

Gene test claims to show what diet works best

March 4 2010, By MARILYNN MARCHIONE , AP Medical Writer

(AP) -- Diet not working? Blame your genes. That's the pitch behind a new test that claims to show whether people will do better on a low-fat or a low-carb weight loss plan.

We're all hard-wired with DNA that controls how we burn and store calories from various foods, and the test claims to sort out this machinery. A study this week found that women on diets well-matched to their [genes](#), as defined by the test, lost roughly five times more weight than those on mismatched diets.

"We were able to explain why some people were successful" and others were not, even though they ate the same way, said Mindy Dopler Nelson, a nutritional biologist at Stanford University who led the study but has no financial ties to the maker of the test.

Some scientists find this hard to swallow. It's another test being peddled without enough research to show it really works, they say.

"I'm afraid this may be another attempt to lure the public into purchasing genetic tests that provide little value for those struggling with their weight," said Raymond Rodriguez, director of the National Center of Excellence for Nutritional Genomics at the University of California, Davis.

The research shows "nothing that should move the American public out to get their genome tested," said Dr. Robert Eckel, a former American Heart Association president and cardiologist at the University of

Colorado-Denver.

But it sure has appeal.

Gene testing originally was aimed at finding risk for things like cancer, diabetes and Alzheimer's disease. Lately, genes have been linked to things you might not suspect, such as stuttering or compulsive leg-jiggling.

The latest trend is to connect genes to lifestyle counseling, determining what type of diet or exercise is best. That's what the maker of the new diet test hopes to do.

The company, Waltham, Mass.-based Interleukin Genetics Inc., looked at studies on hundreds of genes and chose three genes that show a pattern for metabolizing fats and carbohydrates, said its chief scientific officer, Ken Korman.

The company then hired Stanford researchers to do a validation study of its \$149 test, using people who took part in diet research that was published in 2007. That study tested four diets - Atkins (ultra-low-carb), the Zone (low-carb), Ornish (very low-fat) or a low-fat diet following the federal Food Pyramid.

About one-third of the original participants, 138 women, sent cheek swabs with their DNA to Interleukin, which tagged them as "low-carb appropriate" or "low-fat appropriate."

Looking back at the original study's results, researchers saw that women whose diets matched their genetic makeup lost more than 13 pounds over a year compared to less than 3 pounds for women on mismatched diets, Nelson reported at a heart association conference this week.

Some scientists were unpersuaded. Sticking with a diet is more important than what diet you choose, as is not regaining weight, Eckel said.

"I have serious reservations with this study and studies like it," Rodriguez agreed. "The idea that genetic variants in these genes can predict the likelihood for [weight loss](#) in such a small population, particularly since the tendency for weight loss is probably more behavioral than genetic, is simply hard to believe."

However, one of the study participants, Jacqueline Gardner, 55, of Evergreen, Calif., does believe. She went from 200 pounds at the start of the study to 185, but was back to 200 pounds two years later.

"I now know why I gained it back," she said - the gene test showed she does not metabolize carbohydrates well. More recently, she has been on a high-protein [diet](#) and weighs 180.

"I wish I had had a DNA test 10 years ago," she said.

The researchers also tested themselves.

"It confirmed my suspicion," Nelson said of her result. "When I eat a lot of carbohydrates, I tend to put on weight."

Do we really need a [gene test](#) to tell us that?

More information: UC Davis nutrigenomics center:
nutrigenomics.ucdavis.edu

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