

Introduction: Most Chronic Disease Is a Choice

Like all dentists, every working day, I see tooth decay and the damage it does. In its extreme presentation, decay leads to pain, infection, fever, swelling, irritability, and occasionally even death. But there is more of a health issue here than meets the eye.

Example 1. An overweight mother brings in her ten-year-old for relief from toothache agony. Her husband has type 2 diabetes. This overweight mother is overweight for the same reason her child has a toothache. The husband has type 2 diabetes for the same reason the mother is overweight and the child has a toothache.

Example 2. An obese, middle-aged woman facing knee replacement surgery is in the office to make an appointment for her husband, who is about to have all his teeth removed and replaced with implant-supported teeth. The cost of this treatment is equivalent to purchasing a late-model car. This obese woman has knee replacement surgery

requirements because the knee is carrying too much weight. The cost of knee replacement surgery is also equivalent to purchasing a late-model car. She needs knee replacement surgery for the same reason her husband needs the expensive dental treatment.

Example 3. A man comes in for root canal treatment. He is overweight. So is his wife; in addition, she has varicose veins. Again, both husband and wife owe their individual ailments to a single issue.

In each of these cases, healthcare providers can trace the patients' health issues back to one thing: diet.

Families come to me, from four-year-olds to grandparents. Like all dentists, I take medical histories and see the general health problems my patients have. Most are caused by eating at the same table. The overweight mother, the child with a toothache, and the husband with diabetes all eat at the same table. The obese middle-aged woman with bad knees and her husband with bad teeth eat at the same table. The overweight man requiring root canal treatment and his overweight wife with varicose veins eat at the same table.

Years ago, I began to corroborate my own clinical findings with the work of leading researchers in the field. I started to make notes and do more research, and it soon became clear that these “diseases of civilization” are connected. These “diseases” began to be a problem only after the advent of agriculture that made civilization possible (Cordain et al. 2005). They are a different manifestation of the same problem—the problem that is the way we eat. Our nutrition has departed so significantly from the way we are built to eat that we are abusing our design, and the result is disease (Eaton 2000).

All the people in the examples above are malnourished in the same way. They eat the same “engineered food” that Big Food¹ markets. The problems start with tooth decay, and two to four

1 “Big Food” is the term we use to describe the eight hundred-pound gorilla that dominates commercial food production, distribution and marketing. As long as Big Food sells legal products and is run by business people, its detrimental influence on society's health will

decades later, other lifestyle manifestations show up (Hujoel 2009). We see them as any of the following, much more sinister, disorders:

- The “deadly quartet”:
 - Excess weight and obesity
 - Elevated blood fats
 - Diabetes
 - Hypertension and resulting coronary disease

- Constipation and its consequences:
 - Varicose veins
 - Varicocele
 - Hemorrhoids
 - Diverticulitis

All of these conditions are “lifestyle diseases” that start as dental decay, which can show up as early as the age of two. In other words, when it comes to our health, tooth decay is the proverbial “canary in the coalmine,” warning of imminent danger and giving us the opportunity to make changes while we still can (Hujoel 2009). If we do not heed the warning, the other conditions can show up anywhere from a few years to a few decades later (Temple and Burkitt 1993). Our unique genetic makeup determines which of the diseases we will get.

Would you like to know in your teen years whether you will get type 2 diabetes forty years down the road? Or cardiovascular disease? Or any of the other chronic diseases of civilization? Knowing an ominous future can be troubling, but knowing a manageable future is empowering. This book will empower you.

Simply stated, the refining of carbohydrates is the primary cause of these diseases. Refined carbohydrates are engineered foods. This is the key concept we’ll explore, although engineered fats are increasingly adding to the problem, and we’ll look into that as well.

increase. Big Food does provide jobs and pay taxes even though much of what it does is short on socially redeeming qualities.

Traditionally, *to refine* meant *to purify* and *to improve*. When applied to carbohydrates, to refine means *to diminish* and *to worsen*.

While total carbohydrate consumption has remained fairly consistent throughout the millennia, consumption of refined carbohydrates—mainly added sugar and white flour—over the last two hundred years is unprecedented (Cleave 1974, 14). Added sugars, any ingredient thing ending in “-ose”, are sugars in our foods that exceed those found in foods naturally. Between 1970 and 2005, the North American average added-sugars intake increased by 19 percent, annually and now stands at 355 calories per day. The American Heart Association recommends a fraction of that—no more than 100 calories per day for women and 150 calories per day for men (Johnson et al. 2009). The prevalence of all the diseases this book discusses shows a parallel rise. A further thought-provoking detail is that, in societies that haven't yet adopted wide-scale use of refined carbohydrates, all of these diseases are practically absent (Richards 2002).

Dentists would be largely unemployed in a hunting and gathering society. So would physicians. There are few examples of tooth decay in pre-agricultural specimens. That is, dental decay initially appeared with the advent of the first agricultural revolution some ten thousand years ago and accelerated enormously with the advent of the Industrial Revolution some two hundred years ago. The Tigris-Euphrates region and Egypt were among the world's first areas to develop agriculture and, with it, the diseases of civilization. Ancient Egyptian mummies exhibit signs of advanced dental disease as well as the other so-called diseases of civilization (Allam et al. 2009).

We nourish our bodies today in ways that don't harmonize with our bodies' design (Hujoel 2009). We live longer today because health care has learned how to manage conditions like hypertension and diabetes; but living longer does not necessarily mean living better.

Dental decay results from knowledge and behavior problems. Obesity results from knowledge and behavior problems. Lifestyle diseases result from knowledge and behavior problems.

The purpose of this book is to show the connection between dental and overall health. How you act on that knowledge is a personal choice.

This book will resonate for you if you accept four axioms:

1. We are entirely the product of our genetic makeup and environmental influences. Nothing else shapes us.
2. Our genetic makeup is entirely beyond our control (for now, anyway).
3. Our environmental influences are significantly within our control. Distinguished scientists today continue the debate over the role of nature versus nurture in the forces that shape us. Philosophers have done so for centuries. The debate is sure to continue. For our purposes, we simply need to accept that both play a role in what we become and that we can control environment to a significant degree.
4. The methods of science are the most reliable way to uncover physiologic truths. Almost all references in this book are from primary sources from peer-reviewed scientific journals. You will find no references from Big Food-sponsored publications, gossip magazines, or supermarket tabloids.

Bottom Line

1. There is a major disconnection between the way we nourish our bodies today and the way we were designed.
2. The differences between our modern and our ancestral diets are the primary cause of the chronic diseases of civilization.
3. Dental decay, the first condition to appear, is the early warning system for any of the other health issues,

including diabetes, elevated blood fats, hypertension, excess weight and obesity, and constipation, along with its consequences (varicose veins, varicocele, hemorrhoids, deep venous thrombosis, and diverticulitis). Other conditions, such as acne, kidney disease, age-related memory decline, and many others, may also be linked to dietary choices. Ongoing research is exploring the depth of this connection.

4. With the right diet, one approximating our ancestral diet, the chronic diseases of civilization are preventable, stoppable, and reversible. (See chapter 15, “The Only Guide to Eating You’ll Ever Need.”)

