf rest for 10 minutes once it's out of the oven so that its juices can be reabsorbed and settle in.

## (CANNED) SOUP'S ON

REGISTERED DIETITIAN JILL WEISENBERGER, MS, CDE, AUTHOR OF PREDIABETES: A COMPLETE GUIDE, PICKS FIVE FLAVORFUL CANNED SOUPS TO ADD TO YOUR SHOPPING LIST.

THE OPINIONS EXPRESSED IN THIS SECTION ARE OF THE EXPERTS AND ARE NOT THE OPINIONS OF WEBMD; WEBMD DOES NOT ENDORSE ANY SPECIFIC PRODUCT, SERVICE, OR TREATMENT



#### TRADER JOE'S LATIN STYLE BLACK **BEAN SOUP**

"Loaded with smoky chipotle flavor, this thin soup has 70 calories and 4 grams each of protein and fiber per serving. Enjoy with add-ins like cooked, whole black beans and diced avocado.



#### CAMPBELL'S WELL YES HARVEST CARROT & GINGER SIPPING SOUP

"Microwave the handheld package then pop the lid and drink. . No spoon required for this nicely flavored onthe-go 11-ounce snack with 130 calories and four grams of fiber."



#### WHOLE FOODS 365 ORGANIC TOMATO BISQUE

"Hints of basil accent the super tomato flavor of this thick and hearty boxed soup, which has 120 calories and 3 grams of fiber per cup. Perfect with a grilled cheese.



#### AMY'S ORGANIC HEARTY FRENCH **COUNTRY VEGETABLE** SOUP

"Beans, mushrooms, red rice, tomatoes, and more go into this meal-in-itself soup that has 180 calories and 5 grams each of protein and fiber.

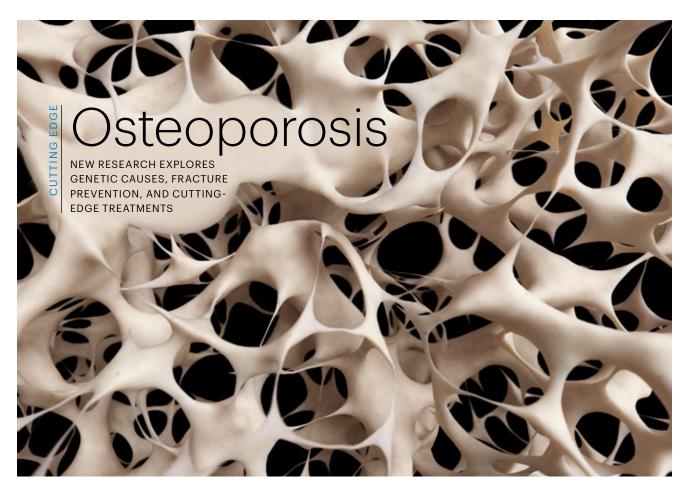


#### PACIFIC FOODS ORGANIC **VEGETABLE MASALA** SOUP

"Loaded with yellow split peas, butternut squash, and much more, this boxed vegan stew boasts 6 grams of fiber and 7 grams of protein in each 180-calorie serving.



# Checkup



ABOUT 54 MILLION AMERICANS HAVE OSTEOPOROSIS OR THE LOW BONE MASS THAT PUTS THEM AT RISK FOR THE CONDITION. Studies suggest that half of women and a quarter of men older than 50 will break a bone due to osteoporosis. Broken bones in older age can reduce mobility and independence and lead to isolation and depression. Hip breaks in particular significantly raise an older adult's risk of death within a year.

A team of doctors at Jewish General Hospital in Montreal uncovered more than 500 gene variants that could predispose a person to developing osteoporosis or avoiding it. These discoveries could lead to development of new, more effective drugs for the condition. Medications aimed at osteoporosis-related genes could, for example, decrease the activity of harmful genes or turn up the output of helpful ones.

