

Exercising judgment: The psychology of fitness

January 9 2008

It's only been a few weeks since you made that New Year's resolution to exercise more, but already you're finding reasons to skip days — maybe even weeks.

You know all the benefits of a healthy lifestyle: In addition to the weight loss, which would obviously be nice, exercise has been linked to reduced depressive symptoms and reduced risk for heart disease. Yet the temptation of sitting on the couch and watching TV instead of going for a short jog is just too great.

You're not alone. According to the surgeon general, more than 60 percent of American adults don't exercise regularly and 25 percent aren't active at all. The Center for Disease Control says that 34 percent of Americans are overweight and more than 72 million people were obese from 2005 to 2006. Inertia has become a national emergency.

For decades, psychologists around the world have studied why people exercise — and why they don't — and there's a growing body of work dedicated to helping you get up off the couch.

Preferring to be sedentary is not necessarily an innate human trait. In fact, most children are actually quite active, and people generally stay active all the way through high school. But many of them stop being active when they reach college.

McMaster University (Ontario, Canada) psychologist Steven Bray

noticed this trend and decided to look at what was stopping students from continuing physical activity during the transition to college. He tracked 127 students and found that most students in their first year of college do, in fact, participate in significantly less exercise than they did the year before.

Bray found that about a third of college students were active in high school and continued to stay active throughout their first year of college. Another third was active in high school but was no longer active after going to college. And the final third is made up of people who were inactive in high school, the majority of which stay inactive.

“A lot of times it has to do with being too busy with school-related things, but it also comes down to changing social patterns,” Bray says. “They get to be friends with people who are less active than they used to be. ... And so there may be a culture of inactivity that starts to take place at first-year university.”

But why do some freshmen manage to stay fit while others quickly put on the “freshman 15”? Bray found that students’ sense of power in life — self-efficacy, in psychological jargon — is closely related to their level of physical activity. Their inability to cope with the environmental and social changes they face at college was a big reason why many stopped exercising. Many students, for example, are athletes in high school but are not talented enough to play on college sports teams.

Not only do they lose out on the vigorous exercise of playing sports, but they often lose their motivation to train, Bray says, which is why he argues that universities can help their students adapt by providing more intramural and club sport opportunities. For many, this change to a sedentary lifestyle then becomes something that persists through the rest of college and even into adulthood.

“Personally, I believe that if we can teach people to adapt, that’s going to be more successful and probably more efficient than having them adopt” new healthy habits later in life, he says.

And it’s not just college. This rule applies to many of life’s transitions — moving into the workforce, switching jobs or moving, getting married, having kids. In each of these moments, there is a chance for people to give up on exercise, possibly for good.

“What it comes down to at each of those points is if we have the skills to be flexible and keep believing that these things are good for us. ... I can keep it a priority and make it something I schedule the rest of my life around,” Bray says. “Unfortunately, [exercise] is one of the first things that goes when we get busy with other things.”

Reasons for stopping exercise might not be the same across all age groups.

Rachel Newson, a psychologist at Flinders University in Australia, looked at this question of what motivates and prevents exercise in adults 63 and over. Barriers to exercise in Newson’s study included “adverse weather conditions” and “not knowing what you’re physically capable of.” But the most common reason her participants didn’t exercise was because of physical ailments and painful joints.

On the other hand, motivators for Newson’s participants ranged from “I want to get out of the house” to “I want to be physically fit” to “I like to be competitive,” and the most common responses were ones related to health and physical fitness, suggesting “that older adults are clearly aware of the potential health benefits of exercise,” Newson writes.

Even adults who are fully healthy, have adapted to their environment, and live in a climate ideal for exercising, find plenty of reasons to sit on

the couch instead. Clearly, other factors are at play. For one thing, it helps to have the right kind of intentions.

Jochen Ziegelmann, a psychologist at Berlin's Freie Universitat, has done work looking at goal-setting as it relates to exercise. He and a number of other psychologists who have done similar studies have found that participants who made implementation intentions ("I will walk to my friend's house and back every Monday, Wednesday, and Friday") were more likely to continue exercising after two weeks than were people who set goal-intentions ("I will exercise in my free time").

Once you have set your goals for implementing your exercise, it is easier to keep a certain exercise part of your routine. Then, you must be able to motivate yourself even on the days when you're feeling tired or bored or distracted. That's called self-control.

Roy Baumeister, a psychologist at Florida State University, has spent his career looking at self-control and decision making, and he has found that self-control is not an unlimited resource — the more you use your self-control, the more difficult it becomes to control your actions.

So if you spend all day trying to avoid the Snickers in the vending machine or trying not to say anything mean to your devilish child, you might not have the same stamina you normally would when you get home for an evening run.

