

# New gadgets demystify metabolism; Find out how many calories your body burns

July 1 2009, By Marion Callahan

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And when she doesn't gain a pound -- ever -- there's only one thing to blame: her metabolism.

New technologies are demystifying the [metabolism](#). Among them is a hand-held device by Fitmate that can track just how many [calories](#) an individual needs through the day, spitting out test results that explain just why some people can splurge while others can't.

Over time, it can also track just how much exercise and dieting influences an individual's [metabolic rate](#).

Registered dietitian Jennifer Doane, who is sampling the \$7,900 Fitmate device at her business, Advantage Nutritional Wellness in Bethlehem, Pa., said the results of the metabolic rate tests help dietitians tailor individual weight-loss plans based on a person's caloric intake and exercise level.

"We talk about metabolism all the time in here, and now we have an easy way to measure it," said Doane. "Two people may have the same height, same weight and same age, but because of [genetic factors](#), they really differ in how many calories they burn."

Fitmate is among a growing number of breathing devices -- including Medgem and Bodygem -- used across the country to determine a person's resting metabolic rate -- the number of calories an individual burns in a day doing nothing. Hospitals, doctors and wellness centers

across the country use similar devices as part of their nutritional programs.

Denice Ferko-Adams, president of Nazareth, Pa., based Wellness Press, showcased the Fitmate device at Lehigh University in Bethlehem, Pa., and sampled it most recently at Doane's [nutrition](#) center. She said Fitmate appeals to doctors, nutritionists and dietitians because it is quick and not intrusive. It requires someone to breathe into the mask hooked to the device for seven minutes. The device then prints out a report with the individual's caloric needs, after age, weight and activity level are plugged in.

The test determines exactly how many calories a person needs and how much exercise is needed to lose fat weight or gain lean muscle tissue. An individual's genes, body composition, age and sex affect metabolism, so the rate varies from person to person. The device, Ferko-Adams said, should test someone over the course of several months.

"By tracking metabolic rate every three months, consumers will see that exercise and diet changes work: Body fat is reduced, muscle tissue is gained, resulting in a high metabolic rate," she said.

A recent test on a 38-year-old woman showed that she burns between 1,400 and 1,600 calories resting. After factoring daily activity and twice-a-week exercise routine, the machine spelled out exactly how many calories her body requires: 2,400. For her to lose a pound a week, she would have to drop 500 calories from her diet a day.

Ferko-Adams said dietitians would then use such information to help patients come up with a diet and exercise plan that would allow them to lose the desired weight and raise their metabolic rate.

"If they really exercise, we finally have a test that will measure the

metabolic increase from that change in lifestyle. It's going to be another motivator to keep people on track."

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