“ALL I’M WRITING IS WHAT I WISH SOMEONE WOULD TELL ME THAT MORNING.”

PASSIONATELY SMASHIN’ EVERY EXPECTATION
Despite a rigorous schedule, Lin-Manuel Miranda finds time for family, philanthropy, and rest
Contents

WEBMD MAGAZINE

January/February 2019

LIVING

10 NEW TRICKS
   How exercise can help you master new motor skills

11 MEN’S HEALTH
   The lifelong benefits of team sports

12 WOMEN’S HEALTH
   Why women should take all heart attack symptoms seriously

13 FITNESS
   Strategies to stick to your resolutions

14 MIND MATTERS
   Guidance for parents of children who have moved back home

BEAUTY

15 SKIN CARE
   Helpful tips for chapped lips

17 BEAUTY SMARTS
   A moisturizer for every skin type

20 EXPERT PICKS
   Soothing solutions for a healthier scalp

21 ANATOMY OF...
   The skinny on soap

FAMILY

22 SOCIAL HEALTH
   New insights on cyberbullying

23 PREGNANCY
   Tips for a healthy pregnancy weight

24 BABY
   What to know about your child’s first three months

26 TEEN HEALTH
   New thinking on teen weight loss surgery

27 KIDS’ HEALTH
   Benefits of after-school activities for kids with ADHD

28 PARENTING
   Steps to avoid gun-related accidents

29 PETS
   Dog Scouts of America help dogs learn new tricks

FOOD

36 GOOD FOR YOU
   Spotlight on leeks

37 3 WAYS: FRITTATA
   Not just for breakfast anymore

39 FOOD 101
   Five ways to get your potato fix

40 BUILD A BETTER
   Simple steps to a flavorful roast chicken

CHECKUP

41 CUTTING EDGE
   New research on sleep and memory

42 EXPERT Q&A
   Nanotechnology’s role in medicine

43 QUIZ
   Myths about migraine

44 INSIGHT
   What to know about fasting

47 DOCTOR Q&A
   What is small lymphocytic lymphoma?

48 BY THE NUMBERS
   The data on childhood obesity

49 HEALTH HIGHLIGHTS
   Tips for the cold and flu season

50 WHO’S WHO
   All about geriatricians

IN EVERY ISSUE

3 EDITOR’S NOTE

5 UPFRONT
   News about stress, memory loss, and more

51 TAKE 10
   Taye Diggs shares insight from his new TV series and how fatherhood has changed him for the better

ON THE COVER
PHOTOGRAPHY BY: Matthew Murphy

WEBMD.COM
There’s nothing stopping us from making a fresh start at any point, but there’s something about a new year that brings it into focus. It’s that time of year to examine our goals—whether they be getting leaner, stronger, or happier or doing more to give back to others. If you’re in need of inspiration, just read our cover story featuring Lin-Manuel Miranda. He’s helped raise millions of dollars to aid recovery efforts following Hurricane Maria in Puerto Rico, all while juggling multiple professional projects and raising two young children.

No matter what your goals are for the new year, we’ve got the recipes, fitness tips, and stress reducers to keep you on track. And since we’re all always trying to improve, we asked some of our staff to share their top health goals for 2019.

Kristy Hammam
Editor in Chief
kristy@webmd.com

Editor’s Note

Eric Williams
WebMD Associate Health Editor

Getting outside helps my body and mind, so I’ll keep training for and running at least a race a month. (5k are my favorite.) But a little change would be nice, so maybe I’ll mix things up a bit and add hiking.

Anna Novinger
WebMD Director, Strategic Accounts

My doctor said I could either start taking a cholesterol-lowering medication or lose 10 pounds by my next appointment in February. My number-one health goal for 2019 is to not only lose that 10 pounds by modifying my diet (staying away from too much white pasta and refined sugar), but continuing that lifestyle change throughout 2019.

Eating more mindfully. I tend to try to multitask during meals—and finishing my food without really enjoying it. (Then, I’m off to find something sweet to make up for it!) So in 2019, I want to focus on letting myself savor every bite.

Carrie Gann
WebMD Senior Health Editor

Getting outside helps my body and mind, so I’ll keep training for and running at least a race a month. (5k are my favorite.) But a little change would be nice, so maybe I’ll mix things up a bit and add hiking.

No matter what your goals are for the new year, we’ve got the recipes, fitness tips, and stress reducers to keep you on track. And since we’re all always trying to improve, we asked some of our staff to share their top health goals for 2019.
Fresh Starts

January ushers in a new year, and for many people, a new set of resolutions. Whether your goal is to trim pounds, quit smoking, or get more active, you’re more likely to achieve it by making small, incremental changes and looking to friends and family for support.

Percentage of Americans who usually make New Year’s resolutions: 40%

Percentage of resolutions that are health-related, such as exercising, eating better, or engaging in healthier habits: 55%

Percentage who successfully keep their resolution for more than a few months: 9%

How many times people who make resolutions are more likely to achieve their goals than those who don’t make resolutions: 10x

Starting a new resolution on the first day of the week, month, or year increases people’s motivation to succeed.
IN THE NEWS

Heroes Who Make a Difference

Be sure to flip to the end to meet our 2018 WebMD Health Hero award winners in a special feature package. Our Health Heroes awards are an honor we bestow each year to exemplary Americans making a difference for others in health care. This time, we focused on people who in some way deal with cancer—as researchers, doctors, patient advocates, and survivors. While cancer is a devastating disease that still touches far too many people, it is an exciting area to look at right now, with advancements unimaginable just a few years ago. We are honored to pay tribute to some remarkable folks on the cutting edge of the field, all of whom are dedicated to breaking through and giving back—the very definition of a WebMD Health Hero. I hope their stories inspire you as much as they do us. —

COLLEEN PARETTY
Editorial Director, colleen@webmd.com

30%

Percentage of Americans who say drug abuse has caused family trouble—up from 22% in 2005.

SOURCE: Gallup

LOWER YOUR EPILEPSY RISK

Epilepsy risk increases as you age. You can’t change your age, but other risk factors are within your control. In a study that followed 10,420 adults for 25 years, those who smoked, had diabetes, and/or had high blood pressure at the start were more likely to develop epilepsy later in life. Higher levels of physical activity and moderate drinking (one to seven drinks a week) lowered risk.

SOURCE: JAMA

1 IN 4

Number of Americans who support a total ban on smoking.

SOURCE: Gallup

TAKE PREVENTIVE MEASURES

One in three adults has prediabetes. That’s when blood sugar is high but not high enough for a diabetes diagnosis. If you have prediabetes, it’s not too late to turn it around with diet and exercise.

SOURCE: CDC
Extra weight in childhood could lead to heart trouble for adults. In a study of 3,822 young adults, researchers found that a high body-mass index—a measure of height and weight that determines obesity—in childhood increased risk of heart problems in early adulthood. Specifically, the higher the body-mass index in childhood, the more likely the young adults were to have high blood pressure as well as two potential signs of heart disease: a larger left ventricle and a greater volume of blood pumping through the heart.

SOURCE: Circulation
**Upfront**

**GREEN IS GOOD**  
Adding a little green to your scene could be a natural antidepressant. Researchers transformed 37 vacant lots in Philadelphia by planting a few trees and grass, running a fence, and cleaning up trash. In another 36 lots, they only cleaned up trash. They left another 37 lots untouched. Measuring community members’ depression before and after the lot makeovers, they found that those who lived near the “greened” lots enjoyed a 41.5% reduction in their symptoms. They were also 62.8% less likely to report poor mental health after the landscape overhaul.

**SOURCE:** JAMA

---

**YOUR ONE-OF-A-KIND NOGGIN**  
Like your fingerprints, your brain is one of a kind. Researchers used multiple MRIs of 191 brains to make this discovery. They fed data about the brains—information concerning total volume, thickness of certain regions, and volume of different types of tissue—to a computer. They used pattern recognition software to see if they could match the brains to their owners. With near perfect accuracy, the software identified the brains. Previous research already shows that the brain changes over time due to your unique experiences. Your brain’s overall individuality, researchers say, is a combination of your personal genetics and circumstances.

**SOURCE:** Scientific Reports

---

**HEALTHY EATING AND PSORIASIS**  
According to a study of 3,557 adults who have psoriasis, the Mediterranean diet could help improve the condition’s symptoms. The diet focuses on fish and lean meats, vegetables, whole grains, and healthy fats in olive oil, avocado, and nuts.

**SOURCE:** JAMA

---

**THE UNITED STATES OF AMERICA**  
Is your town super chill? Or way too tense? Researchers ranked 182 U.S. cities by the stress levels of their inhabitants. They figured in financial woes (the top source of stress), work burden, family and relationship discord, along with health and safety concerns to give each city a stress score. The most stressed-out cities were Detroit (shown below), Newark, and Cleveland. Other high-stress cities: Anchorage for the longest working hours, San Francisco for the most expensive housing, and El Paso for the poorest adult health. The most stress-free? Fremont, California; Bismarck, North Dakota; and Sioux Falls, South Dakota. Their secret? High credit scores, low divorce rates, and good health.

**SOURCE:** WalletHub

---

**WEBMD.COM**

---

**SAY NO TO SELFFIES**  
Go easy on the selfies! They’re hurting your self-image. Forty-two percent of plastic surgeons have patients who wanted surgery to look better in their selfies. But before you go under the knife, let’s be clear. That selfie is not what you look like. Selfies are taken at an average 12-inch distance from your face. Compare that to a typical portrait taken at 5 feet. A recent study found that the super-close shots make noses appear a whopping 30% bigger.

**SOURCE:** JAMA

---

**80%**  
Percentage of U.S. babies who breastfeed at birth. Nearly 60% continue for the first six months of life. Pediatrists recommend that babies get breastmilk exclusively for the first six months.

**SOURCE:** CDC

---

**WEBMD.COM**

---

**WEBMD.COM**

---

**GREEN IS GOOD**

---

**WEBMD.COM**
IN A SMALL STUDY, 25 PEOPLE LEARNED A TRICKY NEW SKILL—a video game that required applying varying levels of pressure on a joystick. After learning the game, half the group rode an exercise bike at a high intensity for 15 minutes. The others rested. Everyone tried their hand at the joystick again eight and then 24 hours later while researchers observed their brain activity. At eight hours, the exercise group was a little better at the game than the others. At 24 hours, they were a lot better. Brain scans showed that the game took less effort for the exercise group. The researchers believe that exercise helped the novice gamers retain the skill while a good night’s sleep then solidified it. —SONYA COLLINS
Get in the Game

WANT TO KEEP FIT AND ACTIVE AS YOU AGE? TEAM UP WITH FRIENDS—OR MAKE SOME NEW ONES—AND PLAY BALL. SPORTS OFFER LIFELONG BENEFITS, BOTH PHYSICAL AND MENTAL.

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

IN A STUDY, BRITISH RESEARCHERS SHOWED THAT MEN WHO PLAY SPORTS AND EXERCISE IN MIDLIFE CONTINUE TO BE MORE ACTIVE AS THEY GET OLDER compared to middle-aged men who prefer less strenuous pastimes. The benefits of sports may also surpass a run on the treadmill or another gym-based exercise.

Gym workouts boost cardiovascular health. Sports do that and more, says Michael Jonesco, DO, a sports medicine specialist at the Ohio State University Wexner Medical Center. Because they require you to act and react at a moment’s notice, sports like tennis, basketball, and soccer can help you improve your hand/eye coordination, fine motor movements, adapting and changing direction, and balance.

And, says Jonesco, you can’t slack: “At the gym, you may be less likely to push yourself than when you’re up against your peers.”

What sports should you play? Ones you like, says Jonesco. “Whatever you like and whatever your body can tolerate: That’s what makes it sustainable.”

He also advises that you—and your doctor—consider your current health. If you have bad knees, for example, sports where you run and jump, like basketball, may not be right for you. Also to be considered: overweight or obesity, your family’s history of heart disease, and diabetes.

Jonesco also recommends that you supplement sports workouts with yoga and other exercises that build muscle, core strength, and flexibility. Do 20 to 30 minutes once or twice a week and you will improve your game and reduce your risk of injury on the court or field.

Finally, sports can boost your mental and emotional health. “The real benefit of sports,” says Jonesco, “comes from the social interaction, the stress reduction, the communication, and the competition that playing sports provides.”

4 TIPS

MICHAEL JONESCO, DO, EXPLAINS HOW TO PLAY SPORTS FOR MAXIMUM HEALTH BENEFITS

1. EAT, WELL
   “Vigorous sports demand more and better food to fuel yourself. If you want to get serious, consult a sports nutritionist.”

2. DRINK PLENTY OF WATER
   “Don’t wait until game day to boost your water intake. Start hydrating three to four days in advance.”

3. BE A BUDDY
   “Play with friends and you’ll likely keep playing. You’ll have more fun, and they will hold you accountable if you’re a no-show.”

4. KNOW YOUR LIMITS
   “Play too hard and for too long and you risk injury. Schedule breaks and, if necessary, reduce your time in the game.”

Search for the quiz Weight Loss Dos and Don’ts at WebMD.com.
Hidden Cause

RESEARCH SHOWS WOMEN SHOULD TAKE POTENTIAL HEART ATTACK SYMPTOMS SERIOUSLY—EVEN IF A DOCTOR SAYS ARTERIES ARE CLEAR

BY Barbara Brody REVIEWED BY Brunilda Nazario, MD, WebMD Senior Medical Editor

YOU’VE HEARD THAT CHOLESTEROL CAN LEAD TO CLOGGED ARTERIES AND RAISE YOUR RISK FOR A HEART ATTACK, and that’s true. But what you might not realize is that you can have a heart attack even if your arteries don’t have any blockages. That’s the case for at least one-third of women who’ve had heart attacks, says C. Noel Bairey Merz, MD, director of the Barbra Streisand Women’s Heart Center at Cedars-Sinai in Los Angeles. Yet even their doctors often don’t realize what’s happened.

When Merz and her colleagues took a group of women who had complained of chest pain yet were told not to worry because imaging tests (angiograms) didn’t show any blockages, they found that 8% had scars on their heart—indicating that a heart attack had occurred. Their research was published earlier this year in the journal Circulation.

How is that possible? While a blocked artery is a major cause of heart attacks, it’s hardly the only one. Acute myocardial infarction, what most people call a heart attack, simply means that blood flow to the heart’s own blood vessels is cut off so that heart muscle cells die, says Merz. Much of the time, that happens because a fatty deposit (called a plaque) that’s already clogging an artery becomes unstable and breaks off, further slowing or stopping blood flow. But even smaller amounts of plaque that don’t normally mess with circulation can break off and form blood clots, which then restrict blood flow and cause small heart attacks, says Merz.