"Stamina counts as a measure of self-control," Baumeister writes, "because it involves resisting fatigue and overriding the urge to quit."

Baumeister's team has done numerous experiments to test this theory, but many of them are similar. They have one set of participants complete an activity that depletes their self-control — such as watching a funny movie while trying not to laugh or resisting cookies and eating

radishes instead — while another group does a similar activity that has no self-control component (they get to eat the cookies and laugh). Then, Baumeister tests the self-control of both groups with a second task, such as the mentally challenging Stroop test, a common tester of self-control, or by seeing how long participants can hold onto a handgrip, which focuses on physical stamina.

Baumeister relates the idea of self-control to a muscle that becomes more exhausted the more you use it, and his studies “all pointed toward the conclusion that the first self-control task consumed and depleted some kind of psychological resource that was therefore less available to help performance on the second self-control task.”

A recent study by University of Kentucky psychologists Suzanne Segerstrom and Lise Solberg Nes supports this idea that controlling your emotions is hard work. They had participants either eat from a plate of cookies and chocolates while avoiding a plate of carrots or eat from the plate of carrots while avoiding the sweets. The heart rate variability of the participants who had to use their self control and avoid the tempting sweets (they even made the cookies warm and freshly baked) was higher than it was in those who didn't have to avoid that temptation. Then, all the participants were asked to work on difficult, or even impossible, anagrams.

The participants who had used up their self-control by avoiding the cookies and chocolates were less determined to finish the impossible anagrams.

“People are aware that they are sometimes vulnerable to saying the wrong thing, eating the wrong thing, or doing the wrong thing, but they may be unaware of their own self-regulatory capacity at any given time,” Segerstrom and Solberg Nes write.

Baumeister says he doesn't know how far the muscle analogy goes for self-control. He says his team hasn't pushed anyone to the state of self-control exhaustion in the laboratory. But it appears that people begin to conserve their self-control as they approach exhaustion in the same way they would if they were getting physically tired. Plus, people seem to be able to exert self-control despite depletion if the stakes are high enough (like great athletes are able to do so even when they're exhausted).

There is even research suggesting that glucose depletion is related to depletion of self-control, much like a muscle. And, also similar to a muscle, research has shown that focusing on a task that requires self-control — exercising or managing your money, for example — improves other self-control-related tasks, such as cutting down on smoking and drinking or helping out with household chores.

“These peripheral improvements suggest that you're strengthening a core muscle rather than just working on the behavior,” Baumeister says.

Recently, they have done work to test whether, like a muscle, you can exercise your self-control to make it stronger. They gave students a variety of self-control tasks to do every day — sit up and stand up straight whenever you think of it; do all minor activities, such as brushing your teeth, lifting a cup to your mouth, and using a computer mouse with your non-dominant hand; don't swear — and then they tested the students' progress on self-control tasks. Their results have been mixed so far. Many participants have been able to improve their self-control, but some have not. Baumeister says the results are promising, but it still needs more study.

“This has not only theoretical interest, but also practical,” Baumeister says. “If we can actually make people stronger, then that would be a good, useful finding.” And it might help you work up the strength to get off the couch.

Once you're off the couch, you have to figure out how to exercise to best meet your goals. That's what Thomas Plante has been working on for more than 20 years. Plante, a psychology professor at Santa Clara University, has looked at the psychological benefits of exercise in men and women. He focuses on keeping the exercise constant — 20 minutes at about 70 percent of the participants' maximum heart rate — and then he measures people's mood.

He has found that environment changes the type of psychological benefits one gets. Exercising indoors and alone is calming for many exercisers. However, if the goal of exercising is to feel energized, then participants are better off exercising outdoors and with friends.

“We think that's because you're enjoying it,” Plante says. “You're experiencing more, you're enjoying the experience, and you're chatting and so forth during the exercise.”

Many people look to personal trainers, not just to make exercise more fun but also to help them stay motivated. But this valuable exercise tool can also have unintended consequences.

Christopher Shields, a psychology professor at Acadia University in Canada, looked at people in group exercise classes and found that those with high proxy-efficacy (i.e. those who relied heavily on someone else to help them exercise) have low self-confidence when it comes to exercising on their own. This is an old psychological principle that goes back to Albert Bandura's self-efficacy theory, but it has real-life implications. It is insignificant if the people using the trainers have the ability to continue exercising with a trainer indefinitely. But if that is not possible, relying on a trainer can cause regular exercisers to lapse into a routine of indolence when the help disappears.

“Professionals working in the health and exercise field must recognize

the potential dilemma that may arise when individuals use them as proxy-agents,” Shields writes. He implores trainers to “actively collaborate with participants to encourage planned development for independence” while still under the trainer’s supervision. If people who use trainers practice not just the exercises that they need to do but also the planning of the exercises, then, Shields says, they will be more prepared to continue their exercise routine after the trainer is no longer available.

