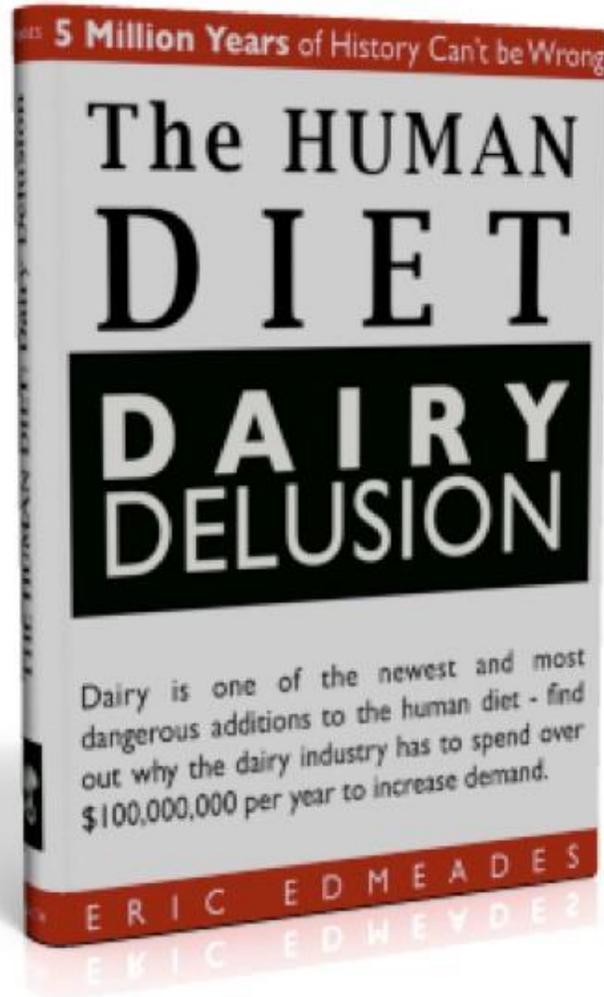


# The Human Diet: Dairy Delusion

B Y E R I C E D M E A D E S



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## Introduction

Dairy products played a major role in my inspiration to write *The Human Diet*. My experiences with, and research into, dairy products inspired my curiosity about food, nutrition and the development of the human diet.

You may be shocked to learn how new dairy products are to humans and that as a result of this recent introduction to human consumption, they are not necessary nor are they a natural component of the human diet. In fact, regardless of what *they* may tell you, dairy products can be quite harmful to people.

I know that this is a vastly different message than you will have received in school, from the government and, in most cases, from your parents.

The essential message of *The Human Diet* is that your experience of optimal health and energy is directly related to how closely you adhere to your body's design. In other words, your body is the result of millions of years of natural selection. This lengthy process has created a miraculous machine; a machine that has specific nutritional requirements. If you give your body what it wants and needs, it will reward you with significantly better health and energy.

On the other hand, if you put the wrong fuel into your body, there will be consequences. You wouldn't put diesel in a petrol powered car, would you? Surely, if you put the wrong fuels into your body, you'd expect it to stall from time to time or, perhaps, to fail entirely?

Dairy products are, as you're about to understand, one of those 'wrong fuels'. Sure, we can get energy from dairy products, but at what cost?

In this book we'll explore the history of dairy products and how they came to feature in the human diet. We'll find out that milk and dairy products have no place in the human digestive system and that your health will be dramatically improved by eliminating dairy products from your diet.

But first, we must begin with a question. Why do so many people believe that milk isn't only good for us, but essential for our health? Especially when no other species on earth drinks the milk of another species, or for that matter, continues drinking its own species' milk into adulthood.

## The Delusion Begins

As I've discussed, until my early twenties, I strongly believed that dairy milk was an important part of the human diet. After all, how else would I get all my calcium needs met?

Like most people, I was a staunch consumer of milk and dairy products. However, as a child I was allergic to milk (something I later understood to be a blessing) and grew up thinking that I was weak as a result.

When my childhood allergies to milk passed and it was reintroduced to my diet, I felt as though I had lots of catching up to do. I drank milk regularly and even forced myself to eat cheese even though I hated it.

Despite, or perhaps looking at it now, *because* of this, I still managed to break several bones as a child. An arm, a leg and several fingers. This was, of course, blamed in part on my childhood allergy to milk and consequent lack of calcium.

I now believe, after years of research, that any weakening of my bones came from the massive reintroduction of milk into my diet. We'll come to the mechanics of this later.

So why did I have such a strong belief in milk? Why do most children growing up in the West also have this belief? For my part, my belief was reinforced by posters at school, television advertisements, well-meaning parents, teachers and just about everyone else.

Later, I would discover that this was not an accident. It was the result of very expensive, clever and intentional marketing and lobbying by the dairy industry.

Before I could discover that though, I had a long way to go. As I approached my teen years, I began to develop severe and painful acne, persistent allergies, routine stomach aches and extremely regular and painful throat infections.

Sometimes you need to hit rock bottom before you can see the truth. In my early twenties, after years of pills and injections for my allergies and ailments, a specialist decided that surgery was the best way to proceed.

## Recovery

I'd just left my doctor's office with a new appointment slip. I was scheduled for surgery and soon my offending tonsils would be long gone, sitting in a jar somewhere.

