For most of the past two million years,

men and women needed strength for basically one reason: to not die. But as horse, machine, and computer power slowly replaced man power, the meaning of strength began to evolve. Now being strong has more cultural and social implications than ever. The connection between mind and body, and body and self-esteem, is complicated and intimate in ways our forebears couldn't imagine. Doctors and scientists are learning more about the health and longevity benefits of muscle, and even the





STRENGTH IS FOR MOVING BIG THINGS

ROY SIMS, IT guy, U.S. sumo champion, brick shithouse 6'5" / 385 pounds / 37 years old

"SUMOS ARE much more athletic and fit than people expect. We often carry a lot of fat, but it's on top of a very solid, muscular structure. It's just a different body style. We need strength, speed, balance, and flexibility.

Because in my sport I'm trying to quickly move a human who is my own weight, I do a lot of explosive lifts using weights equal to my bodyweight. I'll put 360 on the bar and do five back squats, front squats, or hang pulls. I keep the weight low and the intensity high. I try to make the bar move as quickly as possible. I also do yoga, jujitsu, Greco-Roman wrestling, play basketball—I can dunk.

I won a national championship at 380 pounds, and I've competed at 395. B ut I like 360. I feel like I'm faster and just as strong. And my energy level in my daily life is better. What's it like to be 6-foot-5, 385 pounds? I don't get to have a style. When I'm able to find a pair of shoes or pants that fit, that's what I have to buy. I had to put my work desk on blocks, and I used an oversize office chair. I've always wanted to work on cars, but I can't get my big hands in the engine very well.

That moment when we squat down before a match, some guys use it to intimidate or stare down the other guy. I always look right at my opponent's heart and empty my thoughts. I completely relax and stay in the moment so I can react better and not anticipate how the match will go. Sometimes we start and we have a big clash, and other times I'm able to move the guy like butter. I'm never trying to hurt the person. I'm trying to manipulate their body with force."

STRENGTH CHECK NO. 1

WHAT IS THE MINIMUM EFFECTIVE DOSE OF WEIGHTLIFTING?

The Department of Health and Human Services now suggests adults do two sessions per week of muscle-strengthening activities that involve all major muscle groups. "If your goal is the absolute least amount of work possible," says Alwyn Cosgrove, C.S.C.S., a *Men's Health* advisor and co-owner of Results Fitness in Newhall, California, "then this ten-minute, two-exercise superset hits everything." Do it twice a week. Do one warmup set of each exercise with a light weight. Then do two sets of each exercise with a challenging weight.

SQUAT TO SINGLE-ARM PRESS

Standwithyourfeet hip-width apart, dumbbells atyour shoulders. Keepingyourchestup, bend at the knees and pushyour butt back until your thighs are parallel to the floor. Push backup, then squeeze your glutes. Tighten your core, then press the right dumbbell overhead. Pause, then lower it back to your shoulder. That's 1 rep; do 12. alternatingshoulder presses every rep.

RENEGADE ROW WITH PUSHUP

Get in pushup position, with your hands on dumbbells. Keeping your core and glutes tight, lower your chest to the dumbbells, then press backup. Now, without shifting your hips, lift the right dumbbell and row it toward the right side of your rib cage. Pause, then lower. Lifttheleftdumbbell $and \, row it to \, the \, left \, side$ of your rib cage. Return to pushup position. That's 1 rep; do 12.

LIVING LONGER

JOHN NAGY, retired correctional officer, pushup king 5'6" / 154 pounds / 101 years old (yes, 101)

THE MAN LIVES for exercise "I've always been active and involved in sports," savs John Nagy, a chirpy 101-year-old. "And I love the social part of training." Nagy is in a crew of about 30 mature swolesters, all over 70, who train daily at the Physical Activity Centre of Excellence (PACE) gym at McMaster University in Hamilton, Ontario. They provide the oomph in an ongoing research project on strength and longevity, spearheaded by Stuart Phillips, Ph.D., the director of PACE and a professor of kinesiology. "The data shows that being strong is as big a mediator in terms of

long-term health as anything," he says. "Muscle is protective against cancer, it enhances survivorship in people with cancer, and it reduces the risk of mortality in people with hypertension, diabetes, and metabolic syndrome." A new JAMA study revealed that if you can do 40 or more pushups in a row, you're 96 percent less likely to deal with heart problems in the next decade than someone who can't do 10.

