

their young child, who had been suffering from tooth decay, has just been spared costly and painful dental surgery, or when I learn of an adult who has saved a tooth from the dentist's drill.

These results were not accomplished by luck, nor by some special product, chemical, or dental treatment, but by food alone. And you will learn here everything you need to know to enjoy the same results.

### *Important Considerations before We Begin*

Please note there are now two versions of *Cure Tooth Decay* available with identical content. New copies of *Cure Tooth Decay: Heal and Prevent Cavities with Nutrition* (ISBN 9780982021309) will have the same content as *Cure Tooth Decay: Remineralize and Repair Cavities Naturally* (ISBN 9780982021323). I have done this due to logistical and marketing hurdles related to online book retail sales.

Anyone can remineralize their tooth cavities. However for some of us with severe health challenges, I estimate between 1-3% of the readership, there will be added steps necessary that are beyond the scope of this book or my knowledge. For these individuals good food alone cannot create optimal health. If you have a serious or debilitating health problem, some of the advice in this book may not benefit you. I also do not advocate avoiding dentists, but rather advocate that you make choices that feel good to you.

## *Chapter 1*

# Dentistry's Inability to Cure Cavities

**Your teeth are not designed to decay!** They were designed to remain strong, resilient and cavity free for your entire life. Why would Nature plan for the failure and pain of disintegrating teeth? Without healthy teeth and gums, we cannot digest food properly and we eventually will not thrive. In this book you will learn that tooth decay is not a result of Nature's failure or a "fact" of aging, but due to the human error of poor food selection.

Decaying teeth can be a scary and painful process. When in a state of fear and panic, we tend to disregard the most sensible decision we could make: to search for the real cause, rather than succumb to the easy and passive response of allowing a dentist to "fix" the problem for us. Yet when searching for the real cause of tooth decay, many people get lost in a maze of misleading information. Your search is over; herein you will find real and natural solutions to tooth decay.

We have been taught, for the most part, that tooth decay is as inevitable as death and taxes, and that we have no choice in the matter. In this chapter you will learn how the power to cure cavities is in your hands. We will examine the history of dentistry so that you can become aware of how false and misleading beliefs about tooth decay can turn you into a dentistry victim.

## *Reaffirm Your Choice to Cure Your Cavities*

Change begins with a decision. By picking up this book you have either made the decision already, or are considering an important decision in your life: the decision to be responsible for your teeth in a new way. For those who have decided "I want to cure my own cavities," I want to affirm to you that this is an enlivening decision to make. For those of you who have yet to decide, I urge you to look deeply within for a moment and see if you are willing to commit to do what it takes to change the fate of your teeth.

The essential keys to remineralizing teeth are found not only in this book. The answers are within your biology but they simply have been lost or misplaced. This is a guidebook designed to help you establish and implement your own tooth or gum healing diet and to restore a connection with your body through food.

You are not a passive victim to tooth decay. Rather by mistake, you have likely contributed to your teeth's own demise. This principal of personal respon-



sibility brings us self-respect, integrity, and a sense of hope that what seems to be outside of our realm is actually under our personal control. I have found that healing cavities is not just about the physical process of substituting nutrient-devoid foods for their nutrient-rich alternatives. It is an opening up to life itself. It is reaching out and growing. It is a small death of the old ways of being. Those who have successfully conquered their tooth decay have embraced the principles of this book and have *taken it upon themselves to heal*. They looked within, trusted themselves, and in some ways acted out of the involuntary consciousness that instructs and guides us. Many people are faced with difficult choices about their teeth in shades of gray. I have found that the answer to these dilemmas, whether concerning your teeth or other matters, bubble forth from within you. I encourage you to take everything I have written in this book as a pointer to your inner knowing and not as a replacement for it. You are the ultimate authority when it comes to your dental health.

### The Real Cause of Cavities

The essential causes of tooth decay have been known to the modern world for approximately eighty years. Harvard Professor Earnest Hooton clearly and succinctly summarized the problem: "It is store food that has given us store teeth."