While I'd agreed to the surgery (I certainly wasn't going to argue with a specialist) I was somewhat reluctant and concerned. However they got there, whether created by God or evolution, I was certain that I was meant to have tonsils.

It was around this time that my good friend, Tim Ames, sold me some tickets to a motivational seminar in Vancouver, Canada. Like most good sales people, Tim was a vibrant young man with a great deal of energy. He convinced me to attend the program and suggested that I pay special attention to the third day.

On the third day I discovered that the motivational part of the program was over and we were now learning about health. After all, they posed, what is the point in making large amounts of money if you're not around to spend it?

One of the many recommendations of the program seemed ridiculous to me at the time, and that was the suggestion that I eliminate all dairy products from my diet.

I thought, back then, that milk was not simply important to our diets, but vital. After all, why would the schools give it to us for free? Why would our doctor tell us to drink it? Why did the television keep asking us if we'd 'Got Milk' if it was so bad for us?

Tim intervened again. He knew about my upcoming surgery, now only six weeks away, and he implored me to try giving up dairy just until then. After the surgery, he joked, I could have as much ice cream as I wanted.

It was not immediately easy because I routinely ate cereal for breakfast, put cheese on my pizza and hungrily downed ice cream, so it was going to be a big change. Still, I did it.

Three weeks later I noticed that for only the second time since before puberty I had a clear complexion. I had suffered with fairly serious acne, cystic at times, for several years, and now my face was clear.

My face had cleared up once before when I was prescribed Accutane. Yet, as soon as I finished my course of pills, my face and neck broke out again. It was only later that I noticed a pattern. As well as a very long list of hideous side effects and warnings, Accutane comes with firm instructions to dairy products throughout the treatment.

So, interestingly, I was dairy free on the only two occasions in my life that I'd ever had a clear complexion.

The absence of acne on my face is a gift that is hard to explain. Quite apart from the self-esteem and related issues, my acne was really quite painful. To be free of it felt like nothing less than a miracle. And there were more miracles to come.

I woke up one morning soon after my face cleared up and realized that I'd slept really well. This was a novelty because of my sinus problems. I then realized that I'd slept so well because I was breathing clearly through my nose. I'd almost forgotten what it felt

like and for the last several years I had rarely slept well without the aid of decongestants or nasal sprays.

I was even more amazed when it lasted all day, that night and then for the next several days. My sinuses were, it seemed, cured. As was my throat.

Soon after this I took a call at my office. It was my doctor's receptionist hoping to confirm my surgery. I didn't know what to say. For weeks now I'd experienced clear sinuses and no throat problems. I was scared to do so, but I cancelled the surgery. I explained that I was no longer suffering with sinus and throat infections. The receptionist pointed out that this was probably temporary and that I should proceed with the surgery because it had already been booked. I didn't want the symptoms back, did I? And if they came back, I'd have to schedule another appointment with my doctor in order to get another appointment with the specialist so that he could re-prescribe the surgery.

I swear it would have been easier to cancel a purchase I'd made from a persistent telesales company. The doctor's receptionist sounded exactly like someone trying not to lose a sale. Come to think of it, that's exactly what she was doing.

I also remember thinking, at the time, that it was strange that the doctor was not curious about this turn around in my health.

Over time I began to take my new found relief for granted. Until, that is, the symptoms came back. This happened when I attended a lovely holiday meal at a girlfriend's house. I'd been dairy free for six weeks now, so when she brought out apple pie and my favorite ice cream, I ate it with gusto. I'd been 'good' for six weeks now. Why not treat myself?

My answer came within a few hours, when I experienced painful stomach cramps. I'd almost forgotten about them and they returned with a vengeance.

Another benefit from the changes I made came in the form of weight loss. I lost over 30 pounds. The change in my physique was so significant that my mother didn't recognize me at the airport; the shape of my face had completely changed. I attribute the change to both the weight loss and the curing of my sinus infections.

I was sold. It all came together for me. My allergies were gone, my face cleared up, my throat was neither painful nor itchy, my stomach pains were gone and I'd lost 30 pounds, and all in just six weeks.

So clearly, I was not meant to have milk.

The idea of this worried me a great deal. Was I unusual? Did I have some strange defect that others of my species did not? Would I survive into old age considering how weak my bones were likely to get as I got older? I decided that I'd either need to overcome my problems with dairy products, or resort to taking calcium supplements, or worse, maybe even a specific type of medication. I decided to learn all I could about the subject.

And so my fascination with dairy and its impact on human health began. I researched the subject of milk in earnest. In time I determined that there are three main areas to consider. They are, in no particular order:

- 1) Human Dietary Evolution (Nutritional Anthropology)
- 2) Milk as a source of calcium.
- 3) Animal Rights.

## Human History and Evolution

In order to start answering my questions about the increasingly dubious relevance of dairy in our diet, I wanted to know when humans first started to consume dairy products. I didn't yet understand how important this issue would become as my research progressed.

Exactly when and how we started to use dairy products is still not precisely known and probably never will be. I've read theories that suggest that it may have been as long as 11,000 years ago with the domestication of cows in Libya. Ayurvedic writings in India suggest that it may be as recent as 8000 years ago, but the earliest clear example of dairy milk consumption that I've been able to identify, was around 6,500 years ago in England, where pottery has been found with traces of milk products. This discovery was made by Richard P. Evershed, of the University of Bristol in England, using a recently developed method of milk fat detection.<sup>1</sup>

Many archaeologists believe that, despite this early evidence of milk production, milk itself would not have become part of the human diet for several thousand years after its initial production, because of the high incidence of negative reaction to lactose.<sup>2</sup> Instead, it is likely that people initially made and consumed dairy derivatives, what we now think of as butters, cheeses etc., that were lower in lactose and, therefore, edible.