Phillips expects that in five years the government recommendation regarding strength training will be beefed up: Instead of suggesting two strength sessions per week, it

will recommend three to five. "Strength really is a buffer to mortality," he says. "And more importantly, it extends your health span, so you can maintain a higher quality of life for longer." Starting around age 40, most people begin to lose muscle mass. It's imperceptible at first but accelerates to about a pound per year by the time you're 50. It's easier to mitigate the slope of that decline by training more when you're younger than it is to try to rebound when your muscle has wasted away.

Nagy is living proof of that. He's 5-foot-6 and a solid 154 pounds—around the same weight he has always been and has trained regularly for the past 70 years. The standing cable press and pushup are his favorite exercises, and he does them in workouts that tend to last about 90 minutes



but include lots of recovery time spent joshing with his squad. Nagy took a tumble two years ago, breaking his arm and knocking out a few teeth. "Being strong helped me recover better," he says. "I can still walk as well as I can because I train."



BREAKING A BRONCO

STEVEN DENT, rancher, shunner of saddles 5'9" / 175 pounds / 33 years old

"I GREW UP on a ranch in central Nebraska. Certain times, like in the spring and fall, you're never done working. You might get one hour of sleep. You get up early, get your day started, and you go to work. Moving big feed bags, fencing, all that. Like digging post holes—that's all core and shoulders all day. It's physical labor and actually pretty good training for riding bareback.

I got into rodeo early. I started out riding sheep, calves, and steers and eventually bulls. Then I started getting on bucking horses. Bareback riding just felt the most natural to me. Well, about as natural as riding a bucking 1,200- to 1,500-pound horse for eight seconds can feel.

You gotta squeeze the riggings to keep your hand in so you stay on. It's all grip, shoulders, back, and core. And with your legs you're squeezing but trying to feel for the horse's timing so you can move with him. You're never going to outmuscle the horse. Every jump, those horses are trying to snap you off, and your head, shoulders, and neck feel like they're the popper at the end of a whip.

I made my first national finals at 21 and had my first real chance at a title at 22. I blew it. But last year I tied for first. I'm 33 now, and the older I get, the more time I have to put in the gym. I dang sure get some core work in every day. I torture that muscle group—not many situps, but a lot of bicycles, scissors, lea drops, and 12 or 15 minutes of planks every day.

I've spent so much of my life on horseback. at the ranch and in rodeo, that I know how the horse is going to move in any situation, and I've built the strength I need to react. Now I use that strength, experience, and confidence to my advantage."

SHOWING WHAT YOU'RE MADE OF

MILES TAYLOR, photographer, strongman, viral Instagram star 5'8" / 99 pounds / 24 years old

NICOLAI MYERS, a national strongman champion, wasn't sure whether the kid's shaky, 99-pound body could handle the 30-pound medicine ball. But he asked him to try to lift it anyway. The kid, Miles Taylor, a 24-year-old photographer from Carroll County, Maryland, quaked, flailed, and shook as he bent over the ball, attempting to encircle it with his hands and bring it up to his chest. Attempt one: fail. Attempt two: fail. Three, four, and five: fail, fail, fail.

Taylor has cerebral palsy, a condition that makes your muscles a mess. They become too loose or too tight, spasm, lack coordination, and do anything and everything you don't want muscles to do when you're trying to lift weight. At best, cerebral palsy affects just one limb. At worst, you live in paralysis and can hardly communicate. Taylor is in the middle: He can walk and talk, but it's imperfect, and he had to go through extensive childhood therapy to do so.