Other tips are ones that you might already have as part of your exercising routine. Plante has done some preliminary work looking at the difference between exercising with a friend and exercising with an iPod. He has found that there is little difference between the enjoyment of the two forms of exercise. What matters is that you feel close with your friend and that you are listening to peppy music.

Plante has also done work with virtual reality, and his work has shown that people who wear a virtual reality headset while running or biking enjoy their experience more than people who do the same exercise while staring at a wall in a gym. Televisions provide a similar boost in enjoyment.

“We’re always looking for ways that are going to get people to exercise regularly and what can make it more appealing to do,” Plante says. “And this is some evidence to suggest that this can help people feel more engaged more rewarded by their exercise and so forth. And that’s probably a good thing.”

Though it’s true that we are always looking for more ways to get people to exercise, Harvard professor Ellen Langer says it’s possible that some people are already getting more exercise than they realize.

The surgeon general recommends at least 30 minutes a day of moderate exercise or 20 minutes of vigorous exercise three times a week. But

those numbers are based on white-collar workers. Construction workers, for example, spend most of their day lifting and pushing and pulling. Trash collectors are often running from the truck to the sidewalk. And hotel cleaning attendants are running around rooms quickly and vigorously scrubbing bathrooms.

It's this last group that Langer and her student, Alia J. Crum, looked at in a 2007 study. Langer and Crum went to a variety of hotels to recruit volunteers from the cleaning staffs. They told one group that the work they were doing was already enough exercise to meet the surgeon general's daily requirements. Changing linen for 15 minutes burns approximately 40 calories, they told the attendants. And vacuuming for 15 minutes burns about 50 calories. The other group was not given this knowledge. When they returned to the hotels four weeks later, Langer and Crum found that the informed group showed a decrease in weight, blood pressure, body fat, waist-to-hip ratio, and body mass index.

It is possible that the people who were told about the health benefits of their work made other changes to their behavior, such as dieting or increased workload at the hotels. But all the room attendants were asked to report on these activities, and they did not report any changes. They simply became healthier just by being mindful of what they were doing.

“People are mindless with respect to most other exertion,” Langer says. “People see themselves when they're eating. They don't pay attention to the amount of calories burned standing there and stirring. ... I think this study reveals that we potentially have far more control over our psychological and physical functioning than most of us realize.”

Langer has an anecdote that she tells when talking about this subject. She walks into a gym and sees a sign that says “Stairmaster on third floor.” Many people, Langer hypothesizes, would consider their 20-minute Stairmaster workout — and not their three-flight walk up to it — their

only exercise of the day.

So is it possible that most of us are actually getting more exercise than we think" Think about a typical day where you walk to the bus stop, walk to lunch, walk to the copying machine, walk through the supermarket on your way home, and walk around the kitchen while cooking dinner and setting the table. Even a Saturday of sitting around on your couch and watching college football probably involves a walk down to the store for some soda and chips and maybe a game of catch at halftime.

Think about that the next time you're talking about sitting on your couch all day.

Current Research on the Link between Exercise and Depression

Sure, you want to look good in those tight designer jeans, but the advantages of exercising don't stop at the waistline. There are obvious cardiovascular benefits to regular exercise that can help reduce the threat of heart disease. Plus, there is evidence suggesting it might aid in the prevention and treatment of nervous system disorders, and recent psychological research has shown that exercise can help reduce symptoms of patients with major depressive disorder.

Jim Blumenthal of Duke University noticed anecdotally that people felt better when they exercised and decided to look at whether exercise could reduce depressive symptoms in patients. He started out looking at non-depressed patients and found that regular exercise had a positive effect on depressive symptoms in these patients. "But the question was 'Really, what does that really mean?'" Blumenthal says. "If someone's not depressed to begin with and they have reduced symptoms, so what?"

So Blumenthal began to focus his research on patients with major depressive disorder. He assigned patients to one of three treatment groups: medication, exercise, or a combination of both. At the end of four months, the patients assigned to just exercise showed as much improvement as the other two groups. Just over 60 percent of the exercising patients no longer classified as clinically depressed at the end of the study, compared with 69 percent of the patients who were given only medication and 65.5 percent of those assigned to both.

What's more, in follow-up studies, Blumenthal found that patients who exercised had half the risk of being depressed six months after the experiment as those who didn't.

Blumenthal says he is not ready to recommend that people with major depression forgo their medicine in favor of exercise, but "I still remain very optimistic about exercise being an alternative to treatment for depression," he says.

Source: Association for Psychological Science

Citation: Exercising judgment: The psychology of fitness (2008, January 9) retrieved 19 April 2024 from <https://medicalxpress.com/news/2008-01-judgment-psychology.html>

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