Some people are better able to digest lactose than others, thanks to a mutation<sup>3</sup> on chromosome two that allows certain people to continue to produce the lactase required for lactose digestion. Normally, mammals stop producing lactase once they are weaned.

Thousands of years ago, people with this genetic alteration would have had a slight evolutionary advantage because, during times of short food supply, children that were able to get food energy from dairy products were more likely to survive to breeding age and, therefore, to pass on this adaptation.

As I discussed in the Evolution chapter of *The Human Diet*, it's important to remember that evolution doesn't favor the 'fittest' so much as it favors the 'fittest to breed'. This means that an adaptation like increased lactose tolerance would be passed on purely because people with this trait were more likely to survive to breeding age, even if it caused dysfunction or disease later in life.

This advantage was only developed in a few global areas.<sup>4</sup> *Emedicine.com* estimates that 75% of the American population is lactose intolerant.<sup>5</sup> When this statistic is broken down, it turns out that only 25% of the white population (people with European heritage) are lactose intolerant, whereas lactose intolerance among Jewish, African American, Native American, South American and Asian American people runs at around 75-90% of the population. The numbers are very similar for Canada.<sup>6</sup>

This makes clear sense when viewed against the archaeological record. The populations that appear to have introduced dairy products as long as 6,000-10,000 years ago have a far greater ability to process lactose because they've been given the opportunity to begin to adapt their digestive systems. This doesn't mean, however, that the consumption of dairy products is good for those people who adapted the ability to produce lactase in adulthood. It simply means that they don't suffer the immediate symptoms of lactose intolerance.

For example, there are also a large number of people who react badly to casein, a milk protein. And there are a plethora of other symptoms and diseases that have been associated with milk consumption. Studies have also shown that allergies to dairy products can cause irritability, restlessness, hyperactivity, muscle pain, mental depression, abdominal pain, cramps or bloating, gas, diarrhea, bad breath, headaches, lack of energy, constipation, poor appetite, malabsorption of nutrients, nasal stuffiness, runny nose, sinusitis, asthma, shortness of breath, rashes, eczema and hives.<sup>7</sup>

As I discussed in the section on evolution, natural selection often creates almost perfect relationships. For instance, over millions of years, each mammal species has evolved the ability to produce the perfect food for its offspring.

When I say, 'perfect food', I am of course referring to milk and, moreover, I mean perfect for the offspring of the given species. Milk is both species and age specific. Each mammalian mother produces milk that meets the nutritional requirements specific to its own species. Cows for instance, require a great deal more fat, protein, calcium and growth hormones than humans and this is reflected in their milk.

Furthermore, the milk of each species is also specific to the age of its offspring. Milk produced in the first few days of a child's life is very different to that produced later. The composition of the milk changes over time to meet the nutritional requirements of the infant at whatever stage of growth it is at. Evolution, over millions of years, has produced the ability for mothers to produce food that is perfect for their offspring at each developmental stage until they are weaned. So, if the milk of one species can vary greatly, depending on the developmental age of the offspring, consider how different the milk from two different species can be when compared side by side.

For example, bovine and human milk are drastically different.<sup>8</sup> Dairy milk has only 83% of the vitamin A<sup>9</sup> contained in human milk, only half the niacin<sup>10</sup> and only 20% of the vitamin C. Meanwhile, it has 250% of the protein and over 400% of the calcium of human mother's milk. These are the differences before Bovine Growth Hormone,<sup>11</sup> (or BGH), antibiotics and bovine diseases are examined.

In the quest to produce the maximum amount of milk at the lowest cost, a variety of growth hormones and antibiotics are in regular use. BGH (in the USA) is used to increase milk production. Antibiotics are used to fight mastitis. As well as being painful for the cow, the mastitis produces white blood cells (pus) that obviously make their way into our milk. Dr. McDougall said, in the April 2003 issue of his newsletter that:

Unfortunately, some of that white [in milk] comes from white blood cells – commonly referred to as ‘pus cells’ – which are cells produced by the cow's immune system to fight off infections, especially those of bacterial origin, such as mastitis. The dairy industry calls these *somatic cells* and refers to their presence as the *somatic cell count* (SCC). The SCC is the number of (mostly) white blood cells per milliliter (cells/ml) of milk. (There are 20 drops per milliliter; 30 milliliters to an ounce).

Beginning July 1, 1993, the SCC level in milk must be less than 750,000 SCC to comply with the State and Federal Pasteurized Milk Ordinance. This means one 8 ounce glass of milk (240 milliliters) can contain 180 million white blood cells and still be fine for you to drink and feed to your family. In a recent study of milk sold in New York State the average SCC was 363,000 cells/ml.<sup>33</sup> These white blood cells were produced by the cow to fight off the 24,400 bacteria/ml found in this milk.

