

# Soft drinks - hard facts

**Soft drinks are today's trend or much better, you can call them 'fashion' especially among the youth. Do you know that this colorful liquid does not do a bit good to you? Instead, they add up dangerous toxins to your body.**

Just think before you gulp down soft drink, what are you consuming?

Scientific studies reveal that 1 to 1.5 liters of soft drinks a day can raise risks of numerous health problems, such as:

## **Tooth Decay:**

All soft drinks are acidic which corrodes the teeth by eroding its enamel.

The high amount of sugar consumed through soft drinks lead to the development of bacteria that attack the teeth thus aggravating dental problems.

People who drink three or more glasses of aerated drinks (gaseous drinks) daily have much higher chances of dental decay, fillings and teeth loss. Therefore, soft drinks contain acid and sugar that corrode and destroy the teeth in one shot.

## **Obesity:**

Soft drinks are mainly composed of filtered H<sub>2</sub>O, artificial additives and refined sugar. Thus, they lack nutritional value and only add up calories through their refined sugar; therefore, they make you gain weight.

But is shifting to 'Diet Soft Drink' the solution?

The fact is that diet soft drinks contain aspartame (an artificial low-calorie sweetener). Although aspartame does not add up the calories it makes you feel hungrier and crave for food.

The Food and Drug Administration (FDA) no longer allows foods containing aspartame to be labeled as 'weight reduction product'. Now it insists to label these products simply as 'Diet Drink' or 'Diet Food'.

Research also shows that aspartame causes migraines, dizziness and more over it reduces your memory.

## **Malnutrition:**

Some people who are addicted to soft drinks deprive themselves from food until they

become victims of malnutrition. Since gastrointestinal disturbance of these drinks lead to poor appetite thus surviving on soft drinks and little amount of food will cause malnutrition, retarded growth and other physiological problems.

**Effect on Gastro-Intestinal System:**

When you open the bottle of a soft drink, bubbles and fizz are immediately emitted out. This is due to phosphoric acid and carbon dioxide (CO<sub>2</sub>) content, which make these drinks highly acidic. The pH of soft drink ranges from 2.5-3.4 which generates a highly acidic environment in the stomach.

Throughout the digestive system, that starts from the mouth and ends up at the anus (liver, gallbladder and pancreas play the role of accessory organs) only the stomach can resist an acidic environment up to pH 2.0. But before the acidity of soft drink reaches the stomach it passes through all the other organs involved in the digestive system thus causing an abnormal acidic environment. Hence the linings of the mouth, pharynx and esophagus are highly sensitive to acids.

Also there is a very common practice of taking soft drinks when a person suffers from acidity or after having a heavy meal. However, this is wrong.

The phosphoric acid present in soft drink competes with the hydrochloric acid of the stomach and affects its functions. When the stomach becomes ineffective, food remains undigested causing indigestion, gassiness or bloating (swelling of stomach).

Thus people who are suffering from acidity should not be drinking soft drinks because actually it increases acidity further.

**Effect on Kidneys:**

Kidneys are less able to excrete phosphoric acid when it is in excess. Thus, there is extra work for kidney.

Soft drinks remove Calcium from the body, causing an excess amount of Calcium that tend to be deposited in kidney, resulting in nephrolithiasis (kidney stones).

**Effect on Skin:**

Acidic blood affects the action of glutathione, which is an antioxidant enzyme. In addition, these drinks lack vitamins and minerals. By taking these drinks, people cut their intake of fresh juices, milk and even water and deprive themselves from essential vitamins and minerals that are mandatory for skin. Thus, the skin becomes more prone to wrinkles and aging.

**Effect on Bones:**

Phosphoric acid, present in carbonated drinks is violently poisonous, it de-oxidizes blood. In detergent manufacturing industries, phosphoric acid is used to produce water softener. Water softener removes Ca<sup>2+</sup> and Mg<sup>2+</sup> ion from hard water. In human body, the function remains the same by removing Ca<sup>2+</sup> from bones causing osteoporosis (porous

bones).

### **Effect of Caffeine:**

In most of carbonated beverages, caffeine is deliberately added to make it addictive. Caffeine in carbonated drink is more readily absorbed than any other drink (like coffee, chocolate etc.). Caffeine disturbs sleep by stimulating nervous system.

It also makes premenstrual syndrome worse, causes dehydration and induces stomach to produce acids, aggravating hyperacidity. Since caffeine disturbs sleep, the body is more likely to produce C - reactive protein, which plays an important role in heart disease.

### **Prevention:**

Use straw to reduce direct contact with teeth.

Rinse your mouth with water after drinking aerated drink.

Or simply do not drink soft drinks.