“Women can also have heart attacks from less common problems, like SCAD—spontaneous coronary artery dissection—which is when the inner lining of an artery separates,” she adds. Another possible cause is a spasm in a coronary artery, which could restrict blood flow if it goes on long enough or ends up forming a clot.

Unfortunately, women who have a heart attack due to one of these lesser-known causes tend not to be taken seriously. “Doctors didn’t believe that they had a real heart attack,” Merz says of the women with chest pain who were found to have heart scars in the Circulation study.

The takeaway: If you have persistent or severe chest pain, see a cardiologist. If you’re told not to worry because your arteries are open, seek a second opinion. Additional testing such as a cardiac MRI or a coronary flow reserve test might reveal that you really do have a serious heart issue—maybe you’ve even had a heart attack—and that treatment is called for.
Resolution Time

READY TO EMBRACE EXERCISE IN THE NEW YEAR? A PERSONAL TRAINER HAS FIVE NO-FAIL STRATEGIES FOR STICKING TO YOUR 2019 GOALS.

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

YOU RESOLVED THAT THIS WILL BE THE YEAR YOU CROSS THE FINISH LINE IN A 5K, start a strength-training program, set a new personal best in a triathlon, or sign up for a mud run. Although 40% of Americans set goals—including to exercise more—to mark the start of a new year, fewer than 10% achieve them.

You don’t have to be in that group. Ashley Borden, author of Your Perfect Fit and personal trainer with a roster of celebrity clients, suggests ways you can succeed this year.

SET SMALL GOALS
Thinking about running a 5k might seem daunting for new runners. Instead of focusing on how much work it’ll take to cross the finish line, Borden suggests breaking big goals into bite-size steps: Run two blocks this week; add two more blocks next week. “Setting smaller goals feels more manageable and mentally rewarding,” she says.

TRACK YOUR PROGRESS
Time your pace for a one-mile run or strap on a fitness tracker to monitor your daily step count. The data helps you see progress in your workout, which is the key to maintaining motivation, according to Borden. A small study published in the American Journal of Preventive Medicine found that women who wore high-tech fitness trackers logged an additional 62 minutes of physical activity per week than those who wore just a pedometer.

FIND A TRIBE
Group sweat sessions might be the key to achieving your fitness resolutions. One study found that exercisers who walked in groups were more likely to keep up with their workouts than solo walkers. Find a training buddy to keep you accountable.

MAKE A BET
The thought of losing cold hard cash could be the motivation you need to stick with your resolutions. Make a bet with a friend or sign up with an accountability app—and prepare to pony up if you miss a workout or fall short of a fitness goal. One study found that exercisers were more likely to hit their exercise goals when offered financial incentives.

SCHEDULE AN EVENT
Go ahead and register for that 5k or mud run as soon as you start training. A lot of people use upcoming events to muster the motivation to keep training, says Borden. The deadline also allows you to create a training plan so you’re ready to cross the finish line on race day. “You can track your progress and tweak as you go,” Borden adds.

BY THE NUMBERS

5.5%
Percentage of people who resolve to work out more often in the new year.

36%
Percentage of people who gave up on their fitness resolutions because it was hard to find time to work out.

26%
Percentage of exercisers who break a sweat to achieve a fitness goal.

57 MILLION
Number of Americans who have gym memberships.

Search for the quiz How to Make Changes That Stick at WebMD.com.
Parent Trap?
ONE EXPERT GIVES GUIDANCE TO MOMS AND DADS WHOSE ADULT CHILDREN WANT TO MOVE BACK INTO THE FAMILY HOME

BY Lauren Paige Kennedy REVIEWED BY Patricia A. Farrell, PhD, WebMD Medical Reviewer

MAYBE YOU HEARD ABOUT THE 30-YEAR-OLD NEW YORK MAN whose parents, tired of politely and repeatedly asking their unemployed son to move out of their home, took him to court in May to legally evict him—and won.

That case was extreme. But according to recent Pew Research, millennial adults (also called “boomerangs” for their increasing habit of moving back to their childhood homes well in their 20s and 30s) are the first generation in more than 130 years to show a larger subset living with parents than with a spouse or partner. As of 2017, that figure was 32.1% compared to 31.6%, respectively.

Susan Newman, PhD, social psychologist and author of the book Under One Roof Again: All Grown Up and (Re)Learning to Live Happily Together, says rising student debt and putting off marriage are just two factors inspiring millennial adults to return to the family nest.

What’s needed when they do? Emotional, social, and financial guidance—especially for parents, who should lead the transition, says Newman.

“Come up with an exit plan right away,” Newman advises. “Ultimately, the idea is for the adult child to leave again. Ask about goals, job aspirations, life direction. Revisit it every six months. And be realistic: Consider what is truly achievable in that time frame.”

She also suggests house rules be established from the get-go. “Your child is not a guest. But don’t allow dollars to dictate your relationship. If they can’t afford to help pay for the utility bills, maybe they can mow the lawn or help in other ways,” she says. “For best results, let them choose their own chores—they’re more likely to get done that way.”

Same goes for parental boundaries. “It is your house,” Newman adds. “So, if your child smokes (or vapes) and you don’t like it, you have every right to set limits. If they stay out late, you can ask for, and expect, a phone call or text so you don’t worry. If you don’t want your adult son having sleepovers with his girlfriend, say so.”

However, parents must remember their kids are no longer children, stresses Newman. “They’re adults, so you must cede control. They may have different attitudes, needs, and eating, sleeping, or partying habits than they did when they were younger. Accept those differences. And don’t fall back into mommy mode,” she adds. “They can do their own laundry and clean their own rooms. And do respect their privacy.”

4 TIPS

1. ADJUST YOUR ATTITUDE
   “You didn’t fail as a parent, and your kids didn’t fail, either,” says social psychologist Susan Newman. “Some of your friends may actually be jealous” about the time you’re spending with your adult children.

2. MAINTAIN YOUR SCHEDULE
   “Don’t give up your social life to accommodate an adult child,” Newman warns. It’s not necessary to rush home at 6 p.m. to cook for them, for instance.

3. ENJOY FUTURE INSURANCE
   “The silver lining? Down the road, adult children are more likely to care for parents who helped them during tough times,” she says.

4. ENFORCE THE EXIT
   Newman’s verdict? “If after two years your adult child is showing no progress,” she says, “it’s OK to nudge them” out of the nest once again.

Search for the Parenting Message Board at WebMD.com.
A parched pout typically pops up without warning. Lips don’t produce their own oils like other parts of your face, which is why they’re typically the first to dry out when exposed to outside elements. But according to Michele Green, MD, a New York City dermatologist, sliding on balm or lipstick at the first sign of flakes only masks the problem. She suggests starting with an exfoliant such as Fresh Sugar Lip Scrub to exfoliate away any dead skin. Then apply an overnight treatment mask such as a Laneige Lip Sleeping Mask. When you wash it off in the morning, apply an ointment to lips before applying your favorite lipstick or lip gloss. —Ayren Jackson-Cannady
Dry Spell

WINTER CAN WRECK HAVOC ON YOUR SKIN, LEAVING IT DRY AND ITCHY. BUT WITH A FEW TIPS AND TRICKS, YOU CAN HAVE MOIST, SMOOTH, SUMMER-LIKE SKIN, NO MATTER THE WEATHER.

BY Kara Mayer Robinson  REVIEWED BY Mohiba K. Tareen, MD, WebMD Medical Reviewer

WHEN THE SEASONS CHANGE, YOUR SKIN MAY GET FLAKY AND ITCHY. It may even crack and bleed. What is it about winter and dry skin? “Winter brings cold temperatures and less humidity,” explains Deanne Robinson, MD, co-founder of Modern Dermatology of Connecticut. “These changes lead to water loss, resulting in dry and sometimes itchy skin. Indoor heat in the form of forced hot air or radiant heat produces very dry, hot air, which makes it worse.”

Robinson suggests some tips and tricks to soothe winter dry skin.

Q Is it true hot showers make dry skin worse? ROBINSON Yes. Hot and long showers, especially in winter, strip the skin of natural oils, which leads to dryness. You can help prevent winter dry skin by taking shorter (less than 10 minutes) and cooler (less than 105 degrees F) showers—and by moisturizing immediately after.

Q Which products are best for winter? ROBINSON Try a heavier cream or ointment-based emollient, ideally one with ceramides. Ceramides are the skin’s natural fatty acids, which rebuild and protect the skin barrier. Also, skip the soap. Traditional bar soap dries skin out by stripping the natural oils. Instead opt for a non-soap cleanser, which is much gentler.

Q Why are my hands extra dry? ROBINSON Hand-washing and alcohol-based sanitizers can trigger hand eczema. To treat it, moisturize, moisturize, moisturize. Try a non-soap cleanser that’s fragrance- and color-free. After every hand wash, apply a moisturizer. Try one with dimethicone, which coats your skin to create a glove-like barrier that protects against further damage. At night, apply a thick emollient under cotton gloves, which can help tremendously.

Q How does winter affect psoriasis? ROBINSON Psoriasis is a skin condition that may get better from natural UV radiation, or sunlight. Winter may flare your psoriasis because you get less exposure to the sun. Controlled exposure to the sun in winter can improve it.

4 TIPS

TRY THESE BONUS TIPS FROM THE AMERICAN ACADEMY OF DERMATOLOGY. IF YOUR SKIN NEEDS MORE RELIEF, SEE A DERMATOLOGIST.

1. PICK THE RIGHT LIP BALM
Use a soothing lip balm. If your balm doesn’t feel good or makes your lips tingle, try a different one.

2. BAN DRY AIR
Plug in a humidifier to add moisture to the air. Skip cozying up to a fireplace or heat source.

3. WEAR GLOVES
Protect your hands from the elements. Wear gloves when you’re outdoors, washing dishes, or touching chemicals or grease.

4. DITCH IRRITATING CLOTHING
Use gentle laundry detergent labeled “hypoallergenic.” Wear cotton or silk under wool or other rough materials.

Need a specialist? Use WebMD’s Physician Finder. Go to webmd.com/findadoctor.
To make the search easier, moisturizers can be broken down into four broad ingredient categories. (Many formulas are a blend of different types.) We asked top dermatologists to decode moisturizers to make it simple to find the hydrator that’s right for you.

**MOISTURIZER: Humectant**

**How it works:** Humectants attract water from the outside environment or deeper layers of the skin to provide hydration to the top layers,” says Rajani Katta, MD, a clinical assistant professor of medicine at Baylor College of Medicine in Houston.

**Best for:** All skin types. “Humectants are a great ingredient for a daily moisturizer,” Katta says. “They tend to be lotions that spread easily and can be reapplied several times throughout the day.”

**Ingredients to look for:** Glycerin, urea, lactic acid, sorbitol, hyaluronic acid, and alpha hydroxy acids.

**Derm pick:** Tung likes Neutrogena Hydro Boost Gel Cream ($15).

**MOISTURIZER: Occlusive**

**How it works:** These substances fill the spaces between skin cells and help create a smooth surface that reflects light so skin looks more radiant,” Fardin says. These tend to help skin feel softer and look smoother, Katta adds. "Emollients don’t replace moisture as much as they work on the surface to improve the appearance of dry skin.” The results aren’t all cosmetic, however. In addition, Pollock says, emollients can deliver essential fatty acids and triglycerides to nourish the lipid barrier.

**Best for:** Dry, ashy skin will look smoother and dewier with the oil-base options while oilier complexions will benefit from light, oil-free versions, Katta says.

**Ingredients to look for:** Shea butter, stearic acid, sesame oil, cetaryl alcohol, squalane, and jojoba oil.

**Derm pick:** Tung likes Vaseline 100% Pure Petroleum Jelly ($4), Aquaphor Healing Ointment ($10), and Vaniply Ointment ($10).

**THE SCOOP**

**Peeling Good**

**Easy-to-use, peel-off masks are the new blackhead strips.**

**Apply to freshly cleansed skin** Applying a mask over a face full of dirt, oil, and makeup can cause skin irritation and even lead to breakouts.

**Follow the instructions** Peel-off masks are designed for short contact on the skin. Leaving it on for longer than you are supposed to can lead to irritation.

**Be cautious** If you already use retinoids or hydro acids that make skin more sensitive, test the peel-off mask on a patch of skin before slathering it all over.

**Use in moderation** While it depends on the particular mask you are using, intense treatment typically should be done once or twice per week to complement your regular regimen. Using them more may not help the skin—and even cause irritation.

**Softer, Smoother Skin**

**Ingredients to look for:** alpha hydroxy acids.

**Derm picks:**

**Simple Steps for Softer, Smoother Skin**

**Peeling Good**

**Easy-to-use, peel-off masks are the new blackhead strips.**

**Apply to freshly cleansed skin** Applying a mask over a face full of dirt, oil, and makeup can cause skin irritation and even lead to breakouts.

**Follow the instructions** Peel-off masks are designed for short contact on the skin. Leaving it on for longer than you are supposed to can lead to irritation.

**Be cautious** If you already use retinoids or hydro acids that make skin more sensitive, test the peel-off mask on a patch of skin before slathering it all over.

**Use in moderation** While it depends on the particular mask you are using, intense treatment typically should be done once or twice per week to complement your regular regimen. Using them more may not help the skin—and even cause irritation.
“ALL SKIN TYPES NEED TO USE A MOISTURIZER.”

Continued from page 18

**MOISTURIZER: Ceramide**

*How it works:* “Ceramides are lipid molecules that are naturally found in cell membranes and help retain water,” Tung explains. “They can be depleted over time or due to environmental damage—we need them for the skin to function normally.” Not only do topical ceramides help repair the skin barrier and moisturize skin from within, they also help protect it from irritation, explains Perry Romanowski, a cosmetics chemist in Chicago and author of The Beauty Brains blog.

*Best for:* Ceramides work for all skin types, but those with atopic dermatitis or eczema and very dry skin can especially benefit from the protecting and strengthening qualities.

*Ingredients to look for:* Ceramide, caproyl sphingosine, and linoleic acid.

*Derm picks:* Tung likes CeraVe Daily Moisturizing Lotion ($11) and Curel Ultra Healing Intensive Lotion ($7).

---

**DIRTY SECRET**

“I don’t wear sunscreen in the winter. Why should I when days are dark and rainy or snowy?”

**UV RAYS ALWAYS GET THROUGH**

“When the sun is out, you’re getting UV radiation. While the sun is less intense in the winter, you’re still exposing your skin to damaging rays. Any time you are going into the sun—summer or winter—you need to wear sunscreen.”

**SUN DAMAGE IS CUMULATIVE**

“The exposure you get throughout the year adds up and contributes to photodamage, increasing your risk for skin cancer. And some diseases such as lupus are sensitive to even a small amount of sunlight, so wearing sunscreen is essential in any season.”