When I read this, I was seriously surprised. On the other hand, I thought, perhaps it explains something else I read about milk. Over a five year period between October 1, 1993 through September 30, 1998, dairy products were the most often recalled of all foods.<sup>12</sup>

Even with the evolutionary odds stacked against it, and the pharmacological and bacterial infection issues to consider as well, I was still astounded at the long list of

diseases that milk consumption has been linked to: ovarian cancer,<sup>13</sup> prostate cancer,<sup>14</sup> diabetes,<sup>15</sup> lymphoma,<sup>16</sup> osteoporosis,<sup>17</sup> acne,<sup>18</sup> Crohn's disease,<sup>19</sup> salmonella,<sup>20</sup> leukemia,<sup>21</sup> lung cancer<sup>22</sup> and a plethora of other diseases and symptoms.

So, if milk is so bad, why do so many of us trust it? For the same reason that people pay well over the odds for vacuum cleaners, encyclopedias and time share products; good sales and marketing. In 2004 the Dairy Management Company planned to spend one hundred and sixty two million, three hundred and thirty two thousand dollars on their marketing plan to increase demand for milk products. Paul Rovey, chairman of Dairy Management Inc., said in their statement about this marketing plan:

The 2004 budget allows producers to work effectively with processors, retailers, manufacturers, restaurant chains, educators, health organizations and others. Increasing dairy demand is good for our industry and good for the nation.

Knowing what I know today, I'm certain that I don't want Mr. Rovey spending this money to influence 'educators and health organizations'. How much do you think Bill Clinton and other celebrities (whom we often place far too much trust in) get paid to wear milk mustaches in billboard and magazine ads? I note with bitter irony that President Clinton, who is young and appears relatively healthy, is actually recovering from a quadruple bypass as I write this section.

## The Calcium Myth

So if milk is so bad for us, as the evidence seems to prove, then what are we going to do about calcium? Remember that *one hundred and sixty million dollars* the milk people are spending each year to increase demand? That question ‘what are we going to do about calcium’ is precisely what they are spending that money on. And it seems like they’re getting their money’s worth because when my friend Tim first suggested dairy free living, my first question, asked with wide open eyes, was, “Where am I going to get my calcium from?” [(As I think about that now I can just see Mr. Rovey of the Dairy Management Company smiling and rubbing his hands together.)]

Perhaps, given a few hundred million dollars to spend, the farmers and producers of kale, spinach, turnips, broccoli, sesame seeds, nuts, flax seed, seaweed, figs, eggs, parsley, tomato, rhubarb and lettuce could finally get the message out about the foods they produce. That *they* are the natural sources of calcium that the human digestive system requires.

So, during the course of my research on calcium, I sought to answer a number of questions:

Where did we get our calcium from before dairy?

How much calcium do we really need?

Is milk a good source of calcium?

### **Where did we get calcium from before dairy?**

After I learned that milk consumption was relatively new to the human diet, it's been around for approximately 10,000 years for Northern Europeans and as little as a few hundred years for many others, I was of course compelled to wonder how we met our calcium requirements before this change. I had grown up, like most of us, believing that milk was a vital part of our diet and always had been, so discovering how new milk was to our history came as quite a surprise. It was almost as though I'd been misled.

If you consider that hominids<sup>23</sup> first surfaced around five million years ago, and the archaeological record suggests that the earliest use of dairy products was no more than ten thousand years ago, this means that for four million, nine hundred and ninety thousand years (or 99.8% of our history) we've managed to meet our calcium requirements without the help of dairy products. For most of us, the introduction of dairy milk appears to have happened within the last one thousand years. This means that for four million, nine hundred and ninety nine years (or 99.99% of our history) humans have survived without dairy products. This is particularly interesting when we consider that many of our ancestors<sup>24</sup> had significantly larger and stronger bones than we do.

So, it seems that our need to get calcium from milk is nowhere near as crucial as we've been led to believe.

After this realization, I began to wonder how much calcium we really need.

To answer this question I turned to the first few years of a human's life; a period of time when calcium intake is of crucial importance for the formation of strong bones.

Human infants, on average, triple their birth weight in the first year. Naturally this means that babies require a great deal of calcium to support the growth of their bones during this period. So how much is a 'great deal' of calcium, exactly? To answer this, we should examine the only food that was designed specifically for us to consume during that time; human mother's milk.

Cow's milk, specifically designed for calves, contains 431%<sup>25</sup> of the calcium contained in human milk. So, if we need calcium, what is the harm in having four times our proven requirement?

Mark Lallanilli of ABC News reported in an article entitled 'Mineral Rights' that too much calcium can be unhealthy.<sup>26</sup> Further, a paper<sup>27</sup> published in the *British Medical Journal* on May 19, 2001 reported that excess calcium is associated with an increase in the incidence of hip fracture, one of the measures of bone health. They also said:

*... International rates of hip fractures are higher in countries where calcium consumption is high...*

Another study,<sup>28</sup> published by the National Library of Medicine examined the relationship between milk, calcium supplements and hip fracture and they determined that 'neither milk nor a high-calcium diet appears to reduce risk [of hip fracture]' and that, '...adequate vitamin D intake is associated with lower risk [of hip fracture].'

I found this alarming. All these years of education and conditioning (and lobbying) had given me a very strong belief that without regularly consuming dairy products I'd end up with weak or brittle bones. Now I'd just found that the opposite was true.