Learning the lift was like figuring out a puzzle. Taylor slowly pieced together each requisite movement—hinging at the hips, bending the knees, stabilizing the spine, clasping the fingers, and straightening the knee and hip joints—into one, bringing the ball off the ground and up to his chest. "That's when I got bit with the strongman bug," says Taylor. He had shown up at NeverSate, a Maryland gym, to photograph a competition, but he left a member. That was a year ago.

"The hardest part of working out for me has been control," says Taylor. "I have to focus on every muscle and every movement to do any lift." His first time deadlifting, for example, Myers had to steady Taylor from falling as he practiced form with an empty 25-pound bar. "His body will never be able to get in the traditionally correct position for most lifts," says Myers. "So with every lift, we go to the drawing board and figure out where he's the strongest and most stable so he's safe."

Taylor first came to the gym once a week. But within a few months, he was adaily visitor. "I now realize the strength I have and want to keep getting stronger," he says. "I'm a very competitive person." In the winter, Taylor hunched over a barbell and ground out a 200-pound deadlift, sharing the video with his Instagram followers. The video took off. What the world didn't see in the 30-second clip was that Taylor's gym strength has benefited his daily life. "When I photograph activities, I'm much more stable and have more endurance," he says. Simple tasks are easier, too, like moving a pot of water to the stove, and other things people take for granted.

Fine movements are still tricky. "He has a harder time putting on his lifting belt than he does deadlifting 200 pounds," says Myers, causing Taylor to laugh. But he's got help for that anyway. "The gym's community is like my second family," says Taylor. "We do group workouts, and the atmosphere is amazing. It pushes me to keep working." Taylor's next challenge: lift a 100-pound concrete stone and carry it across the gym, says Myers. "He just keeps getting stronger."





ARE YOU STRONG?

You don't have to be able to bench-press as mall planet. Take this test to find out if you have the strength every guy needs. That's MH strong.

1 3-MINUTE MAX HAND-RELEASE PUSHUPS

Doasmany pushups as you can. On each pushup, lower your chest fully to the floor and lift your hands off.

<30: 1 point **30-80:** 2 points

81+: 3points

2 2-MINUTE BODYWEIGHT REVERSE-LUNGE TEST

Do as many reverse lunges as possible. On each rep, your back knee should touch the ground. Count total reps for this, not reps per side.

<30: 1 point

30-55: 2 points

56+: 3 points

3 WALL-SIT

Sit with your back to a wall and your thighs parallel to the floor.

0:30-0:45: 1 point

0:46-1:00: 2 points

1:01+: 3 points

4 SIDE PLANK MAX HOLD

Holdastraight-arm side plank for as long as you can on each side. Add up your time.

0:45-1:00: 1 point 1:01-2:30: 2 points

2:31+: 3 points

5 THE TURKISH GETUP

Lie on your back with one hand directly overhead, holding a paper cupfull of water. Get up off the floor without letting your arm come belowyour head. Once you can do it with a cup of water, try a 12 kg kettle bell.

CAN ONLY GET HALFWAY UP WITH BODYWEIGHT:

1 point

FULL GETUP WITH CUP: 2 points FULL GETUP WITH WEIGHT: 3 points

MHSTRONG SCORE

0-5: Keep working; train 3times aweek. 6-12: Now we're talking.

13 OR MORE: Yes. Go out and crush life.





FIGHTING CANCER

RHETT BOWLDEN, border-patrol agent, survivor; 5'8" / 200 pounds / 39 years old

FIVE DAYS AFTER a golf-ball-sized $can cerous\,tumor\,was\,removed$ $from \, the \, inner \, workings \, of \, Rhett$ Bowlden's ass, the man got that ass back into the gym. "Just for some fan-bike work," says the 39-year-old, who was diagnosed with stage III colon cancer in January.

This was a natural follow-up to the reps he'd done in the ICU of PeaceHealth St. Joseph Medical Center in Bellingham, Washington. "After surgery, they wanted me up and walking," says Bowlden. "There was a little chart on the wall, and it said that 21 laps around the hospital floor was one mile. I'd do 21 laps every time I got up to pee."

