

## IS IT REALLY ALL IN YOUR GENES?

StoneTree Naturopathic Clinic, Collingwood, ON

Since the human genome project began in 1990, we've discovered a genetic component to many of our chronic diseases. For medicine, it's an opportunity to develop genetic therapies for some of the most challenging medical issues of our time.

But while the science of genetic mapping is remarkable, what we take away from it can sometimes be misleading. The belief that "It's all in your genes," shifts the power to take control of our own health from our hands to a genetic inheritance that we're stuck with. High cholesterol? It's not your fault—it's a mutation of LDLRAP1. Diabetes? That must be the Pax4 gene acting up.

The idea that health problems are genetic can lead us to believe that there's nothing we can do. There's no reason to give up smoking, start a walking program or learn to love eating broccoli if all that really matters is the genes your parents gave you.

But the truth about genetic expression isn't so black and white. What we're now discovering is that while you may get your genes from your parents, how they're *expressed* is a different matter.

This isn't just nature versus nurture all over again—it's nature *and* nurture. We now know that our genes actually turn on and off depending on the environment we're in.

That Pax4 gene? Put it into a high stress, high carb, low exercise environment and no surprise – you do indeed get Type II diabetes. But put that same gene in a healthy, happy environment and suddenly diabetes isn't so certain.

Don't give in to the idea of genetic fate. You may not control your nature, but you can control its nurture. You can change what goes on your family dinner table. You can change you health habits, and pass them on to your children.

In doing so you create a new legacy. One where your children write on their medical forms that there's no diabetes in their family history.