HealthSmart

By DR. TEDD MITCHELL

Taking a shot at obesity

Could a vaccine to help with weight control be on the horizon?

FOR YEARS, WE HAVE known about our nation's increasing waist size. We are heavier now than at any time during our history, and the trend continues to grow in the wrong direction.

Because of this, exercise regimens, diets, pills, liquids, hypnosis — you name it — are touted to help us lose excess pounds. Sometimes it seems the only thing more insatiable than our appetite is our desire to find a way to fix it.

Enter Kim Janda. A professor of chemistry at Scripps Research Institute, he has been studying a vaccine designed to help with weight control. It may sound far-fetched, but his preliminary findings are intriguing.

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A new study's findings may mark a turning point in our ability to tackle this dangerous problem.

Janda's research focuses on a hormone called ghrelin (*GRELL-in*). The stomach produces this hormone to help regulate how we use food energy. First identified in 1999, ghrelin works to maintain weight through a series of actions that include appetite stimulation and promotion of fat storage.

Here's the problem: Ghrelin levels go up when we go on a diet. When your body deprives itself of energy (in the form of food), it springs into action, secreting ghrelin at much higher levels. This ghrelin production slows down how rapidly your body metabolizes fat and stimulates your appetite. Although frustrating to the average American, such a mechanism is actually one of nature's ways of preserving stored energy during periods of time when food is not available.

So how does the vaccination work?

Janda and his colleagues studied the effectiveness of a vaccination that works against ghrelin. Using rats, the researchers looked at three different types of vaccinations, all of which were designed to bind with ghrelin, keeping it from having a hunger-stimulating effect on the body. The results showed that rats receiving the vaccination gained less weight and had lower levels of body fat than rats that weren't immunized, despite eating a normal amount of food. This outcome seems to indicate that interference with ghrelin activity could have a positive effect on long-term weight control.

Of course, research on humans is needed to confirm these benefits. The vaccination that may lead to a leaner rat may not translate into one that leads to leaner human beings.

Nonetheless, Janda's findings are interesting, particularly for those who are yo-yo dieters. These are folks whose weight goes up and down over time. A vaccine that limits the effect of ghrelin during a period of dieting may make a person less likely to regain weight once it's lost.

Janda's discoveries, which recently were published in the online edition of *The Proceedings of the National Academy of Sciences*, add to our knowledge about how we gain and lose weight. If this vaccine works as well in humans as it seems to have worked in Janda's rats, it may be a turning point in our battle against obesity.

Of course, even if it's effective, a vaccination is not a substitute for appropriate health habits. It simply may be another tool that clinicians can use as part of a multifaceted approach to help patients maintain a healthy weight for a lifetime. W

Contributing editor TEDD MITCHELL, M.D., *president and medical director of the renowned Cooper Clinic in Dallas, writes HealthSmart every week.*

NOTE: The Association for Women in Communications awarded a prestigious 2006 Clarion Award to HealthSmart for Best Magazine Regular Informational/Non-opinion Column (see past HealthSmart columns online at usaweekend.com). Congrats, Dr. Tedd!