

DOWN to the WIRING

A new wave of mail-order DNA tests can determine with amazing precision which foods are right for you. Christine Muhlke signs on.

My journey started last Christmas at Canyon Ranch in Tucson. A woman who sat at the Captain's Table, where solo travelers ate, was so fit and glowing—even her hair was radiant—that it took me a few meals to deduce that she was in her late 50s. It emerged that this Cynthia Smith from Chicago was a nutritionist, and soon enough she was diagnosing each of her tablemates with potential food allergies. If we truly wanted to know what foods might be making us bloated or overweight, she added, we needed to get a DNA panel done.

The latest twist in the genetic-testing boom reveals what you—and only you—should eat to be your slimmest, healthiest self. Researchers have found that variations in a mere handful of the 20,000 genes we've inherited determine how prone we are to vitamin and mineral deficiencies, whether we're likely to suffer lactose or gluten intolerance, and how quickly we metabolize carbs, fats, caffeine, and alcohol.

Through genetic testing, 39-year-old New York creative director Maggie Slavonic learned that she had the marker for obesity on her FTO gene, and also that she should tweak her supplement regimen and switch to a type of vitamin B₁₂ better suited for her body. San Francisco Bay Area entrepreneur Neil Grimmer discovered from a similar test that he had a potentially lethal reaction to caffeine, thanks to gene CYP1A2. "It's a sea change," says Connecticut naturopathic physician Peter D'Adamo, who has written software that runs a patient's data through hundreds of algorithms. "My consultations are less about what's proven to work with the general population than what has been identified as important to this very person in front of me," he says.

Though I'd magically returned to my college weight after the birth of my son four years ago, it would be even more magical if that swell of belly fat would disappear and I could become less reliant on my Zero + Maria Cornejo bubble dresses. As a professional food consultant, however, I can't justify going on a diet that cuts out wheat, dairy, or sugar wholesale unless I know that one is really the culprit. (With

my luck, they all are.) And so I mail a saliva sample to biotech company Nutrigenomix's Toronto lab.

While I await my results, I arrange to meet with Sharon Moalem, M.D., Ph.D., the unnervingly accomplished and young-looking 40-something physician and scientist who last year published *The DNA Restart* (Rodale), a diet book that addresses how to eat according to our genetic makeup. Moalem suggests at-home tests such as chewing an unsalted saltine (apparently they exist) and examining your earwax to determine how you metabolize carbohydrates and alcohol.

My results reveal that I should restrict my carb consumption and can have no more than one alcoholic drink a day. More important, Moalem tells me, while our genes dictate how we will process our food, the food we eat affects the health of our genes. "What you eat can ultimately benefit your DNA—or harm it," Moalem says. "And harming your DNA will shorten your life."

Finally, my test results—32 genetic markers in all—arrive by mail from Nutrigenomix. A staff nutritionist calls me to walk me through the findings. In addition to limiting my dairy intake, I am enjoined to reduce my consumption of saturated fat. Those of us with the TA or AA variations in the FTO gene, also known as the "fat-mass and obesity-associated gene," the nutritionist explains, benefit from consuming a diet that is low in saturated fat (less than 10 percent of total energy intake) and high in polyunsaturated fat (at

least 5 percent). Real-world translation: Switching from olive oil to flaxseed or grape-seed oil could give me a smaller waist.

Two months after my consultation, I have made the swap and become reacquainted with my skinny jeans. As is to be expected from somebody who smuggles exotic butters on her return flights from Paris, I've had a difficult time cutting down my dairy consumption. I was hoping someone would just put the right food in front of me—and only me—when I read about Habit, a Silicon Valley start-up whose subscribers receive customized food delivery based on their blood-and-DNA-test results. My lactose-intolerant gene, variant rs4988235, thinks that could be a great investment. □



CRACKING THE CODE
MORE AND MORE DOCTORS AND NUTRITIONISTS ARE TAILORING DIETS TO INDIVIDUALS' GENETIC MAKEUP. PHOTOGRAPHED BY ERIC BOMAN FOR VOGUE, 2016.