



## The Hazards of Refined Sugar ...to the Mind and Body

Of all the foods consumed today, refined sugar is considered to be one of the most harmful. In 1997 Americans devoured 7.3 billion pounds of candy. Americans spent an estimated \$23.1 billion dollars on candy and gum. The average American consumed a record 27.3 pounds of candy and gum in the same year-the equivalent of about six regular sized chocolate bars a week-marking the fifth consecutive year of increased demand.

Consumption of processed foods (which are laced with sugar) cost the American public more than \$54 billion in dental bills each year, so the dental industry reaps huge profits from the programmed addiction of the public to sugar products. Today we have a nation that is addicted to sugar. In 1915, the national average of sugar consumption (per year) was around 15 to 20 pounds per person. Today the average person consumes his/her weight in sugar, plus over 20 pounds of corn syrup. This means that since there are some people that use no sweets, or much less than the average figure, a percentage of the population consumes a great deal more refined sugar than their body weight. The human body cannot tolerate this large amount of refined carbohydrates. The vital organs in the body are actually damaged by this gross intake of sugar.

Refined sugar contains no fiber, no minerals, no proteins, no fats, no enzymes, only empty calories. What happens when you eat a refined carbohydrate like sugar? Your body must borrow vital nutrients from healthy cells to metabolize the incomplete food. Calcium, sodium, potassium and magnesium are taken from various parts of the body to make use of the sugar.

Many times, so much calcium is used to neutralize the effects of sugar that the bones become osteoporotic due to the withdrawn calcium. Likewise, the teeth are affected and they lose their components until decay occurs and hastens their loss. Refined sugar is void of all nutrients, consequently it causes the body to deplete its own stores of various vitamins, minerals and enzymes. If sugar consumption is continued, an over-acid condition results, and more minerals are needed from deep in the body to correct the imbalance. If the body is lacking the nutrients used to metabolize sugar, it will not be able to properly handle and rid itself of the poisonous residues. These wastes accumulate through the brain and nervous system, which speeds up cellular death. The bloodstream becomes over-loaded with waste products and symptoms of carbonic poisoning result.

Sugar also makes the blood very thick and sticky, inhibiting much of the blood flow into the minute capillaries that supply our gums and teeth with vital nutrients. Therefore, we wind up

with diseased gums and starving teeth. America and England, the two largest sugar consumers, have horrendous dental problems.

In 1948, a \$57,000 ten-year study was awarded to Harvard University by the Sugar Research Foundation to find out how sugar causes cavities in teeth and how to prevent it. In 1958, Time magazine reported the findings, which were reported in the Dental Association Journal. They discovered there was no way to prevent the problem and their funding immediately disappeared.

"The most significant human study was done in Sweden, reported in 1954, and known as the Vipeholm Dental Caries Study. More than 400 adult dental patients were placed on controlled diets and observed for five years. The subjects were divided into various groups. Some ate complex and simple carbohydrates at mealtimes only, while other supplemented mealtime food with between-meal-snacks, sweetened with sucrose, chocolate, caramel, or toffee. Among the conclusions drawn from the study, was that sucrose consumption could increase caries activity. The risk increased if the sucrose was consumed in a sticky form that adhered to the tooth's surfaces. The greatest damage was inflicted by foods with high concentrations of sucrose, in sticky form, eaten between meals, even if contact with the tooth's surfaces was brief. Caries, due to the intake of foods with high sucrose levels, could be decreased when such offending foods were eliminated from the diet. But individual differences existed, and in some cases, caries continued to appear despite avoidance of refined sugar or maximum restriction of natural sugars and total dietary carbohydrates." (2)

Diabetes is another commonly known disease which is caused by the failure of the pancreas to produce adequate insulin when the blood sugar rises. A concentrated amount of sugar introduced into the system sends the body into shock from the rapid rise in the blood sugar level, and over time this can cause the pancreas to wear out and not be able to produce the levels of insulin that it should.

Hypoglycemia occurs when the pancreas overreacts to the large amount of sugar in the blood and releases too much insulin leaving one with the "tired" feeling as the blood sugar level becomes lower than it should be.

"A recent article in the British Medical Journal, entitled The Sweet Road to Gallstones, reported that refined sugar may be one of the major dietary risk factors in gallstone disease. Gallstones are composed of fats and calcium. Sugar can upset all of the minerals, and one of the minerals, calcium, can become toxic or nonfunctioning, depositing itself anywhere in the body, including the gallbladder.

"One out of ten Americans has gallstones. This risk increases to one out of every five after age forty. Gallstones may go unnoticed or may cause pain-wrenching pain. Other symptoms might include bloating, belching, and intolerance to foods." (3)

Another serious problem with sugar that is now coming to the forefront is the various levels of mental problems. Our brains are very sensitive and react to quick chemical changes within the body. As sugar is consumed, our cells are robbed of their B vitamin, which destroys them, and insulin production is inhibited. Low insulin production means a high sugar (glucose) level in the bloodstream, which can lead to a confused mental state or unsound mind, and has also been linked with juvenile criminal behavior. Dr. Alexander G. Schauss, brings this solemn fact out in his book, *Diet, Crime and Delinquency*. Many mental ward and prison inmates are “sugarholics” and erratic emotional outbreaks often follow a sugar binge.