For people who already have osteoporosis, the Mediterranean diet could help reduce risk of a hip break. Researchers at the University of East Anglia in the U.K. tracked almost 1,300 older adults for a year. During that time, half followed the Mediterranean diet, which emphasizes fruits and vegetables, healthy fats in nuts and olive oil, whole grains, and fish. The other half continued their usual diets. After a year, the people who had osteoporosis and followed the Mediterranean diet saw an increase in hip-bone density. Those who didn't follow the diet saw normal age-related bone loss throughout the year.

Surgeons and scientists at NYU School of Medicine and the College of Dentistry are developing dissolving 3D-printed ceramic bone implants in the laboratory. The 3D-printed bone pieces are coated with a drug that can help speed natural bone growth. After surgeons implant the new bone, they hope natural bone will begin to grow and absorb the ceramic implant. —SONYA COLLINS

# Nature's Medicine Cabinet

LEARN ABOUT DRUGS FROM NATURAL SOURCES

DRUGS DERIVED FROM NATURAL SOURCES. SUCH AS PLANTS, ARE SOME OF THE WORLD'S OLDEST MEDICINES. Many drugs are still made from natural sources. Michael Kopcha, PhD, RPh, director of the Office of Pharmaceutical Quality at the FDA, answers some questions about these drugs.

#### Q What is a naturally derived drug?

KOPCHA Prior to the creation of the first drug made using chemistry, nearly all drugs came from natural sources such as plants, animals, and fungi. Even today, drug manufacturers isolate many ingredients in drug products from natural sources. One interesting example is cannabidiol, the active ingredient in an FDA-approved seizure drug. The drug maker isolates cannabidiol (CBD) from the Cannabis sativa plant, more commonly known as marijuana. CBD does not cause the "high" associated with marijuana.

#### Q How does the FDA determine if a product from a natural source is a drug and not a dietary supplement?

KOPCHA Occasionally, even experts in this field mistakenly think that the source, the process for making a product, or even its purity determines whether a product is a dietary supplement or a drug. In the U.S., the distinction is based on intended use. The labeling on a dietary supplement cannot make a claim to diagnose, cure, mitigate, treat, or prevent disease.

#### Q How does the FDA assure the quality of naturally derived drugs?

KOPCHA Like all drugs, they must be made so that they are consistently safe and able to provide their intended benefit. To do this, drug manufacturers must meet quality standards that ensure every dose of a drug is of the appropriate strength and free of contamination and defects. The FDA has a dedicated botanical team to address unique considerations for developing complex drugs derived from plants. This helps the FDA assure that manufacturers of plant-derived drugs are capable of meeting quality standards prior to approval. This is another reason why you can have confidence in your next dose of medicine, no matter the source.

Learn more about the FDA's Botanical Team here: fda.gov/botanicaldrug.

#### BY THE **NUMBERS**

Percentage of FDA-

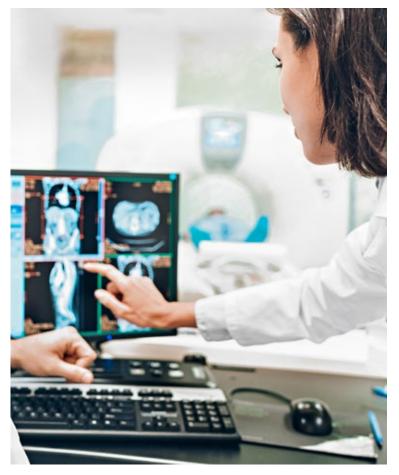
approved drugs that are natural products.

Date of one of the earliest known medicines, the juice of the Papaver somniferum plant, which contained morphine.

# more than

Percentage of the products for some part of their primary source





# heumatologist

THIS SPECIALIST USES AN ARSENAL OF TOOLS TO DIAGNOSE CONDITIONS INVOLVING JOINTS, MUSCLES, AND BONES

BY Jodi Helmer

REVIEWED BY Michael W. Smith, MD, WebMD Chief Medical Editor

RHEUMATOLOGISTS ARE TRAINED TO UNCOVER THE AUTOIMMUNE OR MUSCULOSKELETAL CONDITIONS that could be the cause of symptoms ranging from chronic joint, muscle, and bone pain to fatigue, weakness,

Need a specialist? Use WebMD's Physician Directory. Go to WebMD.com/findadoctor.

and headaches. Since these diseases are often difficult to diagnose, rheumatologists might do blood tests, ultrasounds, CT scans, or MRIs to make an accurate diagnosis and will work with patients to develop tailored treatment programs.