## Remembering Your Connection

Healing cavities is about being connected to life. Our modern society generally exists in a fragmented state of disconnection. When we are out of touch with life, or out of touch with ourselves, the connection between the cause of disease and its effects is lost and we can feel like powerless victims of disease, without any real recourse. Since modern society is based upon supporting our disconnection from ourselves and others, it has not been able to support a real cure for cavities. Healing cavities is about reconnecting with yourself, and Nature, through correct food choices.

## Fear of the Dentist

Many people are afraid of the dentist and there is a good reason why. Their bodies are giving them a strong message, through the feelings of fear and avoidance. "Do not drill another hole in my teeth!"

## How Conventional Dentistry Works

When you go to the dentist for a checkup he (or she) will use x-rays, a dental aminer, and visual inspection to see if there are any cavities present. When a

cavity is found, the dentist gives you the bad news. As they are taught in dental school and legally required to do, dentists offer their patients a surgical treatment for the disease of dental caries in the form of removing the diseased part of the tooth by drilling and replacing it with a synthetic material.

## Tooth Drilling

In the drilling procedure conventional dentists will use a high speed drill, because it saves time, which drills as fast as 350,000 rotations per minute. High speed drilling creates high friction and raises the temperature of the tooth nerve causing irreversible nerve damage in 60% of cases. In addition, a negative vacuum pressure from the high speed shatters a portion of the fragile microscopic nutrient tubules within each tooth.<sup>1</sup>

In the 1800s dentists originally used gold in a careful way to fill painful teeth with cavities. But gold was too expensive for most people to afford; imagine, for example, paying the equivalent of \$10,000 for one filling today. Since dentistry was unaffordable for many people in the 1830s the Crawcour brothers made their way from France to the United States to popularize a low cost gold alternative—Bells putty. With Bells putty, which consisted of a melted silver coin mixed with mercury, they could fill teeth in two minutes, and no drilling was required.<sup>2</sup> While effective in the short term, the mercury was very toxic and many teeth discolored or died<sup>3</sup> not to mention the other side effects that were caused by mercury exposure. Dentists who placed mercury fillings were called quaks (or quacks) after the old Dutch word for a noisy peddler selling mercury-containing "health" potions and salves: *Quacksalber*.

### Dental Fact

In 1845 the American Society of Dental Surgeons banned the use of mercury fillings because of health concerns.<sup>4</sup>

The economics of mercury fillings instead of gold triumphed and the American Society of Dental Surgeons fell apart by 1856. In 1899 the American Dental Association came into existence to promote the use of mercury-laden fillings.<sup>5</sup> In 1896 the fate of our teeth changed forever with the work of dentist G.V. Black. He reformulated mercury fillings making them less toxic and longer lasting. He also developed new drilling protocols which are summarized by the principle of "extension for prevention." In other words, drill a bigger hole (extension) to give more time before the tooth needs to be retreated. This technique, although changed to some degree in modern times, is the foundation of modern dentistry. G.V. Black's "innovations" included drilling away all the discolored tooth structure, and then creating a wedge shape within the tooth in order to place a mercury filling that would remain secure. In plain words, dentists are taught to



drill big holes in teeth, because that is what works best with mercury fillings. This procedure became enshrined in the curriculum taught in dental schools, and dentists have been enthusiastically drilling parts of our teeth that are not decayed, or that can remineralize, for the last hundred years. The problem with "extension for prevention" is that we lose healthy tooth structure. A dental student from India wrote to me explaining this dilemma:

*"As a dental student I drill teeth every week. I'd rather say that I have to do this to pass my exams. When I see my patients sitting on the dental chair with their eyes closed, I feel for them as they are losing their tooth structure forever."*