**MAKE SPF A HABIT**

“If you enjoy outdoor activities at higher altitudes like skiing, you can be getting quite a bit of sun—its intensity increases by 4% for every 1,000 feet. (Walk around any ski resort and you’ll see plenty of sunburns.) The solution is simple: Wear sunscreen every day. Look for a moisturizer with SPF in it to make it easy to include in your daily routine.”

—Whitney High, MD, professor of dermatology and pathology, University of Colorado School of Medicine, Denver
Scalp Solutions

COMBAT ITCHINESS AND FLAKES WITH THESE PICKS FROM CHRISTOPHER BYRNE, SENIOR STYLIST AT COMPLEXIONS IN ALBANY, NEW YORK

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

1. DRY SPELL
Eufora Urgent Repair, $25
“If your scalp tends to have a dry, tight feeling, choose a cleanser with extracts of menthol, camphor, or peppermint oil that tingles on the scalp while boosting moisture and lifting off dead skin.”

2. SCRUB-A-DUB
Nioxin scalp renewal treatment, $16
“Like a spa day for your scalp, this gentle yet deep cleaning treatment is infused with shea butter, citrus extracts, and peppermint oil to help boost circulation to the scalp. Translation: You’ll feel like a whole new person afterward.”

3. SENSITIVE SUDS
René Furterer Astera Soothing Shampoo, $32
“For flaking with some scalp redness, it’s important to choose a shampoo with natural anti-inflammatory oils that will help calm the inflammation. This one is good for this, and it’s great for sensitive scalps in general.”

4. STRIKE OIL
Bumble and Bumble Full Potential Shampoo, $31
“Oily scalp weighing you down? Pick a shampoo like this that gently exfoliates to lift away excess oil and dead skin.”

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.
Soap
THE DIRT ON WHAT MAKES THIS CLEANER WORK

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

A CLEAN START
The basic formula for soap hasn’t changed in 5,000 years. Throughout history, the recipe has been a combination of fats such as tallow, natural oils like coconut or olive oil, and an alkali such as ashes. Modern formulas use lye, potassium hydroxide, or caustic soda as the alkali.

LIQUID ASSET
Though liquid soap was patented in 1865, it wasn’t a household item until B.J. Johnson’s formula containing palm and olive oils hit the market in 1898. His soap was so popular that he renamed his company Palmolive.

GETTING IN A LATHER
You don’t need to see suds for soap to do its job. The foam doesn’t impact cleaning, but it does provide a visual cue that it’s working while also making it easier to see where you’ve spread the soap.

THE ANTIBACTERIAL DIRT
When compared to standard soap, antibacterial options don’t offer any additional cleaning or sanitizing benefits. In fact, evidence suggests that the popular antimicrobial agent triclosan may cause bacterial resistance and could be connected to hormone disruption. The FDA has banned the marketing of soaps with active ingredients that are mainly antibacterial.

SOLID VS. LIQUID
Selecting the best option for your skin is a matter of personal preference. But generally, bar soaps can be drying, especially for the face. To avoid stripping protective oils and potentially causing irritation, look for milder versions with a lower pH called syndets or synthetic detergent soap (such as Dove or an Avène Cold Cream Bar, says Papri Sarkar, MD, a dermatologist in Brookline, Massachusetts).
MORE TIME ON SOCIAL MEDIA COULD MEAN GREATER RISK THAT YOUR TEEN FALLS PREY TO CYBERBULLIES. In a study of more than 5,600 European high school students across three countries, kids who spent more than two hours a day on social media were more likely to be victims of cyberbullying. The study also found a connection between low digital literacy—for example, parents unable to keep up with the latest technology and guide their children’s use of it—and higher risk of victimization. Kids who face online cruelty report loneliness, depression, low self-esteem, and anxiety. —SONYA COLLINS

Bully Blocker

NEARLY NINE IN 10 TEENAGERS HAVE SEEN SOME SORT OF CRUELTY BETWEEN THEIR PEERS ON SOCIAL MEDIA. HOW CAN YOU PROTECT YOUR KIDS?
Baby Weight

OVERWEIGHT PREGNANCIES ARE ON THE RISE. LEARN THE RISKS AND HOW YOU CAN AVOID THEM.

BY Sonya Collins  REVIEWED BY Nivin C.S. Todd, MD, WebMD Medical Reviewer

AS YOUR BELLY EXPANDS DURING PREGNANCY, your weight is the last thing you want to worry about. So before you become pregnant, get yourself as close to a healthy weight as possible to help spare complications for you and your child.

“A healthy weight and lifestyle will make it easier to get pregnant and help ensure a healthier pregnancy and postpartum period,” says Agena Davenport-Nicholson, MD, an OB/GYN at Emory University Hospital in Atlanta. Yet more than half of women are overweight or obese when they get pregnant, according to new data from the CDC.

An overweight pregnancy is risky for both mother and baby. Moms run the risk of gestational diabetes, high blood pressure, and preeclampsia—a potentially dangerous complication of high blood pressure during pregnancy. Risk for C-section is higher, too, as women who are overweight during pregnancy tend to have larger babies.

As for babies born to overweight moms, their blood sugar can plummet dangerously low at birth. That’s because they’re cut off from their sugar source—the umbilical cord—while their body still produces enough insulin to break down all that sugar. In the long run, babies born at a higher birthweight run a greater risk of obesity and diabetes throughout life.

While the risks of overweight pregnancy are real, you don’t have to set unattainable weight-loss goals before you conceive. “Even if we can’t get you to your ideal weight, if we can get you closer to that, it could make a world of difference,” says Davenport-Nicholson. “Losing just 5% to 10% of your body weight prior to pregnancy definitely helps.” If you weigh 180 pounds, 5% is just 9 pounds.

If you’re already pregnant, this is no time to diet. Instead, strive for a healthy pregnancy that includes daily exercise and managing weight gain. Women who are overweight should gain only 15 to 25 pounds during pregnancy (11 to 20 pounds for obese women). Ask your doctor how you’re doing.

LESSONS

1. YOU’RE NOT EATING FOR TWO
   Pregnant women at a normal weight only need 300 more calories a day. “It’s not double your usual intake,” says Davenport-Nicholson. Ask your doctor how many calories you need.

2. WHAT YOU EAT MATTERS
   Consume healthy calories—your baby needs the nutrients. Choose high-protein foods that are rich in polyunsaturated fats but low in sugar, simple carbohydrates (such as white bread), and saturated and trans fats.

3. STAY HYDRATED
   You need 80 to 100 ounces of water a day. “During pregnancy, your blood volume expands, and it’s easy to get dehydrated, feel lightheaded, dizzy, and even pass out,” says Davenport-Nicholson.

4. EXERCISE (ALMOST) EVERY DAY
   You need at least 30 minutes of moderate physical activity most days—walking, dancing, swimming. “Swimming is great in pregnancy,” says Davenport-Nicholson. “It makes you feel lighter.”
safe sleeping space for newborns. To help reduce the risk of sudden infant death syndrome (SIDS), babies should sleep separately from
their parents on their backs and on a firm mattress without pillows, loose blankets, or other soft objects nearby.

**FIRST FEEDINGS**

Another reason newborns don’t sleep longer than about three hours at a time—their stomachs are tiny, so they need to eat often, roughly eight to 12 times in a 24-hour period. Breastfed babies usually eat more frequently than formula-fed babies, about every two to three hours, because breast milk is eliminated from the body quickly, while
babies on formula might go as long as four hours between feedings. Newborns also have periods when they cluster feed, or eat as often as once an hour, Beers says. She recommends following baby’s cues and watching for signs of hunger, including lip-smacking, fussiness, and
emotional crying (turning toward the breast).

In the first few weeks, babies are likely to follow most feedings with a bowel movement. Spinner tells families not to worry if those stools are runny or watery (which is common in the newborn period) or to fret when the frequency of dirty diapers slows down to one daily (or even less often) as the weeks pass. According to Spinner, this is a common reason parents call his office, but it is completely normal.

**FOR MOST NEWBORNS, THE WEEKS AFTER BIRTH ARE RELATIVELY UNCOMPLICATED:** “A baby’s job in those weeks of life is eating and sleeping and pooping and pooping,” says Lee Beers, MD, FAAP, pediatrician with the Children’s National Health Center in Washington, DC. Yet they rarely perform these activities by the clock. “The biggest and most consistent thing about a newborn’s schedule is that it’s unpredictable,” Beers adds. A baby’s sleep-and-wake cycles are particularly short, so “another thing a parent can count on is that babies are only going to sleep at best three to four hours at a stretch,” she says.

And to the dismay of most new parents, newborns can seem to have their days and nights mixed up, sleeping peacefully during the day but waking more frequently and for longer periods at night. No one is really sure why, but it may be that the nighttime quiet invites babies to open their eyes and take in their surroundings. Stan Spinner, MD, chief medical officer for Texas Children’s Pediatrics and Texas Children’s Urgent Care, has another theory. “I think some of it could be perception,” he says. “Their days and nights may actually be similar, but at night when things are quiet and we’re trying to sleep and baby is not, it might be more noticeable.” To help her own babies sleep longer at night, Beers says she often limited their daytime naps to no more than two or three hours at a time. No matter how long baby sleeps, Beers urges parents to establish a

**FIRST FEEDINGS**

Another reason newborns don’t sleep longer than about three hours at a time—their stomachs are tiny, so they need to eat often, roughly eight to 12 times in a 24-hour period. Breastfed babies usually eat more frequently than formula-fed babies, about every two to three hours, because breast milk is eliminated from the body quickly, while babies on formula might go as long as four hours between feedings. Newborns also have periods when they cluster feed, or eat as often as once an hour, Beers says. She recommends following baby’s cues and watching for signs of hunger, including lip-smacking, fussiness, and emotional crying (turning toward the breast).

In the first few weeks, babies are likely to follow most feedings with a bowel movement. Spinner tells families not to worry if those stools are runny or watery (which is common in the newborn period) or to fret when the frequency of dirty diapers slows down to one daily (or even less often) as the weeks pass. According to Spinner, this is a common reason parents call his office, but it is completely normal.

**REASONS PEDIATRICIANS LEE BEERS, MD, FAAP, AND STAN SPINNER, MD, SAY THAT THE FOLLOWING SITUATIONS WARRANT A CALL TO YOUR BABY’S DOCTOR DURING THE NEWBORN PERIOD**

1. **A FEVER**

Call the pediatrician immediately if your baby has a rectal temperature of 100.4˚ or more in the first three months. (A rectal thermometer is the most precise type of thermometer; it’s especially important to be accurate in the case of newborns.)

2. **EATING PROBLEMS**

Call the doctor if baby has any dramatic changes in eating habits. Beers says, such as skipping multiple feedings. Given how important feeding is for newborns, call anytime you have questions or doubts about feeding. Spinner says.

3. **SUGGLISH BEHAVIOR**

Check with your doctor if baby seems lethargic or hard to wake from sleeping. Beers says. “Babies don’t come with instruction manuals, and we’re here to help.”

4. **OTHER CONCERNS**

“A parent should never be nervous about calling their physician,” Spinner says. “Babies don’t come with instruction manuals, and we’re here to help.”

**ENGAGE OFTEN**

When your newborn is awake during those first few months, spend the time talking or singing to them; research reveals that these interactions wire baby’s brain for language and communication. “You don’t even have to stop what you’re doing,” Beers explains. “You can put baby in a sling and kind of narrate your activities,” such as folding laundry or walking the dog.

And it’s never too early to start reading to your baby, Spinner adds. “Even if your baby is not reacting to you, we know that from a very early age babies learn so much from the human voice.”

**SKIP THE SCHEDULE**

Friends and family may advise you to put your newborn on a strict schedule for naps and feedings, but Beers and Spinner recommend that you ignore this advice until baby is older, say 3 or even 6 months. “Overwhelmingly, the data shows that scheduling newborns is not successful and leads to frustration,” Spinner says.

That’s not to say that parents can’t start establishing simple routines, such as a bath and quiet time before bed, or aim to put baby down around the same time each night. “But I think that in those early months, following your baby’s cues for hunger and sleep is more important,” Beers says. “If you are attentive to their cues, babies will naturally fall into a schedule.”

**FREE QUIZ**

Search for the quiz “Is My Newborn Typical?” at WebMD.com.

**BY THE NUMBERS**

- Number of babies born in the U.S. in 2017: 105,100
- Number of babies born in the U.S. in 2017: 105,100
- Percentage of U.S. babies breastfed at some point in the first year: 83%
- Percentage of U.S. babies breastfed at some point in the first year: 83%
- Percentage who are still nursing when baby reaches 6 months old: 55%
- Percentage who are still nursing when baby reaches 6 months old: 55%

**REASONS PEDIATRICIANS LEE BEERS, MD, FAAP, AND STAN SPINNER, MD, SAY THAT THE FOLLOWING SITUATIONS WARRANT A CALL TO YOUR BABY’S DOCTOR DURING THE NEWBORN PERIOD**

1. **A FEVER**

Call the pediatrician immediately if your baby has a rectal temperature of 100.4˚ or more in the first three months. (A rectal thermometer is the most precise type of thermometer; it’s especially important to be accurate in the case of newborns.)

2. **EATING PROBLEMS**

Call the doctor if baby has any dramatic changes in eating habits. Beers says, such as skipping multiple feedings. Given how important feeding is for newborns, call anytime you have questions or doubts about feeding. Spinner says.

3. **SUGGLISH BEHAVIOR**

Check with your doctor if baby seems lethargic or hard to wake from sleeping. Beers says. “Babies don’t come with instruction manuals, and we’re here to help.”

4. **OTHER CONCERNS**

“A parent should never be nervous about calling their physician,” Spinner says. “Babies don’t come with instruction manuals, and we’re here to help.”

**ENGAGE OFTEN**

When your newborn is awake during those first few months, spend the time talking or singing to them; research reveals that these interactions wire baby’s brain for language and communication. “You don’t even have to stop what you’re doing,” Beers explains. “You can put baby in a sling and kind of narrate your activities,” such as folding laundry or walking the dog.

And it’s never too early to start reading to your baby, Spinner adds. “Even if your baby is not reacting to you, we know that from a very early age babies learn so much from the human voice.”

**SKIP THE SCHEDULE**

Friends and family may advise you to put your newborn on a strict schedule for naps and feedings, but Beers and Spinner recommend that you ignore this advice until baby is older, say 3 or even 6 months. “Overwhelmingly, the data shows that scheduling newborns is not successful and leads to frustration,” Spinner says.