#### **BEYOND ARTHRITIS**

More than 54 million adults in the U.S. have been diagnosed with arthritis. As their titles suggest, rheumatologists specialize in treating patients with rheumatoid arthritis, but they also diagnose and treat more than 100 rheumatic diseases ranging from osteoporosis and gout to tendonitis and lupus. All of these diseases cause inflammation that leads to pain, swelling, and stiffness in the joints, muscles, and bones.

#### **COMMITTED TO CARE**

Rheumatologists complete medical school, residencies, fellowships, and rheumatology board exams to earn their licenses to practice medicine, and they must participate in ongoing continuing education. The extensive training helps rheumatologists partner with other health care providers such as nurses, occupational therapists, social workers, and psychologists to offer specialized care.

Due to the progressive nature of several autoimmune and musculoskeletal conditions, the relationship between patients and rheumatologists is often long-term.

#### PEDIATRIC RHEUMATOLOGISTS

Although 300,000 American children have been diagnosed with juvenile arthritis, only 25% of those patients receive specialized care due to a lack of trained medical professionals. The United States has just 350 board-certified and practicing pediatric rheumatologists. To fill the gaps, children receive care from rheumatologists trained to treat adults or pediatricians who lack specialized training in autoimmune diseases.

#### BY THE NUMBERS

The number of adult and pediatric rheumatologists practicing in the U.S. Number of states—Alaska, Idaho, Montana, Nevada, North Dakota, South Dakota, West Virginia, and Wyoming—that do not have a single practicing pediatric rheumatologist.

Percentage of boardcertified rheumatologists practicing in the Northeast. The Northwest is home to just 4.4% of boardcertified rheumatologists.

Number of American adults expected to have a diagnosis of rheumatoid arthritis by 2040.

# Chronic Fatigue Syndrome

OUR EXPERT SORTS OUT SOME OF THE FACTS ABOUT THIS DEBILITATING DISEASE

MORE THAN 1 MILLION AMERICANS HAVE MYALGIC ENCEPHALOMYELITIS/CHRONIC FATIGUE SYNDROME. While researchers have identified underlying abnormalities involving the brain, immune system, and energy metabolism, the causes of the illness and a cure remain undiscovered. Dana J. Brimmer, PhD, MPH, visiting scientist at the CDC, explains what doctors do know.

#### Q What is this disease?

BRIMMER Myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) is a serious, long-term illness that can radically alter patients' lives and last for years. People with ME/CFS often have pain, extreme fatigue, and sleep problems.

While there is no cure, a diagnosis can help patients and families by giving them a better understanding of ME/CFS and knowledge about managing symptoms. In addition, a 2015 Institute of Medicine (IOM) report now gives doctors the guidance they need to evaluate and manage the condition.

#### Q What are the symptoms?

**BRIMMER** According to the IOM report, ME/CFS has five main symptoms:

- Exhaustion and extreme tiredness that causes a drop in a person's usual activities and lasts for more than six months
- Symptoms that get worse after doing physical or mental activities that would have been "usual" before they became ill (also known as post-exertional malaise or PEM)
- Unrefreshing sleep
- Difficulty thinking, processing information, or concentrating

• Symptoms that worsen when a person stands upright but improve when lying down (also known as orthostatic intolerance)

Many patients with ME/CFS say that PEM is the symptom that interferes with their lives the most. PEM is not always predictable so it is hard to plan activities. For example, a person with ME/CFS may be able to go to the grocery store without problems on some days but on others the trip could confine them to bed rest for several days after. People with ME/CFS may also have pain, a sore throat, or flu-like symptoms.

