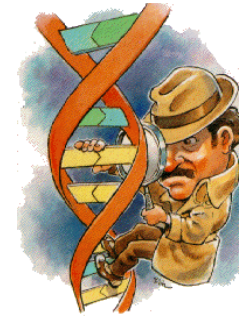


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# DNA *Today*

ADDRESSING THE DNA TESTING NEEDS OF MEDICAL PROFESSIONALS AND THE GENERAL PUBLIC SINCE 1987.

## DNA Detective Work : Discretely Resolve Relationship Questions



Thanks to CSI, many people are aware that DNA can be extracted from many samples other than swabs or blood. DNA testing clients use this technology to resolve questions of parentage when discretion is required. DNA is the same in any cell in the body that has a nucleus. So as long as a submitted sample has several intact cells, DNA testing can be performed.

- Unwashed undergarments
- Cup or bottle
- Chewed gum
- Teeth
- Ear swab
- Used tissue

Samples that DNA can be extracted from include:

- Dental floss or toothbrush
- Licked stamps or envelopes
- Hair with roots
- Cigarette butts

Genelex is a market leader in this testing and our success rate is very high. In delicate situations, DNA detective work can discretely resolve relationship questions and provide peace of mind.

## DNA in the News



The Washington Supreme Court recently ruled that obtaining DNA samples from unwitting potential suspects falls under the confines of the law. In this case, the police sent a potential murder suspect, John Athan, a fake letter asking him to participate in a class-action lawsuit over parking tickets. When he sealed the envelope, he sealed his fate. The DNA on the envelope flap matched DNA found at the rape and murder scene of a young girl over two decades ago. He was sentenced to 10 to 20 years in prison. Privacy experts are concerned about this landmark decision, but many are relieved that determined police work has finally solved the murder of a 13-year-old girl.

# The DNA Diet™: Where Genetics and Nutrition Meet

## An Interview with Carolyn Katzin



Carolyn Katzin, certified nutrition specialist, is the originator of the DNA Diet™. Carolyn's nutrition practice is in Southern California where she has helped people of all ages achieve a healthy weight and optimize their diets since 1985. Her practice includes consulting for two leading cancer centers and she is a regular speaker at UCLA. Carolyn is a lead volunteer with the American Cancer Society serving on the California Division Board of Directors and is a member of the National Advisory Group on Nutrition, Physical Activity and Cancer Control which helps craft the nutrition and physical activity guidelines for the Society. She serves on the California Governor's Council on Physical Fitness and Sports and on UCLA's School of Public Health Dean's Advisory Board (Chair 1998-2001). Carolyn is a popular media commentator as a spokesperson for the American Cancer Society and on the topic of nutrigenomics and The DNA Diet™.

### What is nutritional genetics?

Nutritional genetics or nutrigenomics looks at individual genes that determine how a person will respond to nutrients in the foods they eat. Many people know that some genes may cause disease, but few realize that diet and lifestyle can determine whether certain genes express themselves in a positive or negative manner. With nutritional genetic testing, we can determine which diet program best suits a person's unique genetic make-up. Nutrigenomics looks at how these genetic variations impact the whole person. I use The DNA Diet™ to put this knowledge into action in a truly personalized and integrative manner.

Many people know that some genes may cause disease, but few realize that diet and lifestyle can determine whether certain genes express themselves in a positive or negative manner.

### What health areas does the test cover?

The genetic testing examines key areas important for long term health including cholesterol and lipid metabolism, B vitamin use, cardiovascular health, antioxidants and detoxification, inflammation, bone health, and insulin sensitivity.

### Will clients receive a specific DNA Diet™?

I work with clients one-on-one to tailor dietary recommendations to their unique health needs and genetic profile. I provide each client with sample recipes, including specific foods and supplements to add to their diet and which to avoid. I create a DNA Diet™ Action Plan that combines these foods with suggestions for how to incorporate changes

into their lifestyle. This program is about who you are, not just where you are at in your life now. The Action Plan is about lifelong health - preventing the preventable and optimizing your potential health and performance. The knowledge you receive has value for you going forward as we learn more about genomics and which nutritional components are most important for you.

### What is the DNA Diet™ Weight Loss System?

This is an optional additional six-week, intensive weight loss program I create based on a person's DNA test results. The program includes six consultations, tailored menu plans, and body composition analyses. Because the test is individualized and specific, I have found people have a better understanding of their own metabolic genetic heritage.

### What kind of success rate have you seen?

I have had a successful weight loss practice for twenty years however this additional test has provided a deeper understanding and more long lasting success. I have been using this program for the past three and a half years and most people who are ready to address their weight have had excellent success. I focus on central adiposity (waist) as this is most important in reducing the risk of metabolic syndrome, type 2 diabetes, cardiovascular disease, and certain cancers. A hallmark of this program is that people lose fat not muscle hence maintaining a consistent



Continued on bottom of page 3



Vy Higginsen, left, with her newfound cousin, Marion West.

Vy Higginsen was interested in learning more about her ancestry. She thought she was descended from slaves and that there was a possibility of Native American ancestry. In 2005, she ordered an ethnicity DNA test from Genelex. The results surprised her. "I was stunned," Vy said. "It said I had no Indian blood, but that I did have, in addition to my African ancestry, 28 percent European blood and 8 percent Asian."