The odds of a 39-year-old male developing colon cancer are about 1 in 10,000, which means Bowlden possesses what you can, without exaggeration, call shit luck. But how a man lives before, during, and after a big-C diagnosis influences how he plays the bad hand.

You have a 40 percent chance of developing cancer sometime in your life. Will your workout alter that figure? Doctors don't know. But they do know that it can help you survive a diagnosis. Cancer patients with low muscle lived half as long and were 150 percent more likely to experience toxic chemotherapy side effects, according to a study in The Lancet Oncology. Another study found that postcancer patients who did high-intensity weight training three days a week for 16 weeks reported having more energy, better physical function, and a higher quality of life.

Two years before the doctor gave him the news, Bowlden was 40 pounds overweight and embarrassed about it. "I was ashamed to go out and do things with my family because of my appearance," he says. "At work I'd get winded just bending down to pick up casings during firearms training." He set a handful of lofty fitness goals: reaching a sub-seven-minute 2,000-meter row, deadlifting double his bodyweight, and completing 15 strict pullups.

With five hard hours in the gym each week for one year, he made progress-taking 1:10 off his 2,000-meter row time and adding 80 pounds to his deadlift for a 410-pound max. The physical achievements strengthened the gray muscle inside his skull even more than those from his neck down. "Everyone tells themselves they're going to beat cancer," says Bowlden. "But because of what I've done with my physical fitness, I now actually believe myself when I say that."

SAVING THE DAY

JAMES SHAW JR., electrician, fighter 6'2"/203 pounds / 30 years old

"MY FRIEND BJ and I leave this lounge in Nashville around 2:50 A.M. We're hungry, so we go to a Waffle House. We sit at the counter, and there are people over my right and left shoulders in booths. We can see the cook in the back. He's washing dishes and he's stacking clean plates on the cooktop.

Then we hear this bang, what we think is the plates crashing to the ground. But in my right periphery I see a man fall to the ground; then I hear a huge boom and one of the restaurant's windows explodes like glitter being thrown into the air. Someone is shooting from outside into the restaurant.

People have been hit. Everyone ducks and takes cover and goes frantic. Some people flee into the bathroom, others into a back hall. I jump up and get behind a silver swinging door that leads back to the kitchen. As

I'm moving, I can see the person enter the restaurant holding an AR-15 rifle.

He's shooting. He shoots toward me and one shot grazes me. Then the shooting stops. The shooter is changing his clip. And in the moment, I have this feeling of total relaxation, the most relaxed I've ever felt.

And I have this voice in my head telling me that I need to make a difference. I run right at the shooter. I knock him back. Then we start tussling for the gun. I work out, and before this my frat brothers and I had really focused on lifting weights five times a week and getting into good shape. We were preparing for a beach trip to Miami. That training comes into play.

I'm able to get my left hand around the shooter's throat. With my right hand, I grab the barrel of the gun—it's hot and it burns me—and I point it down toward the floor. Then in one motion I let his neck go, grab the gun, twist the gun, and quickly push it up to get control of it.

The shooter grabs me, but I'm able to throw the gun far over the counter. I then grab him and push him and myself out of the restaurant's door. I take him to the ground and then run away, because I don't know if he has another gun.



The shooter takes off into the woods (and is later apprehended). I ask someone in a car to please, please, please call the police

Then I go back into the Waffle House to find BJ and to help people. It's unbelievably quiet. I see a man bleeding from his gut, another man shot in his head. There's another man lying facedown and not moving.

I find BJ. People around us were shot multiple times. There ended up being four victims who passed away from their wounds.

The whole incident took 42 seconds, and the shooter shot 30 times. He had two more clips with 32 shots each. I still work out five times a week."

FINDING BALANCE

EDDIE HALL, national yoga champion, pretzel 5'10" / 165 pounds / 40 years old

"IPLAYED high school football and ran track. I've always been athletic. But my first Bikram yoga class was just so physically exhausting. I had to sit during a few postures. Iloved the challenge. I came right back the next day and have kept coming back. That was 2009.

