

# Social networks can motivate people to exercise more

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Can the Web make people more fit? It's a question hot on the minds of everyone from health insurers to gym owners to public health officials. Although millions of dollars a year are being spent designing promotional ads and social media campaigns, they clearly aren't working: more than 43 percent of Americans get insufficient levels of daily exercise, and nearly a third are obese.

In a new study, researchers at the University of Pennsylvania, led by professor Damon Centola of the Annenberg School for Communication and the School of Engineering and Applied Sciences, have found a way to make the Web—and social media—more effective for improving people's exercise habits.

The study, recently published in the journal *Preventive Medicine Reports*, tested a fitness motivator that can be more effective—and vastly cheaper—than promotional advertisements: program-assigned "health buddies."

In a randomized controlled trial, the researchers created a website where 217 graduate students enrolled in free exercise classes at the University of Pennsylvania gym.

Part of the group also received promotional messages from the University, including highly engaging motivational videos and infographics emphasizing fitness tips and the importance of exercise.

Meanwhile, another part of the group saw no advertising messages. Instead, members of this group were placed into social networks with six of their peers. While these peer groups remained anonymous to one another, participants were regularly updated on each other's fitness achievements. They could monitor each other's progress on the website, and when one signed up for a weightlifting or yoga class, for example, the others were notified by email.

As a control group for the two interventions, a final group of participants received no further follow-up through the study.

By the end of the 13 week study, the findings were clear. Promotional messages caused an initial bump in class attendance, but the motivational effects quickly wore off. The promotional messages had almost no long term effect on class participation.

Program-assigned "buddies," on the other hand, were much more effective at motivating people to exercise. As the weeks went by, the motivating effects increased, producing a substantial growth in enrollment levels among people in peer networks.

The study utilized a model developed through Centola's previous research on online group dynamics. While in most popular social networks, signals are mixed between positive and negative—one friend might talk about enjoying a spin class while another might revel in a night spent eating pizza on the couch—the network in this study provided live updates only about positive exercise behavior.

"We were able to use the positive signals to form a reinforcing loop that pushed everyone to exercise more," says Jingwen Zhang, an author on the study.

Scientists and entrepreneurs alike have long understood the power of

social influence, both positive and negative, in real-world situations. For example, negative behavior signals like watching a peer smoke or drink, increase the likelihood that observers will follow suit. Or if a high schooler's peers talk about how hard they studied for a test - a positive signal - he is more likely to hit the books too.

What this new study reveals is that these same positive behavior signals are also powerful in our online networks, and can be harnessed for the social good. This approach could be applied not only to encourage exercise, but also to promote vaccinations, medication compliance, and preventative care.

"While promotional messaging remains one of the standard ways of encouraging healthy behavior, it is also quite expensive," says Centola. "What our results show is that you don't necessarily need to generate new media content in order to reach people. You just have to put people into the right kind of social environment where they can interact with each other, and even anonymous social interaction will create behavior change."

The participants, in fact, knew remarkably little about one another, yet the results indicate that even minimal exposure to social cues can have strong effects. Simply knowing that your peers are going to yoga class is effective motivation to get you into your workout clothes—and the technology required to share that information is incredibly cost-effective.

New experiments building on these findings are currently underway to explore why social networks are so effective for increasing participation. Centola and his team are testing whether people are better motivated by competition or by friendly social support. The answer has implications for the entire field of organizations using social tools to help people lose weight, stop smoking, and live healthier lives.

**More information:** *Preventive Medicine Reports*,  
[www.sciencedirect.com/science/ ... ii/S2211335515001072](http://www.sciencedirect.com/science/.../ii/S2211335515001072)

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