Vy then took a common female ancestor to see where her female line originated. Common female ancestor tests look at mitochondrial DNA or mtDNA, a portion of the DNA that is only passed from a mother to her children. As she suspected, her maternal line traced back to Africa.

# Finding your DNA Cousins

Still trying to discover more about her unexpected ancestry, Vy talked her uncle, Reverend James West Jr., into taking an ethnicity DNA test and a common male ancestor test. Common male ancestor tests trace the paternal line through the Y chromosome. Rev. West has always considered himself black, but his results showed him as 52 percent European and his male ancestry traced back to Europe.

Vy took her research further and posted Rev. West's results in a Y chromosome database on line. There were 22 groups of West's and Vy's family

matched group 5. She found new distant cousins through the site and was recently visited in Harlem by one - Marion West, a Missouri cattle rancher.

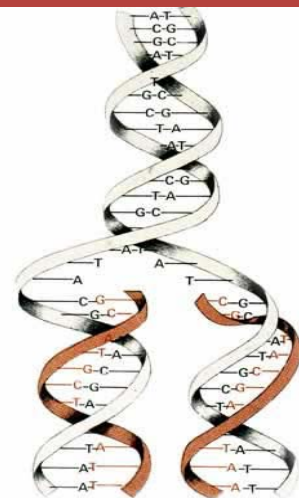
Vy has since told her story of discovery to *The New York Times*, *The Today Show*, and *NBC Nightly News* to name a few.

People are finally asking: 'Whose blood is running through our veins? Who are we? Who of us is black, and who's white?' They're realizing there are no thoroughbreds among us, and nobody's 100 percent anything in this country."

Vy Higginsen

"If it's my story, it's many people's story too," Vy stated. "It's the real story of America. People are finally asking: 'Whose blood is running through our veins? Who are we? Who of us is black, and who's white?' They're realizing there are no thoroughbreds among us, and nobody's 100 percent anything in this country."

## DID YOU KNOW?



- A simple list of the bases of the entire DNA in your genes—the As, Cs, Ts, and Gs—would fill about 200 New York City phone books.
- While the number of base pairs—3.2 billion—on each unique person's 23 chromosomes is quite impressive, the average human being has a mere 31,000 genes. That's about a third fewer than anyone expected—and not even double the amount of genes a roundworm has.
- Any two unrelated strangers anywhere on the planet share 99.9 percent of the same DNA. A miniscule fraction of the genome—about 3 million of its over 3 billion bases—accounts for the vast differences within the human race.

Adapted from *The Genomics Age: How DNA Technology Is Transforming the Way We Live and Who We Are* by Gina Smith.

## The DNA Diet™ continued

resting metabolic rate or energy level. Many people give up on dieting if they feel fatigued and with the DNA Diet I avoid that by focusing on, coaching and tracking each individual.

### Who will benefit most from the DNA Diet™?

Everyone will benefit from learning about genetic variations that affect their metabolism and hence affect their susceptibility to heart disease and other chronic health conditions that affect us as we age. The weight loss program is of value to those who wish to have a healthy body size and especially those who are interested in reducing their health risk by losing belly fat.

### Where do you see nutritional genetics going in the future?

"You are what you eat" has never been more true. We are just learning who we are at the molecular level and so this expands the concept and explains the principles of The DNA Diet.

### Any closing statement?

I am thrilled to be alive at this exciting time of scientific discovery, the Genomic Era. My wish is that as many people as possible will benefit from such personalized, predictive and preventive nutrition as The DNA Diet™.





# Celiac Disease Underdiagnosed

Approximately 90% of Celiac Disease cases go undetected even though it affects 1 in 100 Americans.

Celiac Disease, also known as gluten intolerance, is a disorder affecting 1 in 100 Americans. A toxic reaction to gluten (found in barley, wheat, and rye) damages the surface of the small intestine and interferes with the absorption of nutrients. Due to the exceptionally wide range of difficult to interpret symptoms, 90% of Celiac Disease sufferers are not diagnosed.

Early diagnosis and lifelong treatment with a gluten-free diet is critical for both symptom relief and reducing the risk of developing long-term conditions such as diabetes or GI cancer.

According to a recent NIH study, a typical patient currently endures 11 years of symptoms before an accurate diagnosis is found. Since the traditional approach requires blood tests, small intestine biopsies and six months on a gluten-free diet before confirmed diagnosis, many prefer Celiac Disease DNA Testing.

Celiac Disease DNA testing is not used to diagnose celiac disease, but can quickly, accurately, and painlessly exclude the diagnosis as you must have

*According to a recent NIH study, a typical patient currently endures 11 years of symptoms before an accurate diagnosis is found.*

certain genetic markers in order to develop Celiac disease. A negative results means that you are not at risk of developing Celiac disease. A positive result in addition to clinical symptoms, indicates the need for referral to a gastroenterologist.

Results include genetic consultation for physicians, patients, and families with board certified genetic counselors.

If you are concerned that you may have Celiac Disease, visit [genelex.com](http://genelex.com) for more information or call 800-837-8362 to order your Celiac Disease DNA test for only \$445.

## Questions? Comments?

Call a Genelex DNA Testing Consultant  
800 TEST-DNA  
(800-837-8362)  
or visit us online  
[www.genelex.com](http://www.genelex.com)



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