#### Q What if a person suspects ME/CFS?

BRIMMER Talk to a doctor. Only a health care provider can make a diagnosis. Since symptoms vary, some patients find it helpful to keep track of symptoms and bring a list to the first appointment. People can find information about ME/CFS on the websites of the CDC and the National Institutes of Health (NIH).

#### Q How can I support someone with ME/CFS?

BRIMMER ME/CFS affects patients, families, and friends. The most important support you can provide is to understand that the illness is real and has long-term consequences. The severity of ME/CFS varies by person—for example, some people can still work but others are very sick and homebound.

The illness can also vary for a single patient—sometimes he or she may appear "fine" while other times may be too ill to do normal activities. Try to understand this variability and ask what you can do to help.

# BY THE NUMBERS

2x

Number of women who have ME/CFS as compared to men, although people of both sexes can have the condition.

30S and 40S

Age when the condition most often appears. But it also can affect young kids, teens, and older adults.

## \$17 to \$24 BILLION





# Focus on Falls

ONE MISSTEP CAN ALTER YOUR LIFE, BUT YOU NEED NOT LIVE IN FEAR OF FALLING. DETERMINE YOUR RISK SO YOU CAN STAND STRONG.

BY Erin O'Donnell

REVIEWED BY Brunilda Nazario, MD,

WebMD Senior Medical Editor

WE KNOW HEART DISEASE AND CANCER CAN BE DEADLY. BUT PEOPLE OFTEN IGNORE ANOTHER COMMON HEALTH DANGER THAT PUTS LIVES AT RISK: FALLING. "There's a huge lack of awareness," says Elizabeth Phelan, MD, MS, founding director of the Fall Prevention Clinic at Harborview Medical Center in Seattle. "People don't understand how devastating falls can be if they cause injuries" (such as bone fractures and traumatic brain injuries). And the older-than-65 crowd isn't the only group at risk. Phelan and her colleagues see a surprising number of people in their 40s and 50s after fall-related injuries.

She believes even middle-aged adults can benefit from boosting their falls IQ. "Falls are largely preventable," Phelan says. "It's important to know the things that contribute to your own risk of falls and to do something about them."

#### **FALL FACTOR #1: MEDICATIONS**

About a quarter of all adults 65 and older take medications that increase their risk of falling, Phelan says. These include benzodiazepines, often used for insomnia and anxiety, and opioids for pain relief. "All of these medicines affect the brain, so they can make you confused, dizzy, or unbalanced," Phelan says.

#### BY THE NUMBERS

Percentage of increase in death by falls in older adults between 2007 and 2016.

Number of falls that cause a serious injury, such as broken bones or a head injury.

Number of older adults who go to emergency rooms each year due to falls.

Number of adults 65 and older who fall each year.

nd FTTY IMAGES

Phelan and colleagues recently launched a study to determine if helping patients reduce their dose of these medicines to the smallest amount that still provides a benefit might decrease their falls risk. A previous study in Canada shows that patients were successful in lowering their medication dose when given guidance on how to do so. Phelan's study will examine whether using this approach will result in fewer falls.

#### **FALL FACTOR #2: BLOOD PRESSURE**

A condition known as postural hypotension (also called orthostatic hypotension) is a common cause of falls, Phelan reports. When a person with this problem stands from a seated position or rises out of bed quickly, their blood pressure drops, which can cause lightheadedness, dizziness, or even fainting.

It's more common as people age and can be triggered by dehydration, diseases such as Parkinson's, and medications, including older medicines for enlarged prostate and urinary incontinence, some blood pressure medications, and certain antidepressants. Many people with postural hypotension don't know they have it; in fact, a fall may be their first warning sign, Phelan notes. Your health care provider can check for postural hypotension by taking three blood pressure readings—while you're sitting, standing, and lying down—and comparing them.

To prevent dizziness or fainting, Phelan recommends getting out of bed gradually. Sit up for a few moments first to allow your blood pressure to stabilize before you stand. "You can also do simple maneuvers that raise your blood pressure a few points before standing, like flexing your ankles or clenching and unclenching your fists," Phelan adds. Drink plenty of water and other nonalcoholic fluids daily to stay hydrated.