## Tooth Filling

Once there is a large hole in your tooth something needs to be put in its place. Alzheimer's disease<sup>6</sup>, Lou Gehrig's disease (ALS), Multiple Sclerosis, Parkinson's disease, lupus, and some forms of arthritis all have one thing in common—mercury.<sup>7</sup> Mercury is considered hazardous waste in fluorescent bulbs at the amount of 22 milligrams. A normal mercury filling has approximately 1000 milligrams of mercury. In watching a video teaching mercury filling placement, I saw myself the messy process of installing mercury fillings as hundreds of shreds of hazardous mercury are spread all over the mouth. When a foreign substance, particularly a metal, is implanted in the body, the body can mount an immune system reaction. This toxic substance can cause or contribute to diseases such as those just mentioned. The book *Whole-Body Dentistry* by dentist Mark Breiner describes dental immune reactions in children. For example: one child became sick and unable to talk from mercury fillings and stainless steel (nickel) crowns, and another child developed leukemia from these same dental materials.<sup>8</sup>

It isn't just mercury amalgams that are toxic. While less toxic, white composite fillings made up of ground glass and plastic still cause immune reactions on average in 50% of patients. One of the most popular composite fillings caused negative immune reactions in 90% of those who received them.<sup>9</sup> Conventional dentists do not check filling compatibility with your body. Composites of plastic and glue can contain toxic chemicals like bisphenol-A. Modern fillings last on average 5-12 years depending on the material. In the case of amalgam fillings even with all the extra drilling, only 25% will last 8 years or longer.<sup>10</sup> While there are some good composites on the market, with such a short life span, the typical filling is not a long lasting solution for tooth decay.

After the drilling and filling comes our least favorite part—billing. **Drilling, filling, and billing** is the model of conventional dentistry and it is also a business model. The dentist with lots of medical school debt, a family to support, staff to pay and so forth, needs to make a lot of money to stay in business and enjoy a

comfortable lifestyle. The more teeth that are drilled and filled, the more money is made. There isn't much incentive in this system for curing and preventing cavities because without the drilling and filling business model it becomes more of a challenge to turn dentistry into a profitable career. Because many alternative dentists are afraid of being sued or losing their license, they don't want to practice dentistry that is beyond the accepted drilling and filling protocol. The incredibly strong profit motive has many dentists blinded by dollar signs. People know most dentists are in business for the money because they can see it and feel it. It is easy for a conventional dentist to get greedy and recommend the least conservative (as in most profitable) approach to treating cavities. As a result, many people have lost faith in dentistry; with each new dentist they try, the profit-motivated dentist continues to fail to put the patient's needs first. Even dentists have lost faith in their profession. Dentist Marvin Schissel wrote a chilling commentary on the shoddy dental work performed by dentists trying to maximize profits called *Dentistry and Its Victims*, and dentist Robert Nara wrote *Money by the Mouthful*, exposing how easy and common it is for dentists to make money by pushing unnecessary dental treatments.

With all the toxic materials put into people's mouths causing immune system responses, the short life span of fillings, the damage caused by high speed drilling, and unnecessarily prescribed filling treatments, the conventional dentist doesn't really offer his patients true health care, or a permanent solution to tooth decay.

## Micro-organisms

In ancient times, when people were afflicted with various types of ailments and diseases, they commonly blamed evil spirits. The belief was that the evil spirit had invaded the person's body and then caused disease. If one could placate these spirits or induce them to leave then the disease would be cured.

Many people around the world still maintain this same belief today, except that these evil spirits now have been identified. Dentists, scientists, doctors, and government officials have decided that disease-causing "evil spirits" are now real, in the form of micro-organisms (viruses, bacteria, etc.). The prevalent and accepted theory is that these viruses and bacteria are the basic or primary cause of disease—including tooth decay. This theory of disease, labeled the germ theory, became cemented in our minds thanks to the work of Louis Pasteur (1822–1895) who is famous for the invention of pasteurization. Mr. Pasteur proposed a theory of disease that is now the basis of most forms of modern medicine. This theory projects the idea that pathogenic bacteria exist outside the body and that when our body's defenses are lowered bacteria can invade the body and cause disease. Pasteur's "science" has remained the status quo despite a large body of evidence showing that bacteria don't invade people, but rather that they evolve and change based upon their environment. The effect of Mr. Pasteur's contribution to medi-



cal thought has led us to our modern system of dental care in which we attempt to cure cavities by killing the evil invading force-bacteria.