That’s not to say that parents can’t start establishing simple routines, such as a bath and quiet time before bed, or aim to put baby down around the same time each night. “But I think that in those early months, following your baby’s cues for hunger and sleep is more important,” Beers says. “If you are attentive to their cues, babies will naturally fall into a schedule.”

**FREE QUIZ**

Search for the quiz “Is My Newborn Typical?” at WebMD.com.

**BY THE NUMBERS**

- Number of babies born in the U.S. in 2017: 105,100
- Number of babies born in the U.S. in 2017: 105,100
- Percentage of U.S. babies breastfed at some point in the first year: 83%
- Percentage of U.S. babies breastfed at some point in the first year: 83%
- Percentage who are still nursing when baby reaches 6 months old: 55%
- Percentage who are still nursing when baby reaches 6 months old: 55%
Family

Surgical Solution?
LONG STIGMATIZED AS A RISKY LAST-RESORT, TEEN WEIGHT LOSS SURGERY IS GAINING ACCEPTANCE AS SEVERE OBESITY RATES RISE
BY Lisa Marshall REVIEWED BY Roy Benaroch, MD, WebMD Medical Reviewer

TWENTY YEARS AGO, WEIGHT LOSS SURGERY FOR TEENAGERS WAS CONSIDERED A RARE AND RISKY LAST RESORT, with little data on what happened to patients long-term. Even a decade ago, half of family physicians said they’d never recommend it.

Today, with one in 11 teenagers severely obese and research showing surgery can improve lifelong health, many doctors say that for some youth the benefits outweigh the risks.

“We have found that the weight loss is durable over the long haul for the majority of teenagers and the high blood pressure, diabetes, and high cholesterol go away and stay away,” says Thomas Inge, MD, director of adolescent bariatric surgery at Children’s Hospital Colorado in Aurora.

In one of the first long-term studies of teen patients, Inge followed 58 who had undergone gastric bypass surgery, which reduces the size of the stomach. Patients’ average body mass index (BMI) fell from 59 before surgery to 36 one year later and 42 eight years after surgery, a loss of about 110 pounds, or 30% of body weight. The number with diabetes plummeted from 16% to 2%, high cholesterol rates fell from 86% to 38%, and high blood pressure dropped from 47% to 16%.

Notably, two-thirds remained obese (a BMI of 30 or greater). The less they weighed at the time of surgery, the better they fared.

“We found that the window to get back to a normal weight, or even to obese, closes quickly after you become severely obese,” says Inge. “If you make the mistake of ignoring the problem too long the opportunity may be sadly missed.”

Another study compared 81 obese teenagers who had surgery to 80 who did not. Five years later, those who had surgery had kept one-third of their original weight off while those who didn’t gained weight.

The American Society for Metabolic and Bariatric Surgery recently updated its guidelines regarding youth, stating that “it has become clear that surgery is a safe and effective treatment” and urging doctors to get over the “stigma.”

Inge says surgery is only for severe cases. Common risks include nutritional deficiencies, hernias, bowel obstruction, and gallbladder stones.

He recommends it only for teens with a BMI of 40 or more (235 pounds for a person who is 5 foot 4) or those with a BMI of 35 or more who have diabetes, non-alcoholic fatty liver disease, or sleep apnea. He advises new patients to try lifestyle changes and medications for six months before committing to surgery.

For those who opt for it, the results are often transformational.

“They report less pain in their joints, they feel more vital, their relationships are improved, and they gain the ability to achieve simple life goals that the rest of us take for granted,” says Inge. “It’s truly a metamorphosis.”
ATTENTION GETTER

DON’T LET ADHD SIDELINE YOUR KIDS FROM STRUCTURED, AFTER-SCHOOL ACTIVITIES. THE PROGRAMS COULD REAP GREAT REWARDS.

BY Sonya Collins
REVIEWED BY Roy Benaroch, MD, WebMD Medical Reviewer

KIDS WITH ADHD OFTEN STRUGGLE JUST TO STAY ON TASK OR BEHAVE IN SCHOOL. So the idea of enrolling in additional activities after school might feel like you’re asking for trouble. But new research shows that after-school programs could relieve some troubles for kids with this condition.

“These activities have potential benefits for kids with ADHD and should be part of the holistic strategies that we offer,” says Nicole Brown, MD, a pediatrician at Children’s Hospital at Montefiore in New York. Brown co-led a study on this subject with Yonit Lax, MD, a pediatrician at Maimonides Medical Center in New York.

Brown and Lax pulled data from the 2016 National Survey on Children’s Health, a questionnaire for parents of children ages 5 to 17. Parents of 4,185 children reported that their child had ADHD and answered questions about severity. Kids who participated in after-school activities were more likely to have only mild—versus moderate to severe—ADHD symptoms. These children were less likely than others with ADHD to have missed more than seven days of school in the last 12 months.

The researchers can’t say for sure whether afternoon extra-curriculars reduce symptoms or whether kids with already mild symptoms are more likely to enroll in such programs. Nevertheless, they see clear benefits to enrollment. “When children are in after-school activities,” says Lax, “they’re less likely to be sitting and watching TV for several hours a day and more likely to be engaging both their mind and their body.” That results in better mental and physical health for everyone.

After-school programs can also build friendships and confidence. These perks could help reduce the school-related anxiety and stress that often accompany ADHD, “which is very strongly linked with refusal to go to school,” says Brown.

Treating ADHD isn’t just about prescription medications and behavioral therapy. “We need to think about multimodal strategies that can also help with symptoms, and after-school programs are pretty low-cost and associated with great outcomes,” says Brown.

4 TIPS

1. Limit screen-time
   Keep tablets, computers, phones, computers, and TV viewing to less than two hours per day.

2. Go outside
   Don’t let your child spend all their downtime in the same indoor space. “Get them out into different settings, such as parks or the backyard, to avoid stagnant time in the same environment for extended periods,” says Lax.

3. Get fit
   Help your child get as close to national physical activity guidelines as possible. CDC recommends 60 minutes of mostly aerobic activity per day.

4. Adhere to a schedule
   “Structure is very important, no matter what the activity, so try to have your child do the same things at the same time every day,” says Brown.

Armed With the Facts

GUN-RELATED INJURIES AND FATALITIES AFFECT AMERICAN CHILDREN. WHAT CAN PARENTS AND PEDIATRICIANS DO TO KEEP KIDS SAFE?

BY Lauren Paige Kennedy  REVIEWED BY Hansa Bhargava, MD, WebMD Senior Medical Editor

MAYBE YOU’RE A GUN OWNER. Maybe you’re not. Personal preferences aside, the numbers are clear: Firearm-related fatalities are the third-leading cause of death among U.S. children ages 17 and younger, according to the American Academy of Pediatrics (AAP).

A recent study shared by the AAP and published in the journal Pediatrics shows that one in three American households has at least one gun, often loaded and not safely secured. The same report reveals that close to 1,300 children died each year between 2012 and 2014 from a gun-related injury in the U.S. In the same time span, nearly 5,800 American children annually received medical treatment in an emergency room for gun-related injuries.

Benjamin Hoffman, MD, professor of pediatrics at Doernbecher Children’s Hospital at Oregon Health and Science University, urges both parents and doctors to “normalize” discussions about gun safety.

“People are afraid to talk about it; the debate is cast as either pro-gun or anti-gun,” he says. “We need to acknowledge that people have guns; the Second Amendment gives them that right. Let’s think about it in a practical way.”

Hoffman, who is also the medical director at the Doernbecher Tom Sargent Safety Center, adds: “The AAP’s policy statement states very clearly that the safest home for a child is one without a gun. OK, great. But we could say the same thing about cars. The safest thing is for a child to never to get into a car—but that’s not practical. Between 30% to 40% of U.S. homes have guns. In the same way we acknowledge that children travel by car [with some risk], we need to acknowledge that in 2018 people have guns. Let’s agree that if we have guns, children shouldn’t be injured by them.”

Hoffman wants parents to take a defensive approach—just not with one another. Prevention is his aim, fostered by open communication between differing adults and with pediatricians, who can suggest basic gun safety steps to help combat this deadly health issue.

Keeping guns in the home both unloaded and safely secured is key, he says. And parents shouldn’t be shy about asking their friends and neighbors if they have guns—and whether or not they’re safely stored—before a child visits. Yet the same study reveals that even in homes with a high-risk child with a history of depression or a previous suicide attempt, “those parents were no more likely to store their firearms safely,” Hoffman adds.

BY THE NUMBERS

82% Percentage of all child firearm deaths—and 84% of all nonfatal firearm injuries that were medically treated—that involved boys, who are disproportionately affected.

8 Number of children who die from gun violence each day in the U.S.

393 MILLION Number of civilian guns now owned in the U.S. (last measured in 2017). The U.S. Census Bureau estimates the current population of the country to be 320 million.

160% Percentage of firearm suicides among children, a trend that has risen since 2007. The highest rates are among Native American and non-Hispanic white boys.

Sign up for the Parenting and Children’s Health Newsletter at WebMD.com.
Leader of the Pack

IN DOG SCOUTS OF AMERICA, PETS EARN MERIT BADGES FOR MASTERING NEW SKILLS

BY Jodi Helmer
REVIEWED BY Will Draper, DVM, WebMD Medical Reviewer

SOME DOGS TRADE TRICKS FOR TREATS. The four-legged members of Dog Scouts of America earn merit badges for mastering skills like tracking scents, navigating obstacle courses, pulling sleds, and understanding sign language.

“We're not just about badges and bragging rights,” explains Lonnie Olson, founder and president of Dog Scouts of America. “Our goal is to promote the human-canine bond through positive training methods and fun activities.”

The nonprofit was founded in 1995 and has grown from a single summer camp to a national organization with troops in 20 states and several annual overnight camps. Dog Scouts of America borrowed the basic concept of traditional scouting programs: Scouts must master new skills to earn merit badges and participate in activities like hikes and camps—dogs even wear backpacks filled with their supplies.

The activities help keep dogs active, which is important, because 56% of American canines are overweight or obese, which has health implications ranging from arthritis and high blood pressure to shortened lifespan. K9 Fitness and DOGa—dog yoga—badges ensure canine scouts get their exercise.

It’s not just dogs learning new skills; dog owners benefit, too. To earn a first aid merit badge, owners must learn to recognize the signs of emergencies, check vital signs, and administer basic first aid; dog scouts act as “patients” to help their owners practice.

Dog scouts also volunteer in their communities, participating in search-and-rescue missions and visiting schools and nursing homes as comfort dogs. Several troops have hosted fundraisers to purchase Kevlar vests for K9 officers and animal-size oxygen masks for local fire departments.

Olson believes Dog Scouts of America has helped several owners learn reward-based training to correct unwelcome behaviors and improve the likelihood that dogs will remain in their homes.

“Most dogs end up in shelters because of behavior issues,” she says. “We’re doing more than teaching and training, we’re saving lives.”

LEARNED LEADERS
Dog Scouts of America helps dogs master skills like pulling sleds.

BY THE NUMBERS

<table>
<thead>
<tr>
<th>Number of merit badges available through Dog Scouts of America</th>
<th>Percentage of dogs in the U.S. that take a training class</th>
<th>Number of dogs that tip the scales above a healthy weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>117</td>
<td>7%</td>
<td>50.2 MILLION</td>
</tr>
</tbody>
</table>
PASSIONATELY
SMASHIN’
EVERY
EXCEPTATION

LIKE ALEXANDER HAMILTON, HIS FAMOUS BROADWAY THEATER ROLE, LIN-MANUEL MIRANDA PUSHERS FORWARD WITH RELENTLESS SPEED AND BOTTOMLESS GOOD CHEER, JUGGLING MULTIPLE PROJECTS AND COMMITTED OUTREACH TO PEOPLE IN NEED—BUT HE ALSO FINDS TIME TO JUST BREATHE.
his month, Lin-Manuel Miranda will don his frock coat, tie back his ponytail, and take the stage as “10-dollar Founding Father” Alexander Hamilton for the first time in nearly three years (the composer-actor left the original cast of the Broadway juggernaut “Hamilton” shortly after the show swept the Tonys in June 2016). “Hamilton” will play a three-week run at the University of Puerto Rico’s main campus in San Juan to help revitalize the island’s artistic community after the devastation of Hurricane Maria.

Miranda, who also authored the Tony-winning “In the Heights” and penned the music for Disney’s Moana, has used his skyrocketing fame to serve many causes. He’s filmed public service announcements urging people to register to vote in the 2018 midterm elections, spoken out against the separation of families seeking asylum at the U.S. border, and raised funds through his TeeRico merchandise store to combat climate change and support March For Our Lives and Everytown for Gun Safety.

A FORGOTTEN SPOT

But perhaps nothing else stirs Miranda’s passion quite so powerfully as Puerto Rico, the U.S. territory where his parents were born and which has suffered so much tragedy since the hurricane hit in 2017. Original estimates put the death toll from Hurricane Maria at 6,912, but a George Washington University study commissioned by the local government and released in August 2018 put the total at 2,975 lost lives—more than Hurricane Katrina. Many of the deaths were avoidable, linked to a lack of emergency and relief services and a full year of power outages. “The power grid is key to everything, and so much of the heartbreaking stories we’re hearing about were preventable,” says Miranda. “In some parts of the island, it’s business as usual, and in other parts there are still no traffic lights. Everyone’s still going on the honor system, and that’s become business as usual, which is very sad. In some ways it’s back to normal and in some ways it will never be normal again.”

The Puerto Rico Primary Care Association, the Hispanic Federation, and other benefactors have also established a telemedicine initiative and mobile health units to reach isolated mountainous and rural parts of the island. “With every donation, from medications to diesel engines to gas for vulnerable populations on the island, reported increases in conditions like conjunctivitis (eye inflammation), respiratory illnesses such as asthma, and gastrointestinal disease. Today, says Alicia Suárez, the association’s executive director, mental health represents the biggest crisis on the beleaguered island: “The level of stress is enormous. On the second weekend in January and September 2018, there were 151 suicides.”

As part of his hurricane relief efforts, Miranda works with the Hispanic Federation, a nongovernmental organization that has provided substantial support to Puerto Rico’s recovery—he’s father, Luis, is the group’s founding president. To aid in the recovery, Miranda has raised millions through TeeRico and his star-studded single “Almost Like Praying.” “Through the Hispanic Federation, we’ve been working on providing solar energy for health centers so if everything goes down again—it’s very fragile and outdated power grid, and I’m not confident it got fixed post-Maria—there will still be medical care available,” he says. “In some parts of the island, it’s business as usual, and in other parts there are still no traffic lights. Everyone’s still going on the honor system, and that’s become business as usual, which is very sad. In some ways it’s back to normal and in some ways it will never be normal again.”