### **Just how much calcium do we need?**

Wait! There must be examples of people who don't have milk and have even worse incidents of hip fracture and brittle bones. As I searched for examples of this, I found that the *American Journal of Clinical Nutrition* reported in 1965, that African 'Bantu' women, who give birth to an average of 9 children, and breastfeed each one for two years, rarely if ever have calcium deficiency, hardly ever break bones or lose teeth and yet only consume 350mg of calcium per day, which rarely, if ever, comes from milk or dairy derivatives. That is not a great deal of calcium when you consider that one cup of milk has around 300mg of calcium and that the US RDA <sup>29</sup> for adults is around 1000mg, with the British RNI <sup>30</sup> set at between 700mg and 1000mg per day.

Websites published by dairy providers and promoters are fond of quoting the drastic amount of spinach we would have to consume to meet our daily calcium requirements so I decided to do some math...

...If the US RDA for adults is correct (1000mg per day), then it would take around four cups of spinach to meet our daily requirements; a bit extreme for anyone other than Popeye. Alternatively, one could consume 10 cups of broccoli, also a daunting task. On the other hand, if the actual daily requirement for calcium is closer to 350mg, then a person eating a good amount of green vegetables each day would surely get enough calcium.

So why is the US RDA set at 1000mg? And why are the Japanese and Korean RDAs closer to 600mg? Is it possible that some of Mr. Rovey's hundreds of millions of dollars have influenced this number? He did say that he planned to use the money to work with 'educators, health organizations and others.'

It appears that the US RDAs are set by looking at the average American daily consumption and the current health of the general population. If the average American is taking 600–800mg per day, and there is an average decrease in bone density and a corresponding increase in osteoporosis, then it would be easy for Mr. Rovey to convince the 'educators, health organizations and others', that people should be consuming even more calcium. But this is not the whole picture.

### **Is milk a good source of dietary calcium?**

No! To my surprise I found that animal protein, which milk is packed with, can cause calcium loss. USA Today reports on their website that:

*Eating too much animal protein (over 80 to 100 grams a day) can cause you to lose too much calcium. Plant or vegetarian protein does not seem to cause this problem.*

Since dairy milk is high in animal protein, consuming it may well amount to working at cross purposes, particularly if you are already consuming enough or more than enough animal protein to begin with. In other words, the more animal protein (including milk) you consume the more calcium you will require.

Now I had my answer as to why incidents of hip fracture appeared to increase in proportion to milk consumption around the world. Drinking milk does not provide the calcium benefit that we originally thought.

So by now, my beliefs about milk had drastically changed. I was now certain that my lactose intolerance was not a misfortune but an advantage. I didn't need to compensate for this intolerance, and had learned that, in all probability, nobody should consume dairy products.

As I continued my research I learned that not only was there a strong connection between the calcium in milk and higher rates of osteoporosis but that there were also links to other diseases as well. Further to the long list of diseases I mentioned in the previous section of this chapter, I found an extraordinary link between excessive calcium consumption and prostate cancer.

The American Cancer Society reported that a study conducted at Harvard University<sup>31</sup> suggested that too much calcium may be the largest dietary risk factor for the development of prostate cancer. The study found that men that consumed the most calcium, say double the recommended daily intake, were 300 per cent more likely to develop advanced prostate cancer, and 500 per cent more likely to develop metastatic prostate cancer than men who took half that level. The study also found that increased fructose (fruit sugars) reduced these percentages substantially.

One of the study authors, Dr. Edward Giovannucci, said:

*We're not saying that calcium causes cancer. What we are saying is that more than enough calcium may be too much of a good thing. It may even be more important than how much fat you eat. And that by eating plenty of fruit, you can bring down your chances of getting prostate cancer dramatically.*

If 'more than enough calcium may be too much of a good thing', then is it wise for our children to be consuming approximately four times the requirement determined by nature and millions of years of evolution? And, if it is not wise for our children, is it wise for us in adulthood?

Obviously, as my research progressed and my knowledge increased, I became certain that dairy products are far from being a requirement, they are not even an option (except of course for calves).

Furthermore, I have come to understand that cows undergo serious animal abuse in order to provide us with the very dairy products that actually have no place in our diet. I strongly believe that the single most important and beneficial change that most people can make to their diets is to eliminate all dairy products.

By cutting dairy from your diet, you are likely to reduce or eliminate allergies and asthma symptoms, lose weight and gain energy as well as avoid serious illnesses such as ovarian cancer, breast cancer, prostate cancer, diabetes, lymphoma, osteoporosis, acne,<sup>32</sup> Crohn's disease, salmonella, leukemia and lung cancer. There is a certain irony in the fact that, by eliminating dairy and avoiding these diseases altogether, you may never truly understand the extent of the favor you've done yourself.

## Animal Rights

I have discussed this issue briefly in the chapter on animal rights, however, just in case the personal reasons for eliminating dairy products were not compelling enough, I thought I'd point out a few realities about how dairy cows are treated.

To start, I'll quote a few points from John Robbins' book, *The Food Revolution*:

Dairy cows in the United States today do not have it easy. The natural life span for dairy cows is 20–25 years. But under modern conditions these animals are lucky to make it to age four.

