

Let's get **PHYSICAL**

HOW YOUR DNA CAN (AND SHOULD) AFFECT YOUR HEALTH AND NUTRITION GOALS

Ever wondered why there is so much contradictory information out there in the field of health, weight loss, exercise and nutrition? Ever felt stuck or confused about which way to turn, because on your left is someone promoting low-fat... and on your right is someone else promoting high-fat? Or paleo? Or veganism? And all you really want to know is what's best for you?! Practising nutritionist **Lisa Cutforth** has studied nutrition, psychology and neuroscience (she has a certificate in cordon bleu cookery) and has the answers you may be searching for.





“THE WOMAN WHO FOLLOWS THE CROWD WILL USUALLY GO NO FURTHER THAN THE CROWD. THE WOMAN WHO WALKS ALONE IS LIKELY TO FIND HERSELF IN PLACES NO ONE HAS EVER BEEN BEFORE.”

- ALBERT EINSTEIN

If you've ever had a goal, whether it be “strength building” or “weight loss”, then you've also probably tried something that worked for someone else or something that was recommended by someone else because they got great results and you hoped it would do the same for you.

We are wired with mirror neurons to learn from the experience of others, so of course it makes sense to think that because something has worked for someone else it will work for us. And sometimes it does, but many times it doesn't - and that's when it gets really frustrating. We've all been there.

Most people have suffered from a reality hangover at some point: despite their best efforts, someone else's perfect recipe for success fails them and they're left feeling disappointed, or cheated. Nowhere is this truer than in health and diet.

Many experts will promote their solution as if it will work for everyone and it is the perfect solution, but the reality is it cannot be. In fact, some people need a low-carb diet and others need a low-fat diet because their body is genetically programmed to tolerate more of one than the other. If there is one certainty you can walk away with from this article, let it be:

“THERE IS NO ‘ONE SIZE FITS ALL’ ANSWER TO HEALTH, FITNESS, WEIGHT LOSS OR NUTRITION. IN FACT, YOU SHOULD TAKE YOUR HEALTH PERSONALLY.”

And that is because we are all unique, and your nutrition needs are personal.

For centuries scientists have debated whether nature (our genes) or nurture (our environment) is the biggest predictor of everything from personality to performance ability, success and intelligence, through to health and disease.

More recently, research clearly demonstrates that it is a combination of the two. The science of epigenetics (how our cells read our genes) is opening previously secret vaults into understanding what influences or determines who we become, what we are capable of and how long we live, and just how much of that we can influence.

When it comes to your health, your best shot is not somebody else's best-kept secret - but your own!

Play to your strengths

“EVERYBODY IS A GENIUS. BUT IF YOU JUDGE A FISH BY ITS ABILITY TO CLIMB A TREE, IT WILL LIVE ITS WHOLE LIFE BELIEVING IT IS STUPID.” - ALBERT EINSTEIN

The field of nutrigenomics (how nutrition affects your gene expression) and epigenetics (how your environment and lifestyle affect which and how your genes express) offer new and exciting information and opportunities to literally be the best you can be.

Nowadays, scientists have isolated a number of genes and can give us all sorts of clues about sports performance, weight control, diet preferences and disease risk, just to name a few. Athletes and sports enthusiasts can get useful insights into how to best train, based on their genetics and lifestyle. Not everyone has the same strengths and weaknesses; some of us are built to be better at running marathons, or swimming, and others of us are built to be better at weightlifting, or “climbing trees”. There’s no getting away from training, but you can start by playing to your strengths and building in protection for your weaknesses.

“STRENGTH COMES IN KNOWING YOUR WEAKNESSES”.

When most people think of DNA, they simply think about its role in determining their eye colour, or how tall they will be, or whether they’re more at risk of diseases such as diabetes or cancer.

But most people don’t realise your DNA can give you important clues and help you make predictions and choices about how to live your life and how to thrive. Sometimes this can inform you about vulnerabilities, for instance, you may be prone to inflammation. Inflammation is the leading cause of most chronic disease, such as arthritis and asthma, and may trigger some cancers. Knowing this piece of the puzzle is enough to allow you to be very proactive in preventing or decreasing the severity of these diseases that you may formerly have thought were simply written into your DNA - literally. In the same way that not all tall people are basketballers, not everyone with genetic variations, let’s say for example a gene that impacts carbohydrate responsiveness, will end up diabetic. It’s partly your genes and partly what you do with them.

Genes can be “turned on” (expressed) and “turned off” and can be “turned up” (up-regulated) and “turned down” (down-regulated) a bit like a light can be turned on and off, dim and bright with a switch. Just because you have a gene doesn’t guarantee it will be expressed. This is where the fields of epigenetics and nutrigenomics come in as they give us information about how we can influence our genes.

Nutrigenomics gives us information about how we can eat to influence our genes (your diet and nutrition can affect how and which genes express and how strongly they express). For example, if you have an “inflammation genetic variation” with a tendency to “get stuck on”, you could benefit by eating certain foods that help your body turn this off e.g. broccoli. But if you know you have a genetic aversion to bitter foods and you don’t like most green vegetables, even though you don’t really like the taste, you can make an effort to cook the broccoli in ways that you can tolerate its taste and texture - because you know it has important health benefits. You might also eat more anti-inflammatory foods like turmeric and foods containing omega 3s, and fewer inflammatory foods (deep-fried, highly processed or dairy).

Weight loss success

More than half of Australians are overweight or obese, and most diets fail. They fail because they are diets and not lifestyle programs; they usually do not satisfy our hunger, they don’t take environmental, social, psychological and emotional components into account... and they don’t take personal genetic variations into account. This means they often operate against your genetic coding because they are not based on your personal health and nutritional requirements.

Imagine you have been overweight your whole life and you’ve tried every diet under the sun, without success. Imagine there was a way to finally shine a light on some of your potential weaknesses so that you could target lifestyle and nutrition solutions to support or minimise them. What if you discovered you have genetic variations which mean you battle with appetite regulation or carbohydrate metabolism, and you are vulnerable to depression and you most likely benefit from medium intensity exercise?

You would then be able to work with a nutritionist who could test your current nutrient status (e.g. vitamin B, iron and vitamin D). If you are deficient in certain B vitamins and iron you will typically be low in energy. If you’re short in vitamin D, you are more prone to depression (and other illnesses).

Now consider that in the context of someone who is genetically vulnerable to depression and appetite regulation, and you are probably going to end up with someone who binges and comfort eats and ends up depressed and overweight and wonders why they can’t break the cycle.

Knowing your DNA blueprint comes with no guarantees, however. There is never one single gene that inevitably leads to a given result. Even though your DNA is only one tiny part of a holistic puzzle, the more you know about yourself, your strengths and your weaknesses, the more realistic you can be with your goal setting and lifestyle planning. Additionally, you’ll be informed and deliberate in creating the best habits for the outcomes and results you hope to achieve. The secret to being a strong woman is knowing yourself.

Where to from here...?

Seek out professionals you can trust. It’s important to only get DNA testing done through reputable, ethical companies and professional practitioners. So be well informed about what you are getting tested for and be clear on what you are hoping to find! The new and exciting information in this field can make huge differences in your life. Seek out the help of experienced professionals to help you align what you have learned about your DNA with your health and nutrition and fitness goals, in the context of your environment. ●

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