LIKE HE’S RUNNING OUT OF TIME

Miranda, who invited “Hamilton” audiences to re-imagine an early America in which such icons as Washington and Jefferson could have people of color, seems to have hit a wall in an endless array of projects these days. At the time of this interview, he was packing up with his family—wife, Vanessa Nadal, an attorney and scientist, and two young sons—for two months in Wales filming the BBC’s adaptation of Philip Pullman’s His Dark Materials. Miranda will play balloonist Lee SCOREY. He’s also directing a film version of “Rent” composer Jonathan Larson’s Tick, Tick... Boom!, producing an FX series about Broadway choreographer and dancer Bob Fosse and starring Jeff Daniels, bringing “In the Heights” to the big screen, teaming up with Disney legend Alan Menken to write new songs for a live-action movie of The Little Mermaid, and releasing Gomes/Griffith, a box collection of his inspirational, life-coachy daily tweets. (Miranda is prolific on Twitter and will often announce that he has a few moments of down time to answer fans’ questions.) And last month the long-awaited Moxie Poppins sequel finally hit theaters, starring Miranda as Jack the lamplighter opposite Emily Blunt’s magical nanny.

But to manage this stress in an out-of-control world—what we need is resilience—the ability to bend but not break under great pressure, and in some cases even grow as a result of that pressure. “Resilience is learning to recover from stress and harness it,” Southwick says.

Finding purpose. So what can you do if Southwick has a few suggestions:

Mindfulness meditation. Repetitive practice of mindfulness meditation helps you gradually learn to be in the present moment and not constantly anticipate what stressful thing is coming next.

Re-appraisal. Re-appraise what feels threatening and see it as more of a challenge. “We have all these stressors, these things we can’t control, and we don’t have total control,” he says. “But to manage this stress in an out-of-control world—what we need is resilience—the ability to bend but not break under great pressure, and in some cases even grow as a result of that pressure. “Resilience is learning to recover from stress and harness it,” Southwick says.

Exercise. “Exercise helps to repair neurons in the brain in areas that control our stress response,” he says. “It improves mood and concentration and cognitive abilities.”

Role models. “If resilient people have role models,” says Southwick. “Look of friends or people you admire, who handle stress well, and then think about how they do that.”
But Miranda is quick to explain that each project “works different muscle groups” and that he’s not really working himself into an early grave. “I have a lot of help. I sleep. I take my kids to school and tuck them in each night. I’m not some kind of sleep-deprived tortured writing animal,” he says. “Some days, I feel like I’m constantly trying to kick the pedestal out from under me that people are trying to put there.”

The Gmorning/Gnight book developed organically as a result of the internet. “There’s no magic behind that. All I’m writing is what I wish someone would tell me that morning. If it’s about anxiety, I’m probably feeling anxious. If it’s about ‘pace yourself,’ I probably put toothpaste in my coffee,” he says. “The more personal I get, the more it resonates—which is an amazing lesson as a writer. Those are written and done, and all that’s left is for people to have it.”

A biography of Fosse and Verdon, written by Miranda’s Wesleyan classmate Sam Wasson, inspired the upcoming FX series. “I put it in the hands of Tommy Kail [a director-producer and frequent Miranda collaborator] and Andy Blankenbuehler, our choreographer from ‘Heights’ and ‘Hamilton,’ who’s as close to a modern-day Fosse as I know,” he says. “That’s not really work for me; it’s helping put talented people together in a room and saying, ‘Okay, keep going.’”

Of Tick, Tick . . . Boom!, he says, “I know I’m going to have to wait to make it, because I want to make sure the screenplay is everything it can be. We really just started kicking the tires on it in earnest, and I don’t think it’ll get into production until late 2020. And playing Lee Scoresby feels like a vacation—I don’t really work that much at once.”

Part of the reason Miranda’s fan base is so vast and devoted is his goofy, self-deprecating personality—he’s a “West Wing” geek (the ‘Hamilton’ line about “looking for a mind at work” was lifted straight from the series), and he once told Conan O’Brien that he totally freaked out upon meeting Weird Al Yankovic, saying “I have no chill whatsoever.” It’s as if he is simultaneously the hippest and the dorkiest guy in the room. “It would take so much more energy if I had to pretend to be cool,” he says. “I don’t know how to do that. I feel very lucky that ‘Hamilton’ came along at a time in my life when I already knew who I was. I was married, I had a kid. When you have that level of success as a person and you’re still trying to find out who you are and what you want to be in the world, it can knock you off your feet in a very real way.”

He pauses. “Of course, I could still get knocked off my feet at any second,” says Miranda. “Let’s not predict anything!”

BEST OF WIVES AND BEST OF WOMEN

Helping keep Miranda on an even keel is his wife, Nadal, whom he praised as “the reason everything gets done” in his heart-wrenching “love is love is love” speech at the Tonys shortly after the Pulse nightclub massacre in Orlando. His high-traffic Twitter feed is punctuated with mini “one-act plays” featuring dialogue from the Miranda household, which often involves Nadal keeping any sign of ego from her husband firmly in check.

“She’s an absolute superhero who manages to do her own legal work while still nursing a baby,” he says. “She’s also not really a theater person. So if I’ve written something and she likes it, I know I’ve cleared a higher bar than someone who loves shows tunes full stop. If ‘Hamilton’ has gone beyond the base of people who like musical theater, it’s because of her.”

The couple is still adjusting to life as parents of two. “We’re not outnumbered, but our attention can be split,” he says. “The baby is still very dependent on us, and the three-year-old is testing boundaries all the time. The threenager thing is real! There can be nights she’s with the baby and I’m with the older one, and we both fall asleep without checking in because we’re freaking exhausted! So we really have to focus on taking the time to be with each other and not let drift happen. That’s the foundation, not only for our kids, but for ourselves.”

To ensure that he’s fully present for his family, Miranda enforces a “no Twitter on the weekends” rule, deleting the app from his phone every Friday night and reinstalling it Monday morning. “It’s an absolute addiction, and this is the only way I know to really not do it,” he says. “And then I go into the week with energy because I’ve had the weekend off.”

In the face of a seemingly relentless barrage of negative news, whether on social media or anywhere else, Miranda advises his fans to look for opportunities to create good. “When we were filming Poppins, it made me so happy to know that whatever was going on in the world, we were creating something that will provide escape and joy for people,” he says. “There is no shortage of challenges in the world, but there’s also no shortage of ways to do good. Dedicating a little part of your day to doing that, in your backyard or out in the world, takes away the helplessness and the tide of it all.”
MELLOWER AND SWEETER THAN OTHER ALLIUMS, leeks offer some of the same disease-fighting compounds in the allium family but with less pungency. Some examples: Leeks contain kaempferol, a flavonoid that protects the lining of blood vessels from damage. One leek contains 30% of an adult's daily value of vitamin A (which aids eyesight and helps maintain healthy teeth and skin) and almost 20% of vitamin C (beneficial for blood-clotting and bone health). To enjoy leeks, slice them thinly and sauté with other veggies in olive oil or add chopped leeks to winter soups and stews. —ERIN O’DONNELL
Frittata

MAKE GOOD ON YOUR RESOLUTION TO COOK MORE THIS YEAR—MASTER THE FRITTATA. IT’S SIMPLE, SUBSTANTIAL, AND EASY TO PACK WITH HEALTHY INGREDIENTS.

By Erin O’Donnell

Recipes by Kathleen Zelman, MPH, RD, LD

Asparagus, Ham, and Cheese Frittata

Three main ingredients make this frittata a hearty entrée for any time of day. Just about any meat can sub for the ham, or skip it altogether for a vegetarian option.

The Mix

- 6 eggs + olive oil, onion, asparagus, mushrooms, ham, low-fat milk, nutmeg, fresh rosemary, Parmesan cheese

Make It

Preheat oven to 375ºF. Coat an oven-safe skillet with nonstick cooking spray. Add 1 tbsp olive oil and heat over medium-high heat. Sauté diced onion in hot oil until lightly browned. Add sliced asparagus and cook for 3 minutes. Add sliced mushrooms and diced ham; cook 2 minutes more. Whisk eggs with ¼ cup milk, salt, white pepper, nutmeg, and chopped rosemary to taste. Pour egg mixture over vegetables. Cook 4 to 5 minutes until edges begin to set. Sprinkle with Parmesan cheese. Transfer to oven for 10 to 14 minutes or until slightly puffed and set.

Serves 6

Per serving (1/6 of frittata)

- 193 calories, 17 g protein, 4 g carbohydrate, 12 g fat (4 g saturated fat), 265 mg cholesterol, 1 g fiber, 2 g sugar, 456 mg sodium. Calories from fat: 56%

Ratatouille Frittata

This Mediterranean-inspired frittata calls for Japanese eggplant—a smaller version of the purple vegetable—but regular eggplant works, too. Serve this frittata with crusty bread and a simple salad.

The Mix

- 6 eggs + olive oil, Japanese eggplant, zucchini, onion, Roma tomatoes, garlic, low-fat milk, goat cheese

Make It

Preheat oven to 375ºF. Coat an oven-safe skillet with nonstick cooking spray. Add 2 tbsp olive oil and heat over medium-high heat. Sauté chopped onion, red pepper, and sweet potato in hot oil until soft, 6 to 8 minutes. Add kale and stir to soften. Whisk eggs with ¼ cup milk, salt, pepper, and thyme to taste. Pour egg mixture over vegetables; cook for 4 to 5 minutes until edges begin to set. Sprinkle with mozzarella cheese. Transfer to oven for 10 to 14 minutes or until slightly puffed and set. After frittata cools, garnish with torn basil.

Serves 6

Per serving (1/6 of frittata)

- 198 calories, 2 g protein, 8 g carbohydrate, 15 g fat (6 g saturated fat), 248 mg cholesterol, 2 g fiber, 4 g sugar, 332 mg sodium. Calories from fat: 61%

Kale, Red Pepper, and Sweet Potato Frittata

This tasty frittata is packed with colorful antioxidant-rich foods, including kale. We use baby kale because it’s so tender; find it in the produce department near salad greens.

The Mix

- 6 eggs + red onion, red sweet pepper, sweet potato, baby kale, low-fat milk, thyme, mozzarella

Make It

Preheat oven to 375ºF. Coat an oven-safe skillet with nonstick cooking spray. Add 2 tbsp olive oil and heat over medium-high heat. Sauté chopped onion, red pepper, and sweet potato in hot oil until soft, 6 to 8 minutes. Add kale and stir to wilt. Whisk eggs with ¼ cup milk, salt, pepper, and thyme to taste. Pour egg mixture over vegetables; cook for 4 to 5 minutes until edges begin to set. Sprinkle with mozzarella cheese. Transfer to oven for 10 to 14 minutes or until slightly puffed and set.

Serves 6

Per serving (1/6 of frittata)

- 202 calories, 12 g protein, 10 g carbohydrate, 13 g fat (4 g saturated fat), 218 mg cholesterol, 2 g fiber, 4 g sugar, 368 mg sodium. Calories from fat: 57%
BAKE THEM, BOIL THEM, MASH THEM, PIPE THEM: POTATOES CAN BE COOKED AND SERVED COUNTLESS WAYS BOTH NUTRITIOUS AND INDULGENT—OR SOMEWHERE IN BETWEEN

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

“POTATOES CAN BE THE STAR OF A MEAL or make a spectacular side dish,” says Cara Mangini, chef/owner of Little Eater in Columbus, Ohio, and author of the award-winning cookbook The Vegetable Butcher. Boasting little fat, lots of vitamins and minerals, and a healthy dose of fiber, these are Mangini’s five essential spuds.

**1. FINGERLINGS**

“Full of moisture and low in starch, simple preparations let them shine: Boil with salt and garlic, brown in a hot skillet with olive oil, thyme and rosemary; then splash with red wine vinegar.”

**2. SWEET POTATOES**

“Served simply as a baked potato substitute, shredded for fritters, or puréed and used in baked goods, they deliver a rich sweetness and a range of textures, depending on the variety you select.”

**3. YUKON GOLDS**

“Medium starchy with a dense, creamy texture, these potatoes belong in potato salads and frittatas. Roasted or sautéed, they make a wonderful taco filling, along with zucchini, peppers, onions, avocado, and black beans.”

**4. RED POTATOES**

“With thin, delicious skins that crisp up nicely when roasted and tender, flavorful flesh, these are also delicious steamed and tossed with butter, flaky sea salt, and herbs.”

**5. RUSSETS**

“A high-starch/low-moisture content makes them perfect for mashing, for creamy soups, or sliced into thin wedges and tossed with a little olive oil and salt for skinny baked potato fries.”

Search for the slideshow You Say Potato, We Say Why Not? at WebMD.com.
Roast Chicken

SIMPLE TO PREPARE AND WORTH MASTERING, WHOLE ROASTED CHICKEN SHOULD BE IN EVERY HOME COOK’S REPERTOIRE

BY MATT McMILLENN
REVIEWED BY Hansa Bhargava, MD, WebMD Senior Medical Editor

“ROAST CHICKEN IS ONE OF THOSE THINGS THAT EVERYBODY LOVES—it makes them feel warm and comforted and satisfied,” says Sarah Rich. And she should know: Rich and her husband and co-chef, Evan, own and run the popular San Francisco spot RT Rotisserie, whose menu stars whole and half chickens. “Roasting a chicken is something that anyone can do, but there are tips and tricks that can make it even better,” says Rich.

MAKE IT

• Smaller chickens have better flavor. Select one that’s five pounds or less.
• Feeding a crowd? Roast two small chickens rather than one large one.
• To boost flavor, brine your chicken for at least four hours, ideally 24, in the refrigerator. A simple brine of water, salt, and sugar works well, but buttermilk adds tang and helps tenderize the meat.
• For crisp skin: After brining, pat the chicken dry and place on a rack on a baking sheet. Let it air dry in the fridge for at least eight hours.
• To cook the chicken more evenly, let it stand at room temperature for 30 minutes before roasting. Pat dry again if necessary.
• Tie three pieces of string around the chicken—in the middle, at the wings, and around the legs—to ensure even cooking.
• Skip the roasting rack. Instead, lightly brown the breast and sides in a hot cast iron skillet on the stovetop, then transfer the skillet to the oven.
• Go hot (425ºF) for the first 15 minutes then reduce the oven temperature to 350ºF for 30 minutes or so of gentle cooking. Spoon juices over twice, at 15-minute intervals.
• Check for doneness: Insert a meat fork or tongs into the bird’s cavity and gently tip it up. It’s cooked if the juices run clear. Let rest for a few minutes before carving.

COOKING OILS

EXPAND YOUR COOKING OIL COLLECTION WITH THESE FLAVORFUL, HEALTHFUL OPTIONS SELECTED BY REGISTERED DIETITIAN CONNIE GUTTERSEN, PhD, AUTHOR OF THE LOVE DIET AND THE SONOMA DIET.