I agree with many of John Robbins' observations and I suspect that when he said 'lucky' he did not really mean lucky. After all, how 'lucky' are these animals to make it to age four, or to live at all? They are removed from their mothers almost as soon as they are born and then (in the United States) more than half of them end up living in factory-like conditions<sup>33</sup> some of which are described below by the Humane Society of the United States:

Factory farmed dairy cows are typically kept in indoor stalls or on drylots. A drylot is an outdoor enclosure devoid of grass. Cows raised on drylots usually have no protection from inclement weather, nor are they provided with any bedding or a clean place to rest. Drylots can hold thousands of cows at one time. Because these lots are only completely cleaned out once — or at the most, twice — a year, the filth just keeps building up. Such conditions are not only extremely stressful for the cows, they also facilitate the spread of disease.

Until recently, Robbins tells us in his book, dairy cows could produce their own body weight in milk in a four month period, they are now doing so in three weeks, or, if they've been injected with bovine growth hormones, in as little as ten days. Until recently, US cows were fed food mixed with animal products, just as they were in the United Kingdom, until outbreaks of BSE stopped the practice. This pressure to over produce, combined with the unhealthy diet and lifestyle has created a situation that has half<sup>34</sup> of the ten million dairy cows in the United States suffering with mastitis.<sup>35</sup> Even if the

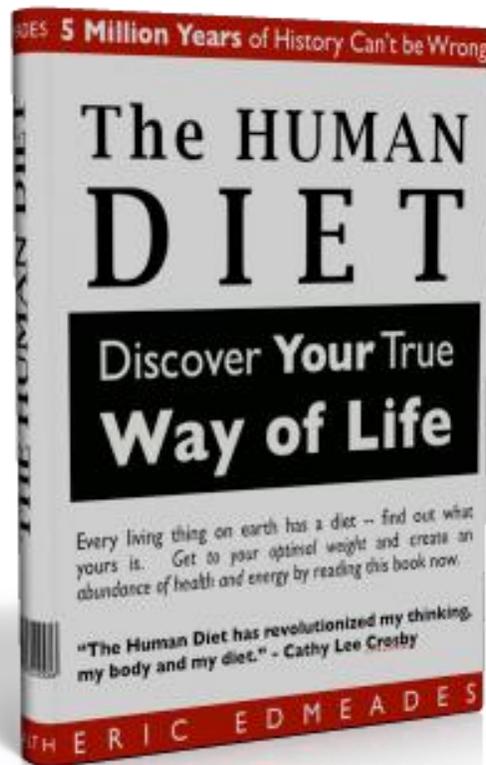
mastitis issue does not bother you from a health perspective (just remember the pus count in milk), it may be worth considering how painful it is for the cows.

I don't think that anyone could suggest that dairy cows live anywhere near enjoyable lives. In most cases they live deplorable lives of slavery and suffering. Their suffering is reason enough for many people to stay well clear of dairy foods.

If you continue to consume dairy products after reading this book, I only ask that you consider purchasing them from producers that use organic or free-range and ethical farming practices.

## Sneak Preview: Discover Your True Way of Life

Eric's flagship book in *The Human Diet* series is due out soon. To make sure you're first in line for this ground breaking book, please register for our mailing list at [www.TheHumanDiet.com](http://www.TheHumanDiet.com) or send an email to [va@TheHumanDiet.com](mailto:va@TheHumanDiet.com)



## Eric Speaks

Eric is a highly entertaining and informed international speaker. He does a variety of keynote presentations and seminars. To find out more about upcoming appearances, please visit [www.EricEdmeades.com](http://www.EricEdmeades.com)

Eric also undertakes executive coaching and designs corporate wellness programs in America, England and South Africa. If you would like to find out more about working with Eric, please write to [va@EricEdmeades.com](mailto:va@EricEdmeades.com)

### ***Walking with the Bushman and See You at the Top***

Eric prefers real life experience to classroom learning. To that end Eric has created Adventure Seminars.

*Walking with the Bushman* is an intensive program for those looking to learn more about and experience *The Human Diet*. The trips take place once a year and go to either South Africa or Tanzania in alternating years.

*See You at the Top* is also an intensive program for those wishing to learn more about emotional and mental state management, team work and achievement. The program includes climbing Kilimanjaro, Africa's tallest mountain, and going on safari.

### **Building Schools**

Eric and his partner Elise build schools in the third world each year. Both *Walking with the Bushman* and *See You at the Top* include community projects related to establishing schools for kids in need.



## Footnotes and References

1 Richard P. Evershed, employed a recently developed mass spectrometric technique to identify milk fats on pots. *Science News*, (1 Feb 2003).

2 Lactose: The sugar (disaccharide) in dairy milk that requires lactase, a digestive enzyme, to digest. Mammals stop producing lactase, the digestive enzyme required to digest lactose, once they are weaned from their mothers.