## Conventional Dentistry's Losing Battle Against Bacteria

When disease like tooth decay is our enemy then we must fight it. We create war and thus inner and outer conflicts. Conventional dentistry is engaged in fighting this war. Bacteria are the enemy and your mouth is the battleground. Yet no matter how much money you spend on dentistry, the war against bacteria never seems to be won.

The modern system of dentistry has evolved from the combination of beliefs that tooth decay is caused by bacteria (identified as *Streptococcus mutans*) and the belief that bacteria eat foods in the mouth and produce acid that causes teeth to decay. Dentistry then aims to control bacterial growth in the mouth for treatment and prevention of tooth cavities. Dentistry's war against bacteria can be summarized as follows:

1. You must brush your teeth all the time to eliminate these "disease causing" bacteria.
2. You must rinse your mouth with chemicals to eliminate more "dangerous" bacteria.
3. You must floss to eliminate the remaining bacteria and food particles.
4. When those three tactics do not work, you must pay a dentist to remove the bacterial infestations with drilling.
5. When a dental drill cannot remove the bacteria and the bacterial growth progresses, the tooth root can become infected. This requires a root canal to attempt to clean out the bacteria from within the tooth.
6. Finally, when all those procedures fail to keep your tooth alive from the supposed onslaught of bacterial invaders, the tooth must be removed and a fake tooth or no tooth is what remains.

By the time the sixth stage is reached, even after spending thousands of dollars on dental care, the war is lost. No matter how much money you spend, or how much a dentist drills your teeth, the cure for cavities remains elusive. Modern treatments do limit some pain and suffering, but if the basic cause of tooth decay (your diet) is not addressed, your teeth continue to decay.

## Dental Alert: Bacteria are Not the Primary Cause of Cavities

The foundational theory of modern dentistry was synthesized in 1883 by dentist W. D. Miller. He found that extracted teeth immersed in fermenting mixtures of bread and saliva produced what appeared to be tooth decay. He thought that acids in the mouth that were formed by microorganisms dissolved teeth. Yet Dr. Miller himself never believed that tooth decay was caused by bacteria. Rather he believed that bacteria and their acid were a part of the process of decay. Most importantly he believed that a strong tooth would not decay.

Dr. Miller wrote this:

*The extent to which any tooth suffers from the action of the acid depends upon its density and structure, but more particularly upon the perfection of the enamel and the protection of the neck of the tooth by healthy gums. What we might call the perfect tooth would resist indefinitely the same acid to which a tooth of opposite character would succumb in a few weeks.<sup>11</sup>*

In simple terms, Dr. Miller believed a dense strong tooth would "resist indefinitely" an attack from acid, whether it be from bacteria or from food. Meanwhile, a non-dense tooth would succumb quickly to any sort of acid, from bacteria or otherwise. Dr. Miller also wrote that, "The invasion of the micro-organisms is always preceded by the extraction of lime salts."<sup>12</sup> In plain terms, the tooth loses its mineral density first (lime salts), and then microorganisms can cause trouble.

Over one hundred and twenty years later dentistry and the American Dental Association (ADA) sticks with Dr. Miller's theory while leaving out vital information. They write,

*[Tooth decay] occurs when foods containing carbohydrates (sugars and starches) such as milk, pop, raisins, cakes or candy are frequently left on the teeth. Bacteria that live in the mouth thrive on these foods, producing acids as a result. Over a period of time, these acids destroy tooth enamel, resulting in tooth decay.<sup>13</sup>*

The difference from Dr. Miller's 1883 theory and dentistry's 2009 theory is that Dr. Miller knew that the tooth's density and structure are what protected it against tooth decay, whereas today, dentists are taught that it is the bacteria by themselves that cause tooth decay. **Other than in how food sticks to teeth, dentists believe that diet has little to do with tooth cavities.**

The modern theory of tooth decay further dissolves because white sugar actually has the ability to incapacitate microorganisms since it attracts water.<sup>14</sup> In a 20% sugar solution, bacteria will perish.<sup>15</sup> Yes, bacteria are present as a result of the process of tooth decay, but a lot of sugar at once will destroy them. If dentistry is correct about bacteria, then a high sugar diet should eliminate them.