LUCINI EXTRA VIRGIN OLIVE OIL
“Olive oil boasts healthy fats and a host of antioxidants. It’s perfect for frying, sautéing, poaching, and baking. Pair this grassy, peppery example with boldly flavored arugula, endive, and radicchio.”

SPECTRUM UNREFINED TOASTED SESAME OIL
“This oil, which contains heart-healthy polyunsaturated fats, adds an intense, distinctive flavor to Asian-inspired sautés, sauces, and dressings. A little goes a long way, which means fewer calories.”

BELLA VADO AVOCADO OIL
“This organic, cold-pressed oil adds a fruity, mellow flavor to marinades and salad dressings. Like other healthy oils, it helps your body absorb fat-soluble vitamins like A and D.”

SPECTRUM REFINED GRAPESEED OIL
“Rich in vitamin E, with a light, neutral flavor, this oil is a delicious choice for vegetable dishes, cakes, and cookies and for herb, pepper, and spice infusions.”

LA TOURANGEELLE ROASTED WALNUT OIL
“A good source of omega-3 fatty acids, this oil has a deep, nutty taste and can be drizzled on just about anything for a delicious flavor boost.”
NEW RESEARCH ADDS TO THE EVIDENCE FOR A LINK BETWEEN SLEEP, MEMORY, AND BRAIN FUNCTION.

A team of scientists at the National Institutes of Health recently found that just one lost night of sleep can increase beta-amyloid levels in the brain. Beta-amyloid is a waste product in fluid between brain cells. The body should clear out the substance. But in Alzheimer's disease it builds up to form plaque in the brain that hinders communication between brain cells. The new research suggests that the body needs sleep every night to rid the brain of this waste.

Sleep apnea, which can cause night after night of poor sleep, may also lead to brain changes similar to those that occur in Alzheimer's disease. Sleep apnea causes a person to stop breathing for brief periods during sleep. In a small study of 83 middle-age and older adults in Australia who have sleep apnea, the ones with low levels of oxygen in their blood while they slept—a consequence of the condition—and experienced poor sleep tended to have changes in their brain tissue in areas related to language and memory. Treating the sleep disorder could help lower risk for dementia later in life.

New research in young people also underscores the connection between sleep and memory. In an experiment with 49 preschool-age kids at the University of Massachusetts Amherst, the ones who napped during the day and slept at night performed better in a memory game the next day than the ones who only slept at night. In a similar study, Chinese 12-year-old students who napped midday demonstrated better attention span, nonverbal reasoning, and spatial memory—the part of memory that records environment and keeps a person from getting lost. —SONYA COLLINS
**Small Science in Action**

**NANOTECHNOLOGY CAN PLAY A ROLE IN DEVELOPING DRUGS**

**NANOTECHNOLOGY IS THE SCIENCE OF THE VERY SMALL.** Michael Kopcha, PhD, RPh, director of the Office of Pharmaceutical Quality at the FDA, answers some questions about nanotechnology in medicine.

**Q** What is nanotechnology?

**KOPCHA** Nanotechnology is a field of study that focuses on materials that are extremely small and measured by something called nanometers. For perspective, a nanometer is about 100,000 times smaller than the width of a human hair and too small to see with normal microscopes. Scientists in the field of nanotechnology can create and explore materials—including those in medicines—at this very small scale.

**Q** How does nanotechnology affect drugs?

**KOPCHA** It allows drugs to be engineered to better address certain patient needs. One example is a cancer drug that uses a 100-nanometer sphere, called a liposome, to penetrate tumors and remain stable in the bloodstream. Another example is a schizophrenia drug that uses nano-size crystals that allow it to be delivered by injection as few as four times per year, so patients don’t have to take medication daily. The FDA has programs to facilitate innovations in nanotechnology. Read more about them at fda.gov/nanotech.

**Q** What are the FDA’s expectations for drugs that use nanotechnology as compared to other drugs?

**KOPCHA** While nanotechnology does bring some unique scientific considerations, all drugs must be made such that they are 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. Drugs that use nanotechnology are no different. The FDA assures that a manufacturer is capable of meeting quality standards prior to approving a drug. This is why you can have confidence in your next dose of medicine, whether it is “nano” or not.

[Sign up for the WebMD Daily Newsletter at WebMD.com.]

---

**BY THE NUMBERS**

- **914 MILLION** Number of nanometers in a yard.
- **100** Number of miles high this magazine page would appear if you were shrunk to 1 nanometer tall.
- **60+** Number of FDA-approved drugs that use nanotechnology.
- **MORE THAN 1 in 3** Number of these drugs used to treat cancer.

---

**ILLUSTRATION BY:** EVA VASQUEZ
Migraine Myths

A LOT OF MISCONCEPTIONS STILL SURROUND THIS COMPLEX CONDITION THAT AFFECTS MORE THAN 37 MILLION AMERICANS. CAN YOU SEPARATE THE FACTS FROM COMMON MYTHS?

BY Michelle Leifer
REVIEWED BY Lawrence Newman, MD, WebMD Medical Reviewer

1. **MYTH**
   EXTRA SLEEP WILL PREVENT MIGRAINE.
   **FACT**

2. **MYTH**
   MIGRAINE IS USUALLY PRECEDED BY A WARNING SIGN KNOWN AS AN AURA.
   **FACT**

3. **MYTH**
   IT IS RARE FOR A MIGRAINE ATTACK TO LAST LONGER THAN AN HOUR.
   **FACT**

4. **MYTH**
   MOST PEOPLE HAVE MIGRAINE IN THE LATE AFTERNOON OR EARLY EVENING.
   **FACT**

5. **MYTH**
   CAFFEINE CAN BE A SOURCE OF MIGRAINE RELIEF.
   **FACT**

6. **MYTH**
   MOST PEOPLE WITH MIGRAINE FEEL WELL ENOUGH TO RESUME NORMAL ACTIVITY AS SOON AS THE PAIN SUBSIDES.
   **FACT**

7. **MYTH**
   MIGRAINE BECOMES LESS FREQUENT AND LESS SEVERE AS YOU GET OLDER.
   **FACT**

ANSWERS

1. **MYTH**
   Although lack of sleep has been linked to migraine, too much sleep can also bring on an attack. Aim to get seven to eight hours per night and go to bed and wake up at the same time every day.

2. **MYTH**
   Only about 20% of people with migraine have an aura, which is a warning sign that an attack is about to begin. The symptoms usually last less than an hour and may include flashing lights, wavy lines, ringing in the ears, or changes in smell, taste, or touch.

3. **MYTH**
   Most migraine attacks last between four and 72 hours, but they can last longer. If a single migraine lasts more than 72 hours, call your doctor.

4. **MYTH**
   You can have migraine at any time of the day, though nearly half occur between 4 a.m. and 9 a.m. Researchers believe that’s because the body tends to produce less of its natural painkillers such as endorphins in the early morning hours.

5. **FACT**
   For some, caffeine can provide migraine relief. For others, it can be a trigger. During a migraine attack, blood vessels in the brain dilate, causing pain. Since caffeine narrows blood vessels, a strong cup of coffee may help stop migraine. However, this only seems to work for occasional caffeine users. If you’re a regular caffeine user, your brain can become dependent on it. If you don’t get enough caffeine, you have withdrawal symptoms—including migraine.

6. **FACT**
   Migraine tends to peak between ages 35 and 40. Most people report fewer attacks that are less painful as they age.

7. **MYTH**
   Many people with migraine feel sluggish and have difficulty concentrating for up to 24 hours after the pain stops. During this recovery phase, stay hydrated and allow yourself time to ease back into your routine gradually.

Search for the slideshow **Home Remedies for Migraine** at WebMD.com.
ONE OF THE LATEST TRENDS IN THE BATTLE OF THE BULGE HAS BEEN INTERMITTENT FASTING. Although people seem to be talking about fasting as if it’s new and novel, it’s really something we all do at some point. It might be when we are on a long trip and don’t have a chance to stop and eat, a long day at work with no time to break for lunch, or for religious purposes.

Although often referred to as a diet, intermittent fasting is more a method for timed eating. And there are different types—some approaches emphasize eating all food within an eight-hour daily window, while others do not allow eating for one or two days of the week.

The key word is “intermittent,” temporarily putting a stress on the body, thereby changing hormone levels and resting metabolism.

Intermittent fasting does help people recognize the signs of hunger and that awareness is valuable, since we often eat food for reasons other than hunger. Do you ever eat ice cream or popcorn while watching your favorite TV show because that’s what you always do? I like to call this “mindless noshing.” If you become more attuned to the needs of your body for food, then you will recognize when you actually need to eat.

Q Is it safe?
Data show that occasional fasting is safe for most people. If you’re pregnant, breastfeeding, frail, or on insulin, you should probably think twice and talk to your doctor before trying it. Any type of fasting should never be done by children.

Q Can I exercise while fasting?
Yes, as long as you time the end of your fast to coincide with completion of your exercise. Physical activity will deplete your energy (glycogen) stores, and you do need to replenish them.

Q What if I need to take medications with food?
Many medicines are affected by absorption in the stomach, so there’s a reason why you take them with food. Foregoing food could impact how your medicine works.

Q Does it work?
Intermittent fasting can reduce the risk of cancer, heart attacks, and dementia and even improve longevity, according to some data. But much more research is needed. People often do lose weight initially, since they typically consume fewer calories and insulin level spikes (which can cause weight gain) go down.

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

BY THE NUMBERS

45MILLION
Number of Americans who go on a diet each year.

70%
Percentage of adults in the U.S. who are overweight or obese.

AT LEAST
6
Religions that incorporate fasting throughout the year.

22%
Percentage of American adults who get the government’s recommended 150 minutes of moderate aerobic exercise and two sessions of strength training weekly.
Clinical Trials and You

FOR PEOPLE WITH CANCER AND OTHER ILLNESSES, CLINICAL TRIALS CAN OFFER HOPE—BUT KNOW THE RISKS

BY Matt McMillen  REVIEWED BY Neha Pathak, MD, WebMD Medical Editor

EVERY YEAR, THOUSANDS OF AMERICANS TAKE PART IN CLINICAL TRIALS designed to test new, potentially life-saving means of countering diseases like cancer, Alzheimer’s disease, and diabetes. Be sure you know the pros and cons before you participate.

Clinical trials offer all volunteers—those who are healthy and those who are ill—an opportunity to join the fight against disease and contribute to the advance of medical knowledge, says James K. Gilman, MD: “We’re not letting the disease win.”

To patients, some with incurable cancer or another terminal ailment, clinical trials provide something more. “By participating, you have access to a treatment that shows promise, most often in the hands of people who are at the cutting edge of the research,” says Gilman, CEO of the Clinical Center, the National Institutes of Health’s flagship research hospital. “For example, one of our big areas is immunotherapy, which revs up your immune system to fight a cancer that doesn’t respond to chemotherapy or is not surgically removable.”

Clinical trials go through multiple phases and often take years to complete. Only about 14% of experimental drugs eventually receive FDA approval. However, unsuccessful treatments usually are revealed in the early stages of testing. By the time a clinical trial reaches its final pre-approval phase, which enrolls the greatest number of patients, researchers have a reasonable degree of confidence in the treatment’s safety and effectiveness, says Gilman. For patients, that means hope.

Still, Gilman urges prospective clinical trial patients to understand the potential downsides: The treatment may not cure or slow your disease, and it could make you sicker.

Before you enroll, talk to a doctor you trust who’s not involved in the research to get an unbiased opinion about what you stand to gain or lose. And then discuss these factors with your family, relatives, and friends close to you. This is especially important if you have a terminal illness, such as an incurable cancer, that limits your remaining time with them. The side effects of treatment during the clinical trial, Gilman says, could make your final weeks or months much harder and less fulfilling.

“Don’t focus simply on the possible upsides, but understand and appreciate the potential downsides as well,” Gilman advises. “Think through it all.”

4 PHASES OF CLINICAL TRIALS

PHASE 1
Usually involves 20 to 80 healthy volunteers. It determines an experimental drug’s safety and side effects and provides initial information about dosages.

PHASE 2
Involves a few hundred people with the disease that the drug aims to treat. This phase also focuses on the drug’s safety. It includes too few people to measure its effectiveness.

PHASE 3
Involves up to 3,000 patients. It tests the experimental medication’s safety, compares its effectiveness with standard or existing treatments, and monitors side effects. Success here often leads to FDA approval.

PHASE 4
Tracks the new treatment after FDA approval to identify any rare or long-term side effects or other complications.
Checkup

MORE THAN ONE IN THREE ADULTS IN THE U.S. HAS HIGH LDL (the so-called “bad” cholesterol), which puts a person at risk for heart disease and stroke, according to the CDC.

High cholesterol has no symptoms, but over time, it causes plaque to build up, which blocks blood flow and can lead to a heart attack or stroke.

Michael Miller, MD, professor of cardiovascular medicine at the University of Maryland School of Medicine, explains what you can do about it.

Q What should I know about cholesterol numbers?

MILLER Total cholesterol includes LDL, triglycerides, and HDL, the “good cholesterol.” But the focus of treatment is really on driving the LDL levels down. If you have heart disease or are at risk of heart disease, we’d like to get that LDL below 100. If you already have heart disease, or have diabetes, we want to get that number lower, somewhere below 70.

Q Can eating certain foods lower cholesterol?

MILLER Yes. These include those with soluble fiber, such as oats and oat-based cereals, beans, nuts, pectin in fruits—eating a small part of the inner white of an orange or grapefruit. Also eat small amounts of good fats (like mono- or polyunsaturated fats in olive oil and vegetable-based products) and psyllium husks, which you can get at natural food stores.

However, food isn’t a panacea, and if you have super-high LDL cholesterol, diet is important, but it’s not really going to do the trick.

Q Can exercise help lower cholesterol?

MILLER Exercise is really good to drive the triglyceride levels down. We recommend brisk walking—you want to walk about five miles a day, which is 10,000 steps. Or, do about 30 minutes of swimming or jogging or other aerobic activity on a daily basis.

Q What else affects cholesterol levels?

MILLER Smoking or having diabetes can result in a bad LDL level. And stress can have a big effect on raising triglycerides. Stress promotes inflammation, and we know that inflammation is a trigger for heart disease.

If you’re stressed and don’t get a good night’s sleep, that raises your cortisol level, which can raise your LDL and triglyceride levels. So I recommend going to bed at the same time every night, making sure the room is dark, and reading a book or doing whatever you find helps you relax in the last half hour or so before bed.

We all have stress. It’s how we manage it that’s important. Some people like meditation, others do yoga—anything that can reduce your overall stress should affect your cholesterol and reduce your risk of heart disease.