Only half of competitive yoga is about flexibility. The other half is strength. I'm now 40 and won the national championship in 2017. I do yoga five or six days a week, but I also strength-train a few days. I usually dototal-body workouts, 12 to 20 reps. I need muscle endurance so I can contract my muscles to maintain stillness and balance in the postures.

Every yoga posture has a corresponding inhale and exhale. I do the same breathing practice with lifting. For instance, if you're doing a curl, you inhale as you lift and exhale as you lower. Moving with your breath helps you better lengthen or contract the muscle, which gives you better results.

If you're making weird faces while you're lifting or doing yoga, it's a sign you're not breathing right. That's going to throw off your form—if you're straining your face, you're straining your joints, too. Instead, relax your face and breathe in and out deeply through your nose.

Holding a challenging yoga pose while breathing steadily has also taught me to stay calm and breathe through uncomfortable situations in my everyday life. It's made a huge difference in helping me raise my nine-month-old son and also deal with annoyances like crazy traffic or conflicts at work. It helps me stay out of a negative mind-set."





OVERCOMING THE DARKNESS

KC MITCHELL, veteran, dad, powerlifter 6'0" / 242 pounds / 34 years old

KC MITCHELL hit rock bottom at the Happiest Place on Earth. Disneyland, 2013: The now-34-year-old Army veteran and amputee—IED, Kandahar province, Afghanistan—had planned three days with his wife and daughter in the park. But his pain was inescapable. Day one went like this: stand in line, feel that raging pain, get anxious, sit and sulk, eat more Oxy, repeat.

Which wasn't surprising. Mitchell had spent the past year in a hole. He would mostly play video games alone at home while eating Doritos and OxyContin with a Rolling Rock back, a habit that rendered him a sorrowful, unable, addicted mess.

So they cut the trip short, the visit that was meant to celebrate his daughter's second birthday. "And it just upset me so bad," says Mitchell. "I wasn't living up to the person and dad that I wanted to be."

A quarter of Iraq- and Afghanistanwar veterans return stateside with post-traumatic stress disorder, the symptoms of which include depression, self-destructive behavior, irritability,



and addiction. That percentage, however, doesn't apply to amputees, 66 percent of whom show symptoms of the condition.

"Disneyland was my reckoning," says Mitchell. "I remember getting back to the house and flushing every single narcotic. I just accepted that I'm always going to be in pain, and that was that." Three days of crawl-out-of-your-skin withdrawal followed, after which Mitchell used that magical momentum from newfound sobriety to carry himself into a gym.

"I was insecure. I wore sweatpants to cover my leg," he says. But he began showing up every day, eventually making friends whom he told to "make sure I'm coming here." Within several months, he was walking stronger. "I didn't have that little hitch in my step, and I was just feeling better," he says. With his daughter's third birthday looming, it was time to face that mouse again.

"I paid for the trip up front," he says.

"And I kicked Disneyland's ass for three days straight." Iron and the act of moving it pulled Mitchell out of holes both physical and mental, strengthening his outlook and wounded body. Science backs his experience: New research suggests that strength training is one of the best ways to treat depression.

In 2015, he caught wind of competitive powerlifting, a sport in which you bench, squat, and deadlift as much weight as possible. The idea of a one-legged dude doing heavy, lower-body compound lifts yielded bewildered looks, but Mitchell didn't care. He went to that gym every day.

Squatting was the hardest. "It was something that had been so easy to do," says Mitchell. Squatting big numbers requires "spreading the floor," pushing laterally with your feet and bending at the ankle as you lower the weight, which is not easy to do with a prosthesis. It took him a year to be able to use regulation form, where your hips drop below your knees.

In 2017, Mitchell became the first amputee to compete in a full powerlifting competition; he squatted 435, benched 424, and deadlifted 600 pounds. "I'm doing things I never thought I'd be capable of doing when I first got blown up," he says. His journey has him rethinking the PTSD label. "I've been through some shit. But I hate the label PTSD, because it makes me sound like I have an incurable virus. I call it post-traumatic self-growth instead."