3 'It has been established that certain human populations have undergone a mutation on chromosome 2 which results in a bypass of the normal shutdown in lactase production, allowing members of these groups to continue consumption of fresh milk and fresh milk products throughout their lives', *Thefccc.org*

4 People originating in Asia, South America, and Africa appear to have greater incidence of lactose intolerance than those living in northern Europe and the north-western Indian subcontinent who appear to have greater ability to produce the lactase required to digest lactose. *Emedicine.com*

5 Pathophysiology of lactose intolerance: Lactose, a disaccharide, is present in milk and processed foods. Dietary lactose must be hydrolyzed to a monosaccharide in order to be absorbed by the small intestinal mucosa. A deficiency of intestinal lactase prevents hydrolysis of ingested lactose. The osmotic load of the unabsorbed lactose causes secretion of fluid and electrolytes until osmotic equilibrium is reached. Dilation of the intestine caused by the osmosis induces an acceleration of small intestinal transit, which increases the degree of maldigestion. Within the large intestine, free lactose is fermented by colonic bacteria to yield short-chain fatty acids and hydrogen gas. The combined increase in fecal water, intestinal transit, and generated hydrogen gas accounts for the wide range of gastrointestinal symptoms. *Emedicine.com*

6 Liebman, B. 'Lactose, Truth or intolerance', *Nutrition Action*, (April 1991) p.8.

7 Robbins, John. *May All Be Fed*. 1st ed. Morrow. 1992. p107.

8 Stephanie Clark, Ph.D., Assistant Professor Washington State University.

9 Vitamin A: A fat-soluble vitamin or a mixture of vitamins, especially vitamin A1 or a mixture of vitamins A1 and A2, occurring principally in fish-liver oils, milk, and some yellow and dark green vegetables, and functioning in normal cell growth and development. Its deficiency causes hardening and roughening of the skin, night blindness, and degeneration of mucous membranes. Also called retinol. *The American Heritage® Dictionary of the English Language*, (5th Ed.).

10 Niacin: A white crystalline acid, C<sub>5</sub>H<sub>4</sub>NCOOH, that is a component of the vitamin B complex found in meat, wheat germ, dairy products and yeast and is used to treat and prevent pellagra. Also called nicotinic acid. *The American Heritage® Dictionary of the English Language*, (5th Ed.).

11 BGH (also rBGH) Bovine Growth Hormone; used to increase milk production by artificially stimulating lactation.

12 Wong S. 'Recalls of foods and cosmetics due to microbial contamination reported to the U.S. Food and Drug Administration'. *J Food Prot*, (Aug 2000), 63(8):1113-6.

13 Ovarian cancer is more common in Northern Europe than in Asian populations and the consumption of milk products may be the reason. Studies by Cramer et al. have found that there was a higher risk of ovarian cancer in women who consume more lactose (sugar in milk) than those who were lactose intolerant. *Good Medicine*, (Autumn 1996.) PCRM.

In answering the question as to whether milk should be considered a good source for calcium, the Harvard School of Public Health says:

*High levels of galactose, a sugar released by the digestion of lactose in milk, have been studied as possibly damaging to the ovaries and leading to ovarian cancer. Although such associations have not been reported in all studies, there may be a potential harm in consuming high amounts of dairy products.*

14 In answering the question as to whether milk should be considered a good source for calcium, the Harvard School of Public Health also says:

*A diet high in calcium has been implicated as a potential risk factor for prostate cancer. In a Harvard study of male professionals, men who drank two or more glasses of milk a day were almost twice as likely to develop advanced prostate cancer as those who didn't drink milk at all. Moreover, the association appears to be with calcium itself, rather than with dairy products in general.*

15 Diabetes: Multiple studies have shown strong evidence of a relationship between Type 1 diabetes and milk consumption. One study demonstrated that a dairy protein causes an auto-immune reaction which is believed to damage or destroy the insulin producing function of the pancreas. Scott FW. 'Cow milk and insulin-dependent diabetes mellitus: is there a relationship?' *Am J Clin Nutr*, (1990) 51:489-91. Karjalainen J, Martin JM, Knip M, et al. 'Abovine albumin peptide as a possible trigger of insulin-dependent diabetes mellitus'. *N Engl J Med*, (1992) 327:302-7.

16 In the *British Journal of Cancer* (March 1990), 61(3):456-9, there was a report resulting from a large study in Norway (over 1,400 people over 11 and half years). The study suggested that there was no association between the tumor from most cancers and milk ingestion. Lymphoma however, appeared to be clearly linked. Drinking just two or more glasses a day, or eating the equivalent amount, increased a subjects chances of developing lymphoma by 340%.

17 Osteoporosis, porous bones, is a disease that involves weakened bones. The Harvard School of Health reports that 25 million Americans (8.3% of the population) have osteoporosis and numerous reports indicate that hip fracture is significantly higher in countries with higher consumption levels of dairy products.

A Harvard Nurse's study, following 75,000 women over 12 years, measuring hip-fracture incidence determined (a) that there was no preventative effect upon the occurrence of fractures and that (b) increased calcium intake through dairy products was associated with a higher risk of fracture. These findings were similar to those in another Australian study. Feskanich D, Willet WC, Stampfer MJ, Colditz GA. 'Milk, dietary calcium, and bone fractures in women: a 12-year prospective study'. *Am J Public Health*, (1997) 87:992-7.

Australian study: 2. Cumming RG, Klineberg RJ. 'Case-control study of risk factors for hip fractures in the elderly'. *Am J Epidemiol* (1994) 139:493-505.

18 Acne: Dairy products certainly contribute to, if not cause, acne in adolescence despite decades old dogma to the contrary based on one small and flawed Chocolate Manufacturers Association sponsored study. *The McDougall Newsletter*, Vol. 2 Issue 11. (November 2003).

19 Crohn's: In 1996 the Director of the National Association for Colitis and Crohn's Disease said that the best way to describe Crohn's to someone not suffering from the disease was to have them remember their worst ever stomach flu and then imagine living with it every day.