ASK YOUR DOCTOR

Q Should I take a statin to lower cholesterol?

“We try to use lifestyle interventions as much as we can, but if someone has established heart disease or high risk factors, it’s important to start medication sooner rather than later,” says Michael Miller, MD.

Q How often should I get my cholesterol checked?

Get your levels checked starting when you’re 20 or older every four to six years, says the American Heart Association. Check with your doctor if you need it tested more often.

Q What role does family history play in cholesterol?

It plays a pretty big role, says Miller. “But it’s not everything,” he says, “because you can really make a difference lowering cholesterol with lifestyle.”

Q Should I avoid certain foods?

“Foods that promote high cholesterol and can raise the LDL are ones that are high in saturated fat. Those include red meat, organ meats, dairy products, cheese, whole milk, and ice cream,” says Miller.
HOW DO DOCTORS DISTINGUISH THE TWO CANCERS? Jennifer Woyach, MD, associate professor and CLL section head at The Ohio State University Comprehensive Cancer Center—Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, explains and tells why some people with SLL don’t need to be treated right away.

Q What is the difference between SLL and CLL?
WOYACH They are essentially the same type of cancer. Both affect infection-fighting white blood cells called lymphocytes—but they occur in different locations. CLL is in the blood and bone marrow, and SLL resides mainly in the lymph nodes. Under the microscope, though, they are the same disease. If people who are diagnosed with SLL later develop more disease in their blood, it’s called CLL.

Q How do doctors tell the two diseases apart?
WOYACH CLL is diagnosed when the lymphocyte count and number of leukemia cells in the blood are high. People who don’t meet these criteria but have enlarged lymph nodes are diagnosed with SLL instead.

Q Who is most likely to get SLL?
WOYACH Both CLL and SLL are more common in older people. They are also more common in people who have a family history of CLL or other blood cancers.

Q What are the symptoms of SLL?
WOYACH Most people don’t have symptoms when they are diagnosed. Symptoms can include swollen lymph nodes in the neck, armpit, or groin; fatigue; and repeated infections. Some people might also develop an enlarged spleen, which can press on the stomach and make it hard to eat normal-size meals.

Q Do most people need treatment right away?
WOYACH SLL often grows slowly over several months or years. People who don’t have symptoms can be observed, which is called “watchful waiting.” They are usually followed by a hematologist/oncologist, who will perform regular blood tests and exams. Those who do have symptoms like fatigue, weight loss, fever/chills/night sweats, swollen lymph nodes, or drops in hemoglobin or platelet counts will need to start treatment.

Q How is SLL treated?
WOYACH CLL and SLL are treated in the same way. Some people are treated with chemotherapy—drugs that kill cancer cells. But most patients today are treated with targeted therapies, which block proteins and other substances the cancer needs to grow.

ASK YOUR DOCTOR

Q Do I have SLL or CLL?
Tests can help distinguish which form of this cancer you have. Doctors diagnose CLL by looking for abnormal cells in a blood test. Diagnosing SLL involves taking a tissue sample called a biopsy from a lymph node.

Q Which treatment do you recommend?
Your doctor will recommend a treatment based on the extent of your cancer, your age, and your overall health.

Q What’s my outlook?
That depends on the stage of your cancer and how aggressive it is. SLL often grows very slowly, and treatments can help keep the cancer under control.

Q Where can I get support?
If you feel overwhelmed, get help from an organization like the Leukemia & Lymphoma Society, or ask your oncologist to recommend an SLL support group in your area.
**Childhood Obesity**

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

Search for the slideshow Healthy Family Choices from Morning to Night at WebMD.com.

---

**13.7 MILLION**

NUMBER of obese children in the U.S.

---

- **20 YEARS**
  
  Time since the U.S. declared childhood obesity an epidemic

- **10X**
  
  Global increase in childhood and adolescent obesity since 1975

- **4X**
  
  Increased risk of type 2 diabetes among obese children

---

**UP TO 76%**

Percentage of obese children with sleep apnea

---

**2X**

Increased risk of high blood pressure among obese children

---

**57%**

Increased likelihood an obese child will repeat a grade

---

**57%**

Increased likelihood of depression among obese children ages 10 to 17

---

**40%**

Increase of obesity among boys ages 2 to 5 since 2011

---

**70 MILLION**

Projected worldwide number of obese infants and obese or overweight children age 5 and younger by 2025

---

**30%**

Percentage of 16- to 19-year-olds in the U.S. who are obese

---

**63%**

Likelihood that an obese child will be bullied

---

**2X**

Increased likelihood of developmental delay for obese children

---

WEBMD.COM

GETTY IMAGES; SOURCES: CDC, JOURNAL OF THE ENDOCRINE SOCIETY, ACADEMIC PEDIATRICS, HEALTH EDUCATION RESEARCH, PEDIATRICS, JOURNAL OF NUTRITION AND METABOLISM, WHO
’Tis the Season

DON’T LET COLDS AND THE FLU GET YOU DOWN. FOLLOW THESE EXPERT TIPS.

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

1. ACT FAST
Take antiviral flu medication within 48 hours of symptoms for the best results.

2. STAY HEALTHY
Reduce stress and get plenty of sleep to keep your immune system strong.

3. DRINK UP
Loosen congestion and avoid dehydration with lots of water—but skip alcohol and caffeine.

4. DON’T WAIT
If you—or someone you’re caring for—have trouble breathing, get help immediately.

5. FLUSH PROPERLY
To avoid infections, use only boiled, sterile, or distilled water in your neti pot.

6. KEEP IT CLEAN
To kill cold and flu viruses, disinfect surfaces you often touch.

7. KNOW THE DRILL
Learn the flu prevention plan at your child’s school or day care program.

8. PROTECT YOURSELF
Have a doctor’s appointment? Wear a mask in the waiting room.

9. PROTECT OTHERS
Cough or sneeze into a tissue or your sleeve, not your hands.

10. AVOID ANTIBIOTICS
Remember that antibiotics don’t help colds and flu.

PREVENTION
Coughing or sneezing into your sleeve or a tissue instead of your hands is a good way to reduce contamination.

10 WAYS TO COPE

Search for the slideshow Is It a Cold or the Flu? at WebMD.com.
Geriatrician

WHAT DOES THIS SPECIALIST IN AGING CONDITIONS DO?

BY Jodi Helmer REVIEWED BY Brunilda Nazario, MD, WebMD Senior Medical Editor

JUST AS YOUNG PATIENTS SEE PEDIATRICIANS FOR SPECIALIZED CARE, older adults can benefit from working with a geriatrician, an internist who specializes in the care of older patients.

THE CARE IS AGE-APPROPRIATE

More than half of older adults manage three or more chronic conditions, which often means filling several prescriptions and juggling appointments with multiple specialists.

Geriatricians are medical doctors trained and board-certified to address both the normal and abnormal changes of aging and to recognize the difference in the way a disease may develop in an elderly patient. In addition to their backgrounds in internal medicine, geriatricians collaborate with teams of health care professionals to manage patient care and ensure age-related health issues are addressed.

You’ll find geriatricians in long-term and acute care facilities as well as hospitals, medical centers, and private practice.

KNOW ABOUT SUBSPECIALTIES

All geriatricians treat older adults, but some focus on specific disciplines within geriatric medicine, including nursing, pharmacy, surgery, psychiatry, social work, and occupational therapy. Geriatricians from multiple disciplines often work together to provide thorough patient care and to ensure that an older patient maintains functional independence.

DEMAND IS HIGH

By 2030, one in five Americans will be older than 65. Too few geriatricians are practicing in the U.S. to meet the needs of an aging population, leaving older adults without specialized care.

Despite their specialized training, geriatricians rank among the lowest paid medical specialists. Some states now offer loan forgiveness and other incentives to encourage doctors to pursue careers in geriatrics in the hopes of meeting the demand for age-appropriate care.

BY THE NUMBERS

7,300
Number of geriatricians currently practicing in the U.S.

3.6
Number of geriatricians per every 10,000 older adults.

700
Average number of patients a geriatrician sees.

30K
Estimated number of geriatricians needed by 2030 to meet the care demands of an aging population.

Need a specialist? Use WebMD’s Physician Finder. Go to webmd.com/findadoctor.
1. YOUR NEW TV SERIES, ALL AMERICAN, TACKLES ISSUES OF RACE, ECONOMIC DISPARITY, AND SEXUALITY. The show handles those issues in such an organic way, issues that are so pertinent today. The stories are set in places that can be stereotyped as extreme, allowing you to look at different sides of them. It’s not just rich, bratty, white kids; it’s not just gang colors. It gives a more accurate and layered side to both.

2. YOU PLAY COACH BILLY BAKER, WHO’S LOOKING TO SAVE HIS TEAM WITH A SPECIALLY RECRUITED, UNDERPRIVILEGED BLACK TEENAGER. Yes, although I relate to Spencer, too [the teen recruit character based on NFL linebacker Spencer Paysinger]. I’ve felt like a fish out of water before: My experience as a black man who speaks a certain way, who has a certain education, who’s dated a white woman, or who’s taken a ballet class. I can speak to it from personal experience.

3. YOU’RE A FOREVER BASKETBALL LOVER. WAS IT TOUGH TO FOCUS ON FOOTBALL? It’s great to have a job that focuses on athletics. Just the other day for work, it’s 8 p.m., I’m walking onto a brightly lit football field, there are beautiful student athletes everywhere. . . . I never imagined that would be one of my random days at the office.

4. YOUR SON WALKER JUST TURNED 9. ARE YOU ENCOURAGING HIM TO PLAY SPORTS? He’s already taken to it on his own. He’s quite gifted at basketball. It’s another dream I couldn’t have asked for—one that makes me really happy.

5. TELEVISION ACTORS LOG LONG HOURS ON SET. DO YOU STILL HAVE TIME TO PUMP IRON? You gotta make the time! Being surrounded by all these young, fit bodies? They give me inspiration. I lift weights, do cardio when I can, and hit the basketball courts with my son.

6. BOTH OF YOUR GRANDFATHERS DIED OF HEART DISEASE. WHAT TYPES OF HEART PROBLEMS DID THEY HAVE? Both my grandfathers had high blood pressure. My mother also struggles with high blood pressure. So I do everything I can do to keep myself fit and healthy.

7. MORE HEART TROUBLE: YOU AND BROADWAY STAR IDINA MENZEL DIVORCED IN 2014 AFTER 10 YEARS OF MARRIAGE. WHAT WAS THE HARDEST PART ABOUT THE TRANSITION? For me, it was very tough. I’m not embarrassed to say it. It continues to be a lesson. I had to re-evaluate my identity—what I thought a father was, a husband was, an actor was. I had to go with those changes, even if they didn’t fit into what I thought life was supposed to be at that time.

8. IS IT TRUE YOUR SON DOESN’T WANT YOU TO HAVE GIRLFRIENDS? HOW’S HE COPING? It’s true! I was grateful for his honesty. He’s so sensitive and feeling. When he said that, I knew it was coming from an honest place. For now, I’m not even thinking about [dating]. I’m just focusing on fatherhood and the new show.

9. DOES GETTING OLDER SCARE YOU? I make jokes on set because I’m the oldest guy. But I’m excited that I’ve learned a few life lessons; I’m a bit wiser. The things I was chasing as a young man? It feels good to no longer worry about those things and to have other concerns. I love having a kid and how my priorities have changed.

10. YOUR THIRD CHILDREN’S BOOK, I LOVE YOU MORE THAN, WAS JUST PUBLISHED. WHAT GOALS ARE YOU STILL CHASING? I’m proud of my spiritual growth. That’s a journey that never ends. And continuing to raise my son. And producing and directing—I’ve opened myself up to those things, too.

—LAUREN PAIGE KENNEDY
HEALTH HEROES

INNOVATIONS IN CANCER CARE

MEET OUR WINNERS

WEBMD.COM JAN/FEB 2019

WITH A WELCOME LETTER FROM SANDRA LEE

SANDRA LEE

AMY ROBACH
Like far too many of you, cancer is an issue that has touched both of us in deeply personal ways. That’s why it was so important for us to start off this year by hosting the WebMD Health Hero Awards Ceremony at the WebMD headquarters in New York. This event celebrates an extraordinary group of individuals who are working tirelessly to improve outcomes and care for people with cancer. As breast cancer survivors ourselves, we’ve met so many everyday heroes who give of themselves and care for patients on a daily basis. We’ve also seen how much still needs to change. The 2018 WebMD Health Heroes drive that change through their insights, courage, and perseverance.

It is with the greatest warmth and admiration that we introduce you to seven amazing people who serve as a source of hope and optimism for us. We’re sure they will inspire you as well. Motivated by a desire to make difficult situations better, each made a conscious decision to act. Frankly, it’s reassuring to hear their stories of ingenuity and dedication. We are at a pivotal moment in cancer research with unprecedented improvements in the way the disease is diagnosed and treated. As a result, more people who get cancer are living longer.

Yet despite these advances, so much more needs to be done. We need better access to screenings, increased awareness and education, improved treatments, and more individualized care. We also need to break down socioeconomic and racial barriers that affect cancer research and advancements. These are the complex problems our Health Heroes are tackling head-on.

The WebMD Health Heroes you will meet on the following pages have faced some of the most challenging health issues and used them as a platform to improve the health care landscape in this country. It is an honor to shine a light on their contributions and hopefully inspire future Health Heroes along the way.

Here’s to great heroes and good health,
EACH YEAR, WE HONOR EXTRAORDINARY AMERICANS WHO IMPROVE HEALTH AND WELLNESS FOR EVERYONE. IN THIS ISSUE OUR WINNERS FOCUS ON CANCER — IN RESEARCH, ADVOCACY, PATIENT CARE, AND MORE. TURN THE PAGE TO MEET OUR HONOREES.
Kathy Bates credits her best friend, Jennifer, with saving her life. On a 2003 trip to Europe, the Oscar-winning actor’s friend told her, “You don’t look right.”

“I’d known her for nearly 40 years, and I figured I’d better pay attention,” Bates says. An ultrasound revealed a mass that turned out to be ovarian cancer.

Bates survived her cancer and was back at work within a couple of weeks. But less than a decade later, she faced another diagnosis—this time breast cancer. Both her mother and aunt had had the disease, and her aunt had died from it. A double mastectomy rid her of the cancer, but the removal of 39 lymph nodes left her with a painful complication called lymphedema. “My arms swelled to almost twice their size. I could only wear men’s shirts,” Bates says.