Bacteria exist everywhere and are nearly impossible to get rid of completely. More than 400 different bacteria are now associated with dental disease, and many more have yet to be discovered.<sup>16</sup> Since bacteria are a part of life, with some good ones and some bad ones and trillions of them everywhere, dentistry's approach to eliminate bacteria seems hopeless.

In 1922 dentist Percy Howe read before the ADA that his research team tried and failed to reproduce dental decay by feeding and inoculating guinea pigs with various bacteria associated with gum disease and tooth decay. He said, "In no case did we succeed in establishing dental disease by these means."<sup>17</sup> However Dr. Howe had no problems in creating tooth decay in guinea pigs by removing vitamin C from their diet.

That bacteria are the cause of tooth cavities was adopted from Dr. Miller's research but was never proven. In the 1940s at an International Association of Dental Research meeting the debate about the cause of cavities was put to an end. By the power of vote Dr. Miller's acid / bacterial theory was adopted as fact despite contradictory evidence and theories.<sup>18</sup>

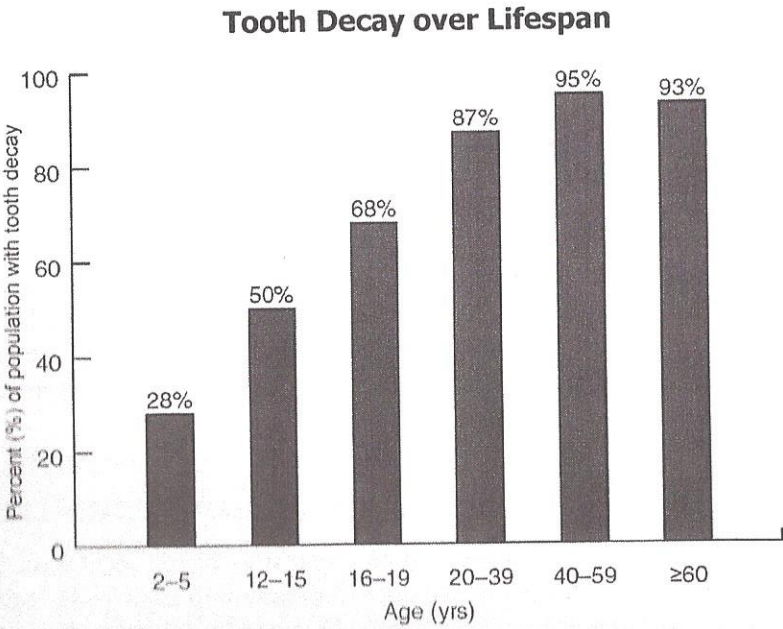
The competing theory of the time was called the proteolysis-chelation theory and was proposed by Dr. Albert Schatz. This theory suggested that enzymes (not bacteria) and chelating agents which are common in plants and animals (not acid) were the cause of tooth decay. In Dr. Schatz's proteolysis-chelation theory, it is diet, trace elements, and hormonal balance that are key factors in triggering enzymes and tooth mineral chelation which results in tooth decay.<sup>19</sup>

From 1954 to today, the life work of dentist Ralph Steinman and his colleague Dr. John Leonora give proof that tooth decay is triggered by our bodies' physiology as a result of our diet. The hypothalamus in our brain regulates the relationship between our nervous system and our glandular system through the pituitary gland. Drs. Leonora and Steinman found that the hypothalamus communicates with glands in our jaw called the parotid glands via parotid hormone releasing factor. When the parotid gland is stimulated by the hypothalamus it releases parotid hormone which triggers a movement of mineral rich dental ymph through microscopic channels in our teeth.<sup>20</sup> This mineral-rich fluid cleans teeth and remineralizes them. When a cavity-causing diet is ingested, the ypothalamus stops telling the parotid gland to release the hormone that circulates the dental remineralizing fluid. Over time, this interruption of mineral-rich fluid results in tooth destruction, what we know as tooth decay. That the parotid gland is in charge of tooth remineralization explains to me why a small portion of the population is immune to tooth decay, even with a relatively poor diet. They were born with a strong parotid gland. Dr. Steinman's rat studies showed that while bacteria produce acid, **there is no correlation between acid produced by bacteria and the presence of tooth decay.**<sup>21</sup>