#### **FALL FACTOR #3: BALANCE AND STRENGTH**

"Doing exercise for balance on a regular basis and keeping your muscles strong has been shown over and over in studies to be the single most important thing anybody can do to prevent falls," Phelan says. Multiple studies show that exercise programs based on Tai Chi, a Chinese martial art that involves gentle, flowing movements, are particularly effective in preventing falls by improving balance and strengthening the lower body.

"Tai Chi also requires you to really focus on what you're doing, so it probably benefits you by increasing awareness of your body and how you move," Phelan says. (Some falls occur when people are distracted.) She adds that although Tai Chi is great for fall prevention, the most effective form of balance and strength exercise is the one you're motivated to perform often.

#### **FALL FACTOR #4: FOOTWEAR**

It's common sense: The shoes you choose affect your ability to stay steady

\$30,000

Average cost of a fall-related hospitalization.

Percentage of older people living in a specific community who say they fear falling

# ASK YOUR DOCTOR

## Q Can you assess my falls risk?

Talk to your doctor about your risk factors. The CDC offers a self-assessment on its website. Consider completing the form and reviewing it with your doctor.

# Q Can you check me for postural hypotension?

This involves taking three blood pressure readings—while you're sitting, standing, and lying down. At the very least, ask for one reading—while standing—to ensure your blood pressure isn't too low.

Q Do certain medicines put me at risk for falling? Medicines including benzodiazepines, nonbenzodiazepine hypnotics ("Z-drugs"), opioids, muscle relaxants, antihistamines, and some selective serotonin reuptake inhibitors can boost falls risk. Talk to your provider about the possibility of stopping these meds, reducing your dose, or trying alternatives. Don't reduce your dose without guidance.

## Q Can you recommend a class to prevent falls?

Your doctor may know of nearby Tai Chi classes. A physical therapist can help you develop a home exercise program. Or contact your Area Agency on Aging to ask about local classes.

on your feet. Phelan recommends using a pair of sturdy slippers or shoes inside the house; one study found that people who went barefoot or wore socks around the house were more likely to fall. "Wear shoes that feel comfortable, provide sufficient support to your feet and ankles, and keep your toes covered and protected," she says.

## FALL FACTOR #5: ENVIRONMENT

Be aware of hazards in and around your homeespecially the bathroom and stairs, where falls that cause injuries are common. Use a nonslip rubber mat in your tub or shower and install handrails in your bathrooms and stairwells. Keep stairs free of objects such as shoes or books. Skip area rugs or use double-sided tape to keep them secure on the floor. Tuck power cords out of the wav. And be sure lighting is adequate, particularly if you make nighttime bathroom visits.

Although it's essential to address such hazards, Phelan urges patients and their families to think beyond environment to often overlooked causes such as medications and balance, particularly if a person falls repeatedly over the course of a year.

"If you're afraid of falling, know that you're not alone," Phelan says. "It's a common consequence of having fallen before or feeling unsteady on your feet. Addressing your personal fall risks will help reduce fear and build your confidence."

Q

Look for the article
Older Adults: How to
Avoid Falls at Home
at WebMD.com.

55 WEBMD.COM

# Stroke

BY Matt McMillen REVIEWED BY Hansa Bhargava, MD, WebMD Senior Medical Editor



Look for the slideshow A Visual Guide to Understanding Stroke at WebMD.com.



**NUMBER** of U.S. adults with **high blood pressure**, a leading cause of stroke



In the U.S., a stroke occurs every 40 seconds

**OF ALL STROKES** THAT OCCUR,

happen to people ages 18 to 50



Number of strokes in the U.S. each year



Stroke's RANK in the TOP 10 leading causes of death IN THE U.S. **PERCENTAGE** of all deaths caused by a stroke in the U.S. each year

deaths caused by stroke WORLDWIDE

Stroke rate will more than double between 2010 and 2050

Estimated percentage of strokes that can be prevented

Annual costs related to stroke, including health care and lost productivity



# Hepatitis C

A LIVER INFECTION THAT AFFECTS 2.4 MILLION AMERICANS, HEPATITIS C CAN CAUSE SERIOUS HARM, INCLUDING CIRRHOSIS AND LIVER CANCER. BUT MANY PEOPLE WHO HAVE THE DISEASE MAY NOT KNOW IT. ARE YOU AT RISK?