In essence Crohn's takes place when the immune system attacks the lining of the gut, causing swelling and inflammation. Symptoms can be from mild to severe and include uncontrollable diarrhea, stomach pains, vomiting and excruciating pain during digestion.

Although not yet accepted as fact, leading specialists are beginning to think that Crohn's may be caused by exposure to dairy products coming from cows suffering with Johne's Disease. Even Kennedy Dalziel, the Scottish surgeon who was the first to clearly describe Crohn's guessed at this in 1913 when he wrote in the *British Medical Journal* (25 October 1913:1058-70) that the characteristics of Crohn's and Johne's disease were:

...so similar as to justify a proposition that the diseases may be the same.

Now, decades later, it has been determined that cows with Johne's Disease infect their milk with *Mycobacterium paratuberculosis* which, it appears, can infect humans that ingest these products and create irritable bowel syndrome and Crohn's Disease. *The Journal of Clinical Microbiology* (1992), 30(12):3070-3073 said,

It is reasonable to conjecture that *M. paratuberculosis* may be responsible for some cases of Crohn's disease.

Later that year they went on to say,

Of 77 milk samples (taken from cows with Johne's disease), 11.6% were culture-positive (contained *M. paratuberculosis*).

And then in 1993 they added,

*Mycobacterium paratuberculosis* was isolated from tissue taken from patients with Crohn's disease and is implicated in the aetiology of this disease

And then, in February 1998 J Herman Taylor said in the *British Medical Journal*,

*Mycobacterium paratuberculosis* crosses the species barrier to infect and cause disease in humans.

And, N. Sung, *Applied and Environmental Microbiology* (Mar 1998), 64(3):

*Mycobacterium paratuberculosis* is capable of surviving commercial pasteurization, when there are more than 10 bacteria per milliliter in raw milk.

D. Mishina, *Proceedings National Academy of Sciences USA*, (September, 1996) 93:

*Mycobacterium paratuberculosis* RNA was found in 100% of Crohn's disease patients, compared with 0% of controls

In *The Paleo Diet*, Loren Cordain postulates, and gives one indicative example, that a return to the original hominid way of life is an effective answer for Crohn's sufferers. The woman in his example experiences a 90% reduction in symptoms and after two years claims to be completely symptom free.

20 Dr. Robert M. Kradjian, MD (Berkeley), said in his open letter to his patients:

A study from UCLA showed that over a third of all cases of salmonella infection in California, 1980-1983, were traced to raw milk. That'll be a way to revive good old brucellosis again, and I would fear leukemia too. (More about that later). In England and Wales, where raw milk is still consumed, there have been outbreaks of milk-borne diseases. The Journal of the American Medical Assn. (251: 483, 1984) reported a multistate series of infections caused by *Yersinia enterocolitica* in pasteurized whole milk.

21 Dr. Robert M. Kradjian, MD (Berkeley), said in his open letter to his patients:

As mentioned, the leukemia virus [which has been found in 3 of 5 cows in the United States] is rendered inactive by pasteurization. However, there can be Chernobyl-like accidents. One of these occurred in the Chicago area in April 1985. At a modern, large milk-processing plant an accidental "cross connection" between raw and pasteurized milk occurred. A violent salmonella outbreak followed, killing four and making an estimated 150,000 ill.

22 *International Journal of Cancer*, (April 15, 1989) reported that people drinking whole milk three or more times daily were twice as likely to develop lung cancer compared with those never drinking whole milk.

23 Humans and our now extinct human ancestors; upright walking primates.

24 *Homo robustus* (circa 2.1 to 1.6 million years ago), for example, was named for the highly robust nature of their bone structure.

25 Dairy milk contains 194mg of calcium while human breast milk contains 45mg.

26 The article discusses the impact that excessive calcium intake has upon the body's ability to absorb iron and zinc. The article quotes Dr. Sattar Hadi, Assistant Professor of Medicine at Vanderbilt University's Centre for Human Nutrition in Nashville, TN:

Calcium has been shown to cause zinc deficiencies in elderly people.

27 Drs. Devendra and Wilkin of Penninsula Medical School in Plymouth, England.

28 Feskanich D, Willett WC, Colditz GA. *Am J Clin Nutr*, (2003 Feb), 77(2):504-11 (Channing Laboratory, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, MA 02115, USA.)

29 RDA: Recommended Daily Allowance (USA).

30 RNI: Reference Nutrient Intake (UK).

31 The Harvard Study analyzed the dietary intake of 47,871 men and was published in the 1 February 1998 issue of *Cancer Research*. The study was supported in part by an American Cancer Society Special Institution Grant.

32 Acne is caused by stimulation of the sebaceous glands by androgens. When stimulated, these glands secrete an oily substance called sebum. Sebum, joins bacteria, dead skin cells and blocks the skins pores, resulting in skin eruptions.

Dr. Jerome Fisher tells us that, 'About 80% of cows that are giving milk are pregnant and are throwing off hormones continuously.' One of those hormones, progesterone, breaks down into androgens (steroids), contributing to the development of acne. Dr. Fisher observed that acne symptoms abated as soon as dairy consumption ceased.

33 Rollin, B, *Farm Animal Welfare: Social, Bioethical and Research Issues* Ames, IA: Iowa State University Press, XX, 103-4. (1995).

34 Adcock, M. and Finelli, M. *The Dairy Cow: America's 'Foster Mother'*, Humane Society of the United States. (1995).

35 A painful udder infection.