Even in Dr. Miller's often cited 1883 bacterial / acid theory of tooth decay, the strength of the tooth is what makes it immune to cavities. In 1922, bacteria were then proven by Dr. Howe not to cause cavities. In the 1940s the theory of tooth decay was voted upon, but could not be proven by dentists. This vote discarded Dr. Schatz's proteolysis-chelation theory which described an alternative biological method of tooth decay from enzymes and chelating agents. Most recently Dr. Steinman has shown that tooth decay is regulated by our glandular system through hormones which are controlled by diet. From 1883 to today, there is a chain of evidence that supports the premise that it is diet, and not bacteria, which causes cavities. On the essential level of responsibility, if germs cause cavities, then humanity will continue to be the victim to the dreaded plague of tooth decay. Yet when diet is understood as the cause of cavities, we have full control to heal and prevent tooth decay.

*The Failure of Conventional Dentistry*

As we age, tooth decay becomes more and more prevalent as seen in the "tooth decay over lifespan" chart. As we age we also lose more teeth. Not including wisdom teeth the average 20 to 39-year-old is missing 1 tooth, the average 40 to 59-year-old 3.5 teeth, and those aged 60 and over are missing 8 teeth.



National Center for Health Statistics.<sup>23</sup>



Further tooth decay statistics for people over the age of 40 are dismal. On average, 45.89 per cent of all teeth in this age group have been affected by decay. That average represents nearly half the teeth in each person's mouth having been affected by decay. This situation only gets worse. By the time you reach the age of 50, 62.36 per cent of all teeth have been affected by decay.<sup>22</sup>

While one can argue that the increase of tooth decay with age is due to the inherent break down of the body over time, it doesn't explain why tooth decay is now on the rise among young children. Tooth decay in primary (baby) teeth of children aged 2 to 5 years increased from 24 percent to 28 percent between 1988-1994 and 1999-2004.<sup>24</sup> Along with this increase in decay came an increase in dental treatments. If tooth decay is caused by the aging process, why are more young children suffering from it? And why hasn't the increase in dental treatments in these young children stopped the tooth decay?

.....  
If dental drilling, root canals, tooth pulling, mass water fluoridation, tooth brushing and toothpastes were the proper treatments for cavities, then we would not see this increase in tooth decay over time.  
.....

Are we to assume that over 90 percent of the population is not following the prescribed protocol? I don't think so. Rather there is something fundamentally wrong with this "modern" war-on-bacteria approach to preventing and treating tooth decay.

\*

Chapter 2

# Dentist Weston Price Discovers the Cure

In 1915 prominent dentist Weston Price was appointed as the first research director of the National Dental Association. A few years later the association changed its name to The American Dental Association (ADA). In 1936, writing in the *Journal of the American Dental Association* (which is still in publication), Dr. Price painted a picture of tooth decay that was very different from the one we have today. He wrote of people who did not use toothbrushes, yet were immune to tooth decay.

*All groups having a liberal supply of minerals particularly phosphorus, and a liberal supply of fat-soluble activators, had 100 per cent immunity to dental caries.<sup>25</sup>*

Let's examine some of Dr. Price's fascinating field studies of people immune to tooth decay.

## Lack of Nutrition is the Cause of Physical Degeneration

Dr. Weston Price realized that something was fundamentally wrong with the way we live and set out to explore the world to find out what it was. During the 1930s, Dr. Price was able to document the sharp decline in health experienced by previously healthy people who came into contact with modern civilization. The revealing findings of Dr. Price, published in his book *Nutrition and Physical Degeneration*, along with his telling photographs, bring home the important fact that our modern food and lifestyle are the primary causes of tooth decay.