BY Matt McMillen

REVIEWED BY Arefa Cassoobhoy, MD, MPH, WebMD Senior Medical Editor

I'M A HEALTHY BABY BOOMER. DO I NEED TO BE TESTED?

NO

IS MY RISK OF

**HIGHER IF MY** 

RELATIONSHIPS

MONOGAMOUS?

**HEPATITIS C** 

ARE NOT

\_\_\_ YES

\_\_ NO

I DON'T HAVE ANY SYMPTOMS. **DOES THAT MEAN** I DON'T HAVE **HEPATITIS C?** 

\_\_\_ YES

\_\_\_ NO

MY PARTNER HAS HEPATITIS C. DOES THAT MEAN I MIGHT HAVE IT, TOO?

\_\_\_ YES

\_\_ NO

I'VE BEEN SUCCESSFULLY TREATED FOR **HEPATITIS C. CAN** I GET IT A SECOND TIME?

\_\_\_ YES

\_\_ NO

I RECEIVED A BLOOD **TRANSFUSION** YEARS AGO. AM I AT RISK OF **HEPATITIS C?** 

\_\_\_ YES

\_\_\_ NO

**ANSWERS** 

People born from 1945 to 1965 are five times more likely to have hepatitis C than other adults.

Symptoms like fever, fatigue, and darkened urine may develop when you first are infected. However, most people have no symptoms.

Not unless you and your partner use intravenous drugs and share needles or you have HIV. It's rarely transmitted during sex, though anal sex may increase the risk.

People with multiple partners are more likely to get the disease, particularly if they already have a sexually transmitted disease or HIV.

Previous infection does not provide future protection against the virus. If you engage in risky behaviors like sharing needles, you may become infected with hepatitis C again.

You are at risk, but only if you received your transfusion before July 1992, when new blood



Look for the slideshow What You Need to Know About Hepatitis C at WebMD.com.



# Daily Aspirin

SHOULD YOU TAKE ONE EVERY DAY? THAT DEPENDS.



BY John Whyte, MD, MPH, WebMD Chief Medical Officer

ING." That's often what our parents and grandparents heard when calling the doctor at night with some ailment. For more than a century, aspirin was considered a kind of wonder drug, treating a host of conditions such as heart disease and pain.

But recently doctors have gained a greater understanding of which patients should take aspirin—and who should probably not. Don't assume that since you can get aspirin at a pharmacy without a prescription, it's always safe to take. Like every drug, aspirin has risks as well as benefits. Aspirin works by inhibiting the blood from clotting, but this can also increase bleeding. Doctors used to recommend aspirin for almost everyone age 40 and older to help prevent heart disease, some types of strokes, and maybe even some cancers. Now we know from recent well-designed large trials that sometimes the risk is greater than the benefit.

#### Here's what you need to know:

- If you have already had a heart attack, the benefits of aspirin to ward off future heart attacks and some types of strokes are likely greater than the risk of major bleeding.
- But if you've never had a heart attack or stroke, age and risk are important factors.
  - If you are younger than 50, most studies do not seem to support taking daily

- aspirin to prevent a heart attack.
- If you are between age 50 and 69, you need to calculate your 10-year atherosclerotic cardiovascular disease (ASCVD) risk, which is often higher if you have diabetes, high cholesterol, or high blood pressure (you can do this yourself-see below). If your ASCVD risk is more than 10%, the benefits of a daily aspirin probably outweigh harms, assuming you have no increased bleeding risk (such as a previous stomach ulcer).
- If you are age 70 or older and have never suffered a heart attack or stroke, studies are not clear about the benefit of a daily aspirin.
- Consult your doctor about what makes sense for you-starting a daily low-dose or baby aspirin, or stopping. If you already take one, don't just stop. Have that conversation first.
- · If you have chest pain, you should still call 911 and chew an aspirin.