Her experience led her to become a spokesperson for the Lymphatic Education & Research Network (LERN), an organization that promotes lymphedema awareness and research. With LERN, she has pushed to educate the medical community about lymphedema and pressed for legislation to ensure that hospitals inform patients about the risks before they undergo surgery. “My ultimate goal is to educate the entire medical community,” she says. “This has been a huge uphill climb for all of us. It’s not over. I feel like we’re just getting to base camp.”

She’s also signed on as an executive producer of the HBO documentary *Rx Early Detection: A Cancer Journey with Sandra Lee*, which chronicles Lee’s journey through her own breast cancer treatment. “This is our way to honor the women who have died, and to say thank you for surviving,” Bates says.

**KATHY BATES**

**Actor**

Kathy Bates credits her best friend, Jennifer, with saving her life. On a 2003 trip to Europe, the Oscar-winning actor’s friend told her, “You don’t look right.”

“I’d known her for nearly 40 years, and I figured I’d better pay attention,” Bates says. An ultrasound revealed a mass that turned out to be ovarian cancer.

Bates survived her cancer and was back at work within a couple of weeks. But less than a decade later, she faced another diagnosis—this time breast cancer. Both her mother and aunt had had the disease, and her aunt had died from it. A double mastectomy rid her of the cancer, but the removal of 39 lymph nodes left her with a painful complication called lymphedema. “My arms swelled to almost twice their size. I could only wear men’s shirts,” Bates says.

Her experience led her to become a spokesperson for the Lymphatic Education & Research Network (LERN), an organization that promotes lymphedema awareness and research. With LERN, she has pushed to educate the medical community about lymphedema and pressed for legislation to ensure that hospitals inform patients about the risks before they undergo surgery. “My ultimate goal is to educate the entire medical community,” she says. “This has been a huge uphill climb for all of us. It’s not over. I feel like we’re just getting to base camp.”

She’s also signed on as an executive producer of the HBO documentary *Rx Early Detection: A Cancer Journey with Sandra Lee*, which chronicles Lee’s journey through her own breast cancer treatment. “This is our way to honor the women who have died, and to say thank you for surviving,” Bates says.
Losing his mother to lymphoma and two uncles to melanoma and lung cancer taught James P. Allison, PhD, a difficult lesson at an early age. “My mother was treated with radiation and my uncle, who had lung cancer, was treated with chemotherapy. I saw the ravages of those treatments, which ultimately were unsuccessful,” he says.

Allison knew he wanted to work in cancer research, developing more effective and less toxic therapies. An undergraduate immunology course at the University of Texas at Austin sparked his interest in T cells—warrior cells of the immune system that defend the body against infections and cancer.

In October, Allison won the 2018 Nobel Prize in Physiology or Medicine jointly with Japanese immunologist Tasuku Honjo, MD, PhD. Allison has spent more than 30 years studying how T cells work and what turns the immune response on and off against cancer.

In the 1980s, he discovered the T-cell antigen receptor, which he describes as the cell’s “ignition switch.” A few years later, he showed that a molecule called CD28 acts as the “gas pedal.” Finally, he found that CTLA-4, a protein on the surface of T cells, is the “brake,” signaling the immune system to stop the millions of T cells from attacking the cancer.

The next step, he says, was to prevent the brakes from engaging—“to give the T cells time to keep going and eliminate the tumors.” Allison’s work led to the development of drugs called checkpoint blockade antibodies, including ipilimumab (Yervoy) for melanoma. “When we started this work, the median life expectancy with metastatic melanoma was 11 months, and no drug had ever changed that,” he says. Among people treated with Yervoy, more than 20% are still alive three years later, and some have survived 10 years.

New drugs targeting another off-switch, PD-1, have since been developed to treat cancers of the head and neck, lung, kidney, and bladder, among others. Now Allison’s lab is studying different combinations of checkpoint blockades to see which patients will respond best to them. “I don’t think these approaches are going to replace any of the traditional therapies,” he says, but, “I think that soon, immunotherapy is going to be part of every successful cancer therapy.”
You could say politics is in Margaret Cuomo’s DNA. Her late father, Mario, was the 52nd governor of New York, and her brother Andrew currently holds the position. Yet from an early age, Cuomo’s passion was medicine. She entered the radiology field in the 1980s, when imaging technologies like the CAT scan and MRI had just entered the medical arena. “It was so exciting to me that there were these new tools that could enable physicians to pinpoint the diagnosis in a way that had never been done before,” she says.

That decade also brought a flood of cancer patients, many of whom were diagnosed with late-stage or aggressive cancers. “It seemed like we were not ahead of the game, we were behind,” Cuomo says. “We were losing too many young, productive lives. After a while, I reached a critical tipping point where I said to myself, ‘We must be able to do better.’”

In 2013, she wrote A World Without Cancer, a book focused on the power of cancer prevention. “There are many strategies within our control every day, from the moment we wake up to the moment we go to sleep,” Cuomo says. She points to several, including a plant-based diet, physical activity, good quality sleep, stress management, smoking cessation, and sun protection. “These are messages that we can start offering our young people and carry right through the lifecycle,” she says.

Cuomo also pushes for prevention as a leader in two nonprofit organizations: TrueHealth Initiative is a coalition of experts promoting lifestyle as medicine, and HeritX aims to prevent inherited cancers linked to the BRCA gene mutation. She believes that with initiatives like these, a world without cancer is possible. “When you get brilliant minds together and they’re focused and dedicated, amazing things can happen,” she says.
At age 8, Elizabeth Jaffee, MD, lost her great uncle to lung cancer. “It really hit me hard that somebody I knew and liked was dead,” she says. That loss, and tagging along with her aunt to American Cancer Society fundraisers, planted the seeds of a career in cancer research.

As a Brandeis University undergraduate in the late 1970s and early 1980s, Jaffee became fascinated with immunology—a burgeoning area of medical research using the body’s own defense system to fight disease. “I had always thought the immune system could recognize cancer and kill it. Even though it was early in that concept, I was reading some hypotheses,” she says. “It got me very excited. I started thinking, ‘I’m going to become an oncologist.’”

At the time, chemotherapy was one of the few weapons doctors had against cancer. Chemo offered patients a little more time, but at the steep price of toxic side effects. Jaffee devoted her research to developing immune therapies that would improve the outlook for cancer patients without making them sick. “Not only did I want to give people hope, I didn’t want to cause them discomfort. I wanted to give them hope with a good quality of life,” she says.

One focus of her research is on vaccines that activate the immune system to track down and destroy cancer. Jaffee holds six cancer vaccine patents—including ones for pancreatic, colon, and breast cancers. She’s also working on custom-designed vaccines that target specific mutations in patients’ tumors and on a new therapy to slow the spread of pancreatic cancer.

Jaffee says research has turned once-deadly cancers into chronic diseases. She hopes future innovations will make more cancers manageable, and one day even preventable. “That’s a little bit longer goal, but I think it’s achievable.”
LILLIE SHOCKNEY, RN
Administrative director, Johns Hopkins Breast Center and Johns Hopkins Cancer Survivorship Programs

When Lillie Shockney was 3 years old, her mother bought her a nurse costume from Sears. “I lived in it until I bust the seams,” she says. Soon afterward, tonsillectomy surgery led to an unpleasant encounter with a real member of the profession. When Shockney cried for her mother, the nurse on duty told her to be quiet. “I thought, ‘I want to be the opposite of the nurse I saw that night”—someone who would hold my hand and comfort me,” she says.

In 1983, Shockney joined the Johns Hopkins department of neurosurgery as a clinical and research nurse working with glioblastoma patients. Less than a decade later, she was faced with her own cancer diagnosis, undergoing two mastectomies for breast cancer. Instead of wallowing in grief, Shockney found the humor in her situation. “I knew I was going to have a breast prosthesis. I named her Betty Boob and sent out adoption notices,” she says. The experience led her to volunteer at the Johns Hopkins Breast Center, counseling newly diagnosed patients. That soon turned into a full-time job.

Shockney’s work made her realize that hospitals were more focused on treating the cancer than the patient. “I got weary of saying, ‘I’m so sorry you’re not going to be here for your daughter’s wedding. She’s only 9 years old,’” she says. “That doesn’t fix anything. What can I do to help?”

Shockney helped by creating three-day retreats for women with metastatic breast cancer. At these events, she encourages women to make written and video messages for their children and talk about impossibly uncomfortable subjects—including their final days. “We give them hope that the thing they fear most is nothing to be feared,” she says. She’s also written 16 books and gives about 30 talks a year offering advice to people navigating a cancer diagnosis.
When Canadian folk singer Kate McGarrigle died in 2010, Rufus Wainwright lost both his mother and his biggest fan. “She was the force behind my talent,” says the Grammy-nominated singer/songwriter. “She was a great musician, and I think she realized early on that I had the ability and the drive and the ambition, and she made sure to steer me into the pursuit of excellence.”

McGarrigle’s cancer—clear cell sarcoma—is as rare as it is deadly. Buried in her small intestine, it was undetected for several years. “It got periodically worse, and finally we knew that something was wrong, but by then it was too late,” Wainwright says.

Before McGarrigle died, she started a fund to raise money for sarcoma research. “She started this not so much to save herself. I think she knew deep down that she wasn’t going to win this one. But she really felt for the young people she saw at the hospital and wanted to work to help them,” Wainwright says.

He and his sister Martha continued their mother’s initiative, founding the Kate McGarrigle Foundation in 2012. To finance the foundation’s research grants, the family hosts concerts—including an annual Christmas show called Nöel Nights.

The foundation has also partnered with Stand Up To Cancer to fund music therapy for cancer patients, which Wainwright considers another way to honor his mother’s legacy. “Once she was diagnosed, music became an incredibly important factor in her quality of life,” he says. “So we also support artists who on the one hand need medical care and housing, but also need a creative outlet to interpret what’s happening to them.”
KAREN M. WINKFIELD, MD, PhD

Radiation oncologist, director, Office of Cancer Health Equity, Wake Forest Baptist Comprehensive Cancer Center

Patient care is an integral part of the job for a radiation oncologist. Yet nothing prepared Karen M. Winkfield, MD, PhD, for caring for her husband, Jeffrey Walker, when he was diagnosed with type 2 diabetes in 2003. “His doctor said, ‘You have diabetes and hypertension and here are three sets of medicine you need to take,’ and he walked out of the room,” she recalls. “Being on the other side of the table and having to watch an individual who was brilliant and who understood his body struggle to navigate through a health care system that often becomes impersonal made me want my patients to have a very different experience.”

Winkfield has since devoted herself to advocacy, gently guiding her patients through the often-frightening cancer journey. “I try to make sure that every single patient I’m treating understands the diagnosis, understands why I’m recommending the treatment I’m recommending,” she says. “Then I try to simplify things for them.”

She also works to eliminate racial disparities and barriers to care at Wake Forest as chair of the American Society of Clinical Oncology’s Workforce Diversity Task Force. “Workforce diversity is a big passion of mine,” she says. “How can we make sure that patients are being cared for by people who look like them, or have similar experiences?” Geography can be a barrier, too, which is why Winkfield reaches out to underserved rural communities with smoking cessation and cancer-screening programs.

As the youngest of six in a family of Jehovah’s Witnesses who shunned formal education, Winkfield learned the importance of mentoring. Many of the medical students she advises are, like her, the first in their family to attend college. “Having people who were there to help support me through my journey was really critical,” she says. “So I take my experience through that difficult process and pour that into my mentees.”
KAVYA KOPPARAPU
Inventor

Before graduating from high school, Kavya Kopparapu invented the Eyeagnosis 3D-printed lens system and mobile app to diagnose diabetic retinopathy—a diabetes complication that can lead to blindness. She also founded GirlsComputingLeague, a nonprofit organization that holds computing and science workshops for girls in underfunded schools. And she hosted her own artificial intelligence (AI) summit, bringing together industry leaders and students to introduce a new generation to this groundbreaking technology.

Now 18 and a student at Harvard University, Kopparapu has a second AI summit under her belt and a summer internship with the Core Machine Learning team at Apple. She’s currently testing out a new technology she’s developed to diagnose the deadly brain cancer glioblastoma. GlioVision uses a scanned biopsy image to give oncologists detailed information about a tumor faster and less expensively than current DNA-based methods. “I found my niche in using computer science to make biological technology more accessible,” she says.

LAUREN SINGER
Investigator

Lauren Singer’s older sister, Jodie, first inspired her to work with kids who have developmental disabilities. Jodie has autism, which affects her communication and social skills. While in high school, Singer spent two summers interning in the New York laboratory of autism researcher Joseph Buxbaum, PhD, investigating new methods to diagnose and treat the condition.

Singer is now 20 and a sophomore at Yale University studying cognitive science. She continues to do research, but she has broadened her interest to include other childhood developmental disorders. This past summer, she interned at the Child Mind Institute in New York, working with children who have ADHD and selective mutism—a condition that makes kids anxious to speak in certain situations.

Her internship solidified her goal to become a pediatric psychiatrist/researcher. “This confirms that not only do I want to be doing research, but also directly providing therapy to patients, and especially to pediatric patients,” she says.

CHLOE FERNANDEZ
Advocate

At age 9, Chloe Fernandez wrote and published *PCD Has Nothing on Me!*, chronicling her life with the rare inherited lung disease primary ciliary dyskinesia (PCD). “I wanted other kids to feel that they weren’t alone and they could do anything they set their mind to,” she says.

Now 11 and in sixth grade, Chloe is at work on her second book, which is about her life in the public spotlight. She continues to use her fame and social media platforms to raise awareness and money for PCD.

In addition to writing, Chloe has been taking surfing lessons, studying piano and ukulele, and learning American Sign Language. She also acts and models, and was recently featured in a commercial for the California Department of Health. “In everything she does, she wants to show that even though she has a disability, she’s not disabled—she’s differently abled and extremely capable of achieving all she sets her mind to,” says her mom, Leslie Mota.

“I want to be known as more than the PCD girl,” Chloe says. “I don’t want to forget that I live with the disease, but I can also do all these other amazing things.”

DONNA MAGID, MD, MEd
Mentor

In 1996, radiologist Donna Magid, MD, MEd, was unexpectedly thrust into the role of teacher when a Johns Hopkins colleague called in sick. Students soon started coming to her for advice, which Magid was more than happy to dole out. The mentor role stuck, and today she advises students from their first day of medical school until they leave for their residency.

To help students ace their med school classes and get through the difficult residency application process, she’s developed two tools—TeamRads and Apps of Steel. She regularly updates them, she says, because “I don’t want them to get old. I want them to continue to be relevant.”

Her WebMD Health Hero win not only provided her with much-needed funding for these projects, it also gave her more credibility. “Educators and mentors don’t get much positive feedback and support,” she says. “The award gave me some reinforcement that I actually know what I’m doing. And it reminds people who are interested in education and mentoring that they’re important.”