## The Healthy People of the Loetschental Valley, Switzerland

In 1931 and 1932, Dr. Price traveled to the remote Loetschental Valley in the Swiss Alps. The people of the valley lived in harmony with nature, which resulted in a seemingly peaceful existence. Dr. Price wrote of the superior character and health of these people and the sublime lands of the isolated valleys in the remote Swiss Alps:



### Isolated Swiss Alps Children Were Remarkably Healthy



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*Normal design of face and dental arches when adequate nutrition is provided for both the parents and the children. Note the well developed nostrils.<sup>29</sup> (Original caption.)*

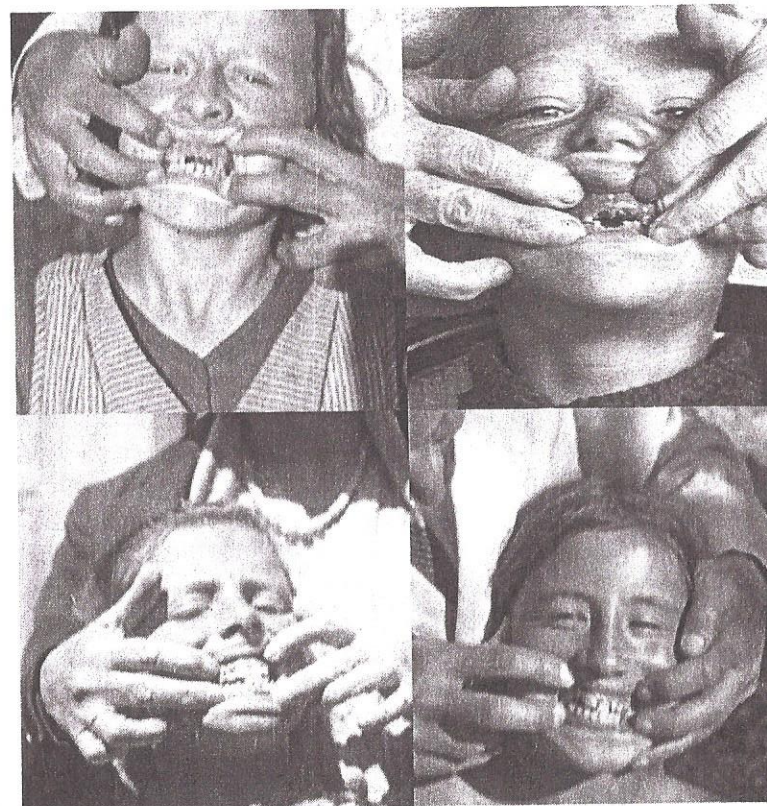
*They have neither physician nor dentist because they have so little need for them; they have neither policeman nor jail, because they have no need for them.<sup>26</sup>*

This harmony is also evident in the production of food:

*While the cows spend the warm summer on the verdant knolls and wooded slopes near the glaciers and fields of perpetual snow, they have a period of high and rich productivity of milk... This cheese contains the natural butter fat and minerals of the splendid milk and is a virtual storehouse of life for the coming winter.<sup>27</sup>*

Reverend John Siegen, the pastor of the one church in the valley, told Dr. Price about the divine characteristics of butter and cheese made from the milk of the grazing cows:

### Modern Swiss Children Have Lost Their Health



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*In the modernized districts of Switzerland tooth decay is rampant. The girl, upper left, is sixteen and the one to the right is younger. They use white bread and sweets liberally. The two children below have very badly formed dental arches with crowding of the teeth. This deformity is not due to heredity.<sup>30</sup> (Original caption.)*

*He told me that they recognize the presence of Divinity in the life-giving qualities of the butter made in June when cows have arrived for pasturage near the glaciers. He gathers the people together to thank the kind Father for evidence of his Being in the life-giving qualities of butter and cheese when the cows eat the grass near the snow line... The natives of the valley are able to recognize the superior quality of their June butter, and, without knowing exactly why, pay it due homage.<sup>28</sup>*