Questions? Comments? Email me at john@webmd.com.

You can find links to online ASCVD calculators, based on recommendations from the U.S. Preventive Services Task Force at:

tools.acc.org/ASCVD-Risk-Estimator-Plus/#!/calculate/estimate/cvriskcalculator.com

# Take 10

# A DOG'S JOURNEY COMES OUT IN ... MAY. WHAT'S IN STORE FOR BAILEY IN THIS SEQUEL TO A DOG'S PURPOSE?

Spoiler alert: Bailey lives to see another day. Even though we think some journeys are fully complete, there's still more to learn. And that is very much the foundation for this story.

# WHEN YOU'RE CREATING ANIMATED .CHARACTERS LIKE BAILEY, AND OLAF IN FROZEN AND FROZEN 2, HOW DO YOU FIND THEIR VOICES?

With Olaf, it all started with a couple of words, which were naïve, youthful, childlike. And that was the catalyst for discovering the childlike wonderment that embodies the sweet sensibility Olaf takes on every adventure that he goes on. With Bailey it was different . . . he's kind of brand-new to the world, but there's a deeper breadth to his knowledge because he's lived so many times.

# HOW IS THE ACTING PROCESS OF THE PROPERTY OF THE PROCESS CHARACTER VERSUS PLAYING ONE IN A LIVE-ACTION FILM?

When you're doing voice acting, you are telling an entire story with one asset—and that's your voice. Conveying complex emotions in your voice is much harder than it is to achieve when you have your full body.

# YOU'VE BEEN VERY PUBLIC ABOUT YOUR ANXIETY. HOW AND WHEN DID IT START?

I was a junior going into my senior year of college. It occurred to me that in one year's time, I was going to be completely independent for the first time in my life. I suddenly felt like I couldn't breathe. I felt like the world was closing in on me. I finally went to see a therapist and talked about what I was feeling. And that was the first time I heard the word *anxiety*.

## 5. WHAT HAVE YOU DONE TO MANAGE YOUR ANXIETY?

Therapy was the key in that it afforded me the opportunity to really talk through all those issues I was dealing with.



# Josh Gad

38, Actor, Producer, Writer, Los Angeles, California

"I THINK THE KEY TO
THEIR LONGEVITY WAS
UNDERSTANDING THE TERM
MODERATION AND THAT
EVERY DAY OF LIFE IS A GIFT."

## 6. WHAT IS YOUR PERSONAL HEALTH PHILOSOPHY?

It's everything in moderation and trying day to day to make the healthiest possible choices I can.

## 7. WHAT'S THE BEST HEALTH ADVICE ANYONE HAS GIVEN YOU?

The best advice I've ever gotten wasn't actually advice. It was watching my 96-year-old grandfather and learning from him. Both my grandparents on my mother's side were Holocaust survivors, and they were put through enormous tests in their youth. They miraculously overcame that and survived, and they both lived for a very long time. I think the key to their longevity was understanding the term *moderation* and that every day of life is a gift.

# O. YOUR DAUGHTERS, AVA AND ISABELLA, CHANGED YOU?

I was very egocentric until I had my kids. I always worried about myself. And the second that these two little bundles arrived, it suddenly became all about them.

# HOW HAS PARENTHOOD CHANGED THE WAY YOU CARE FOR YOUR OWN HEALTH?

I was never really a gym person prior to having my kids, but a healthy lifestyle is something that I am so profoundly aware of now as my responsibility to my children. It's not about me. It's about the fact that I need to be around as long as I possibly can for them.

# 1 WHAT DISEASE WOULD YOU MOST LIKE TO SEE ERADICATED IN YOUR LIFETIME?

Cancer, without a doubt. When we can put a man on the moon and we can send a robot to Mars, I think it's within our grasp to conquer this.

-STEPHANIE WATSON