FORGING CONFIDENCE

RYAN DONAHOO, account executive, burpee fanatic 5'9"/160 pounds / 31 years old

"I HAD A SUPERATHLETIC upbringing. I swam and played water polo on the girls' varsity team into my senior year of high school. I knew at puberty that something wasn't right, but I didn't know that there was a name for it. I decided to run away from home. And then the Internet kind of blew open my world—I was dealing with the fact that I am transgender.

Back then, in 2006, I found an endocrinologist who issued me testosterone, but it really takes a toll on your body. My appetite increased, and I stopped working out to focus more on, like, just becoming myself. I gained a lot of weight. But I also felt better. Transitioning is not like you just take a pill and then you're done. It's a long process. I've been going through it for 13 years. Eventually I got top surgery. I'm 31 now.

Working out had always seemed impossible without hiding my body, but after surgery I no longer had an excuse. So that's when I started doing my own little lifting workouts at the gym. But I didn't really have the skills or tools to achieve results. And the weight-room environment can be very intimidating. To be a transperson standing among a bunch of men huffing and making noises in front of the mirror is not comforting. The locker room is another scary place.



Last year I signed up for a six-week fitness challenge at the Queer Gym in Oakland. Finding the right gym for yourself is so important. In the Queer Gym, I feel like no one is judging me. After the first month or two of classes four days a week, my body started to feel really light. I feel the change most in bodyweight exercises—when I'm going on those, I can really tell how strong I am now, and how far I've come. It sounds ridiculous, but I love burpees. My energy level went way up. I'm now a manager at Olo, a Bay Area company that provides back-end support for restaurants. My attention span, my focus, and my general well-being and feeling of self-worth went way, way up."



LIFTING YOURSELF UP

C.J. BELLAMY, HR coordinator, adaptive athlete 6'3"/160 pounds/29 years old

ONE HOT Orlando night in 2006, 17-vear-old C.J. Bellamy was out on the town with his basketball team when they ran into some punks, one of whom took out a .45 and squeezed the trigger. A lone bullet entered Bellamy's shoulder, nicked his spine, and exited his chest. He hasn't moved his leas since

"When they first told me I was going to be in a wheelchair, I was like, 'Nah, I'm going to be walking back on the basketball court doing my thing again soon." says Bellamy, now 29. "But that didn't happen, and my mind went to dark places for a while. I stayed in my house. I didn't do anything at all." But soon

his family was on him: WTF are you doing, man? You're partially paralyzed, not dead.

So he rolled himself out into the world and found he could still ball, picking up wheelchair basketball. He then began trying out local gyms, ending up at Orlando's SOCF CrossFit, which also had a program that specializes in training athletes with spinal-cord injuries.

"I was already doing basic pullups and stuff, but they introduced me to so many different new movements," says Bellamy. During his first workout, he learned how to do a ring muscleup, where he'd pull himself from the floor to shoulder level with a pair of hanging gymnastics rings and then explosively flip his body above them. Next he practiced clean and jerks, bar overhead presses snatches and more. It was at once a physical assault and a revelation.

"From then on I've just been pushing myself to see how far I can go," says Bellamy. His pullup maximum, for example, has gone from 5 to 20, while

his numbers for exercises that carry over to his everyday life keep rising. "It's giving me more energy and making daily things easier—transferring in and out of my wheelchair to my office chair or car lifting things, moving around."

When he's not training, he explores the world with his three-vear-old niece. "She loves to run around and go outside," he says. "Training has given me the strength and endurance to keep up with her—I can push through a lot of areas that aren't really handicap accessible." And that's turned the tables: Bellamy is now the one pushing his family to get outside, be more active, and meet people, he says.

"Some people in a wheelchair aren't social because the wheelchair is like a barrier," he says. "But I feel more comfortable, and I'm more social now. In a lot of ways, I'm more able than I've ever been."

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