It was neither good genes nor luck that kept these isolated Swiss in superb health. Dr. Price continues:



*One immediately wonders if there is not something in the life-giving vitamins and minerals of the food that builds not only great physical structures within which their souls reside, but builds minds and hearts capable of a higher type of manhood in which the material values of life are made secondary to individual character.<sup>31</sup>*

I want to offer you an opportunity to connect with this once healthy group of people. They are role models for us, for living in health and relative peace. It is this way of being that has become lost in the modern world of convenience and fast food. It is a result of our fall from grace. By sensing and revering the holy nature of food, ancient cultures enjoyed vibrant health. In exchange for their reverence of the life-giving vital force, especially that in the summer milk, the isolated Swiss received health, aliveness, vitality and peace. Unfortunately in today's world, the once profoundly honored cow's milk—unpasteurized and grassfed—which has brought health to people across the globe for thousands of years, is being attacked by our own state and federal governments. This healing food is attacked because as a whole, our culture is disconnected from the vital force of life, and so real food has lost its meaning and value. It even becomes an enemy to be destroyed. When you or your friends and family reconnect with real food, you reconnect with the goodness of life.

### Nutrition of the People in the Loetschental Valley

The native Swiss diet consisted primarily of soured rye bread, summer cheese (consumed in a portion about as large as the slice of bread but not as thick), which was eaten with fresh milk of goats or cows. Meat was eaten once a week and smaller portions of butter, vegetables and barley were consumed regularly. Soup from animal bones was consumed regularly.

**Diet of Healthy Indigenous People in the Swiss Alps<sup>32</sup>**

Calories	Food	Fat-Soluble Vitamins	Calcium	Phosphorus
800	Rye Bread	Low	0.07	0.46
400	Milk	High	0.68	0.53
400	Cheese	Very High	0.84	0.62
100	Butter	Very High	0.00	0.00
100	Barley	Low	0.00	0.03
100	Vegetables	Low	0.06	0.08
100	Meat	Medium	0.00	0.12
2000		Very High	1.76	1.84 <sup>33</sup>

### Immunity to Tooth Decay

In a study of 4,280 teeth of the children in these high valleys, only 3.4% were found to have been attacked by tooth decay. In the Loetschental Valley 0.3% of all teeth were affected with tooth decay.<sup>34</sup>

### Modern Swiss were Losing Their Health

In the 1930s, tooth decay was a major problem for school children in the modern parts of Switzerland, with 85-100 percent of the population affected. The local health director advised sun tanning for the children as it was believed that the vitamins produced from the sunlight would prevent tooth decay. However, this tactic did not work. The modernized Swiss no longer ate their native diets of soured rye bread, summer cheese, summer butter and fresh goat or cow milk.

### The Nutrition of Modern Swiss

Foods that the modern Swiss ate that promoted tooth decay included white-flour products, marmalades, jams, canned vegetables, confections, and fruits. All of these devitalized foods were transported to the area. Only limited supplies of vegetables were grown locally.

While there are several differences between the modern and isolated diets, there are two points of significant interest. When you compare these two tables, the key nutrient differences between the diets are not related to rye bread vs. white bread. Rather 500 calories of the modern diet comes from sweets and chocolate which are low in fat-soluble vitamins and minerals. These products replaced cheese and milk which were dense sources of fat-soluble vitamins and minerals.

**Nutrient-Displacing, Tooth-Decay-Causing Diet of Modern Swiss<sup>35</sup>**

Calories	Food	Fat-Soluble Vitamins	Calcium	Phosphorus
1000	White Bread	Low	0.11	0.35
400	Jam, Honey, Sugar, Syrup	Low	0.05	0.08
100	Chocolate and Coffee	Low	0.02	0.07
100	Milk	High	0.17	0.13
100	Canned Vegetables	Low	0.08	0.08
100	Meat	Medium	0.01	0.11
100	Vegetable Fat	Low	0.00	0.00
100	Butter (dairy)	High	0.00	0.00
2000		Low	0.44	0.82