

## Study links obesity to friendships

by Cheryl Clark

So you think it's the cookies, chips and bread that make you fat?

Well, maybe. But in a major study published July 26, UCSD and Harvard researchers point the finger at an unlikely culprit: the subtle - perhaps even subconscious - influence of spouses, family members and, most important, close friends.

**OBESITY STUDY** - New research says that if people close to you are overweight or obese, you'll be more likely to think that such a body shape and the lifestyle behaviors contributing to it are OK. CNS Photo by Scott Linnett. If those people become overweight or obese, you'll be more likely to think that such a body shape and the lifestyle behaviors contributing to it are OK. The result: You are more likely to gain pounds within a couple of years.

In other words, obesity might spread through "person to person" social interactions, much like the influenza virus spreads through the air.

Likewise, the reverse is true: If your family and trusted friends become thin, you are more likely to lose weight as well.

"Ours is the first study to show how obesity spreads through a social network," said James Fowler, a political science professor at the University of California San Diego and one of the study's two authors.

Fowler said the message is, "If you want to be successful in getting your weight down, get as many of the people to whom you are socially connected involved because there will be a reinforcing effect between your behavior and theirs."

Among the report's surprise findings is that a friend's weight gain or loss tends to have a bigger influence than family genetics, perhaps because friends can affect each other's food consumption and exercise habits by setting a standard of what is normal.

While weight changes in family members, spouses and siblings had some impact, the causal links were greatest among people who identified each other as "mutual friends."

The weight-gain phenomenon also was greater among people of the same gender than those of the opposite sex.

"We were stunned by the size of the effect. We found the effects are stronger between unrelated people than between related people," Fowler said.

The study's findings did not surprise Rebekah May, of Del Mar, Calif.

When May became friends with workout enthusiast Don Pisarcik, she shed 12 pounds in the first year.

"We've adopted a different lifestyle - going to the gym, eating right and using weights," May said. "If I had met someone else, it might have been a totally different story."

For their report, Fowler and Dr. Nicholas Christakis of the Harvard Medical School surveyed more than

12,000 people in Framingham, Mass., from 1971 to 2003. Their work is part of a long-term project examining the relationship between lifestyles and health.

The study is published in the New England Journal of Medicine and was funded by the National Institute on Aging.

Several researchers predicted that if the study's findings are replicated, government officials, insurance plans, employers and schools will be motivated to promote group practices leading to healthier lifestyles, such as exercise and diet support groups or anti-obesity programs in workplaces and community settings.

Obesity is known to increase the risk of diseases such as diabetes and hypertension.

"This study pokes holes in the 'individual responsibility' argument - that if each person just had enough will power, obesity would vanish," said Matthew Gillman, director of obesity prevention at the Harvard Medical School. "Rather, we think this shows that obesity occurs through a complex web of environmental, social and personal factors."

The report said a person's chance of becoming obese increases by 57 percent if he or she has a friend who became obese, 40 percent if a sibling became obese and 37 percent if a spouse became obese.

When two people named each other as friends and one of them became obese, the second person's chance of gaining a significant amount of weight increased 171 percent.

Perhaps most surprising is that the sway of a friend's weight change persisted even if that person moved hundreds of miles away and was seen only once or twice a year.

The researchers asked participants for names of friends who would always know how to find them so the Framingham project could track the social networks.

As it turned out, many of those named as friends also were participants in the study because Framingham was a relatively small town in the 1970s.

This overlap enabled the researchers to determine that weight influences were closest when two people considered each other friends, as opposed to when only one person named the other as a friend.

Fowler said another remarkable finding is that weight changes weren't limited to two friends.

"To borrow a phrase, we found that there were three 'degrees of separation.' A person's obesity status also affects a friend's friend's friend," he said.

The discovery prompted Christakis to suggest that public-health programs may get a bigger bang for their buck if they focus on groups and social networks rather than each individual.

"If we spend \$1,000 to get one person to lose 20 pounds, that's \$50 a pound. But if that weight loss induces a cascade of weight loss in nine other people, that's 200 pounds, or \$5 per pound," Christakis said.

The study does have its drawbacks.

For starters, the participants were almost exclusively white. Weight influences may not be as significant in other races or ethnicities.

Also, the report could not determine whether people who named each other as mutual friends had early childhood connections that may have influenced their perceptions about appropriate body weight.

Dr. Ken Fujioka, medical director for the Scripps Clinic Center for Weight Management in San Diego, Calif., called the study fascinating. But he said that in his experience, obese individuals tend to befriend people who are already overweight or obese.

"Many young women today have incredible difficulty (socializing) with other women who are obese because of peer pressure" to stay thin, he added.

Fujioka also said friends don't influence weight gain as much as spouses.

"It's very common that when women marry someone who is heavier, food becomes a very big emphasis on their lives," he said. "The women end up gaining more weight."

In a journal editorial accompanying the study, Albert-Laszlo Barabasi noted that "network science" is an emerging way of looking at not only sociology, but also cell behavior and disease transmission.

"The growing interest in interconnectedness has brought into focus an often ignored issue: networks pervade all aspects of human health," said Barabasi, who works with the Center for Complex Network Research at the University of Notre Dame.

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