### REFINED SUGAR-A DRUG?

Refined sugar, by some, is called a drug, because in the refining process everything of food value has been removed except the carbohydrates-pure calories, without vitamins, minerals, proteins, fats, enzymes or any of the other elements that make up food. Many nutrition experts say that white sugar is extremely harmful, possibly as harmful as a drug, especially in the quantities consumed by the present-day American.

Dr. David Reuben, author of *Everything You Always Wanted to Know About Nutrition* says, “.white refined sugar-is not a food. It is a pure chemical extracted from plant sources, purer in fact than cocaine, which it resembles in many ways. Its true name is sucrose and its chemical formula is  $C_{12}H_{22}O_{11}$ . It has 12 carbon atoms, 22 hydrogen atoms, 11 oxygen atoms, and absolutely nothing else to offer.” The chemical formula for cocaine is  $C_{17}H_{21}NO_4$ . Sugar’s formula again is  $C_{12}H_{22}O_{11}$ . For all practical purposes, the difference between cocaine and sugar is that sugar is missing the “N”, or nitrogen atom.

Refining means to make “pure” by a process of extraction or separation. Sugars are refined by taking a natural food, which contains a high percentage of sugar, and then removing all elements of that food until only the sugar remains.

White sugar is commonly made from sugar cane or sugar beets. Through heating and mechanical and chemical processing, all vitamins, minerals, proteins, fats, enzymes and indeed every nutrient is removed until only the sugar remains. Sugar cane and sugar beets are first harvested and then chopped into small pieces, squeezing out the juice, which is then mixed with water. This liquid is then heated, and lime is added. Moisture is boiled away, and the remaining fluid is pumped into vacuum pans to concentrate the juice. By this time, the liquid is starting to crystallize, and is ready to be placed into a centrifuge machine where any remaining residues (like molasses) are spun away. The crystals are then dissolved by heating to the boiling point and passed through charcoal filters. After the crystals condense, they are bleached snow-white usually by the use of pork or cattle bones.

During the refining process, 64 food elements are destroyed. All the potassium, magnesium, calcium, iron, manganese, phosphate, and sulfate are removed. The A, D, and B, vitamins are destroyed. Amino acids, vital enzymes, unsaturated fats, and all fiber are gone. To a lesser or greater degree, all refined sweeteners such as corn syrup, maple syrup, etc., undergo sim-

ilar destructive processes. Molasses is the byproduct of sugar manufacturing and can make an excellent food or nutritional supplement since it contains a concentration of nutrients that were stripped from the plant used to make sugar.

Sugar manufacturers are aggressive in defending their product and have a strong political lobby which allows them to continue selling a deadly food item that by all reason should not be allowed in the American diet. If you have any doubts as to the detriments of sugar (sucrose), try leaving it out of your diet for several weeks and see if it makes a difference! You may also notice you have acquired an addiction and experience some withdrawal symptoms. Studies show that “sugar” is just as habit-forming as any narcotic; and its use, misuse, and abuse is our nation’s number one disaster. It is no wonder when we consider all the products we consume daily which are loaded with sugar! The average healthy digestive system can digest and eliminate from two to four teaspoons of sugar daily, usually without noticeable problems, (that is if damage is not already present). One 12 oz. Cola contains 11 teaspoons of sugar, and that’s aside from the caffeine. It’s the sugar that gives you quick energy, but only for a brief time due to the rise of the blood sugar level. But the body quickly releases a rush of insulin, which rapidly lowers the blood sugar and causes a significant drop in energy and endurance. It is easy to see why America’s health is in serious trouble.

### EFFECT OF SUGAR ON NEUROLOGICAL PROCESSES

One of the keys to orderly brain function is glutamic acid, and this compound is found in many vegetables. When sugar is consumed, the bacteria in the intestines, which manufacture B vitamin complexes, begin to die. These bacteria normally thrive in a symbiotic relationship with the human body. When the B vitamin complex level declines, the glutamic acid (normally transformed into “go” “no-go” directive neural enzymes by the B vitamins) is not processed and sleepiness occurs, as well as a decreased ability for short-term memory function and numerical calculative abilities. The removal of B vitamins when foods are “processed” makes the situation even more tenuous.

### WHAT ABOUT GUM CHEWING?

Besides the sugar in gum being damaging to the teeth there is another harmful problem to consider and that is: “teeth and jaws weren’t designed for more than a few minutes of solid chewing per day-far less than the two hours clocked in daily by hardcore gum chewers. All this chewing results in inordinate wear on the jawbone, gum tissue and lower molars, and can change the alignment of the jaws” says Michael Elsohn, D.D.S., in the Medical Tribune.

And lastly, sugar is a major contributor to the aging process.