Remember that diseases do not develop overnight but do develop over the years with improper dietary habits. Also each individual has different tolerance level. So think of all long term effects on your body. The multitude side effects depend on your genetics and an individual's physical strength. Chronic illnesses are not a direct cause but they are triggered or worsened by bad food habits.

Soft drinks have subversive and destructive physiological consequences that contribute to early aging. In the 1500's, the Spanish colonists noted how the Indians of South America were able to allay fatigue by chewing the leaves of the coca shrub. However, that observation lay dormant for three centuries, as the science of organic chemistry developed. By 1860, in Germany, the first pure crystals of cocaine were extracted from coca. In small quantities, it was then used as a stimulant in beverages. By the 1880's, in Paris, a druggist named Angelo Mariani created an immensely popular cocaine-laced wine (vin Mariani). **It contained about 30 mg. of cocaine in five ounces.** Pope Leo XIII gave a gold medal to Mariani for being a benefactor of humanity. Thomas Edison praised the beverage. In the late 1880's, in Atlanta, a new non-alcoholic drink was born to quench thirsts and provide pep during steamy summers. *Coca Cola* contained cocaine from the coca plant and lots of caffeine from the kola bean. Other ingredients were lots of sugar, caramel coloring, lime juice, citric acid, phosphoric acid, nutmeg, coriander, neroli (orange flavoring), and cinnamon. The new beverage was sold as a syrup that would be mixed with cold soda water at local drugstores (with a scoop of vanilla ice cream—after refrigerators

came on the scene in the 1930's)—it became a coke float. In 1906, the Pure Food and Drug Act was passed, and the official in charge of its enforcement set out to prove that the 'Coca Cola habit' was harmful to health. By 1922, that official claimed in *Good Housekeeping* magazine that a child who drank three or four cokes (6 oz.) a day would probably ruin his health for life. Today, we know why that's true:

1. In many states (in the USA) the highway patrol carries two gallons of Coke in the truck to remove blood from the highway after a car accident.
2. You can put a T-bone steak in a bowl of coke and it will be gone in two days.
3. To clean a toilet: Pour a can of Coca-Cola into the toilet bowl and .....Let the "real thing" sit for one hour, then flush clean. The citric acid in Coke removes stains from vitreous china.
4. To remove rust spots from chrome car bumpers: Rub the bumper with a crumpled-up piece of Reynolds Wrap aluminum foil dipped in Coca-Cola.
5. To clean corrosion from car battery terminals: Pour a can of Coca-Cola over the terminals to bubble away the corrosion.
6. To loosen a rusted bolt: Applying a cloth soaked in Coca-Cola to the rusted bolt for several minutes.
7. To bake a moist ham: Empty a can of Coca-Cola into the baking pan, wrap the ham in aluminum foil, and bake. 30 minutes before the ham is finished, remove the foil, allowing the drippings to mix with the Coke for a sumptuous brown gravy.
8. To remove grease from clothes: Empty a can of coke into a load of greasy clothes, add detergent, And run through a regular cycle. The Coca-Cola will help loosen grease stains. It will also clean road haze from your windshield.
9. The active ingredient in Coke is phosphoric acid. Its pH is 2.8. It will dissolve a nail in about 4 days.

10. To carry Coca-Cola syrup (the concentrate) the commercial truck must use the Hazardous material placards reserved for Highly corrosive materials.

11. The distributors of coke have been using it to clean the engines of their trucks for about 20 years!

## Contents

The soft drink usually contains the following components: phosphoric acid, caffeine, sugar or aspartame or saccharin, caramel coloring, carbon dioxide, and aluminum. Ingesting a soft drink does not cause any immediate warning such as stomach cramps, vomiting, or diarrhea that would normally occur when a poison enters the body. Instead, there is the energizing feeling of caffeine, the sweet taste of sugar combined with the sour taste of phosphoric acid, and the playful feeling of the carbon dioxide bubbles. **Those ingredients cause imbalances in the body systems that result in debilitating diseases that show up after many, many years of abuse.** Those diseases have now become commonly thought of as normal aging with no directly attributable causes.

## Phosphoric Acid

This is used because phosphoric acid creates an acid medium that enhances the absorption of carbon dioxide (which also forms carbonic acid in water), thus reducing the pressure required and allowing the mixture to be bottled with a metal cap. The carbon dioxide bubbles are released more slowly, particularly if the mixture is chilled. The sour taste of the phosphoric acid is complemented by adding lots of sugar.

The body maintains a concentration of phosphorus (P) times calcium (Ca) to equal potassium ( $P \times Ca = K$ ) in the bloodstream to provide the right combination for building new bones and remodeling old ones. **The shock of incoming phosphorus with zero calcium in a soft drink causes ionized Ca in the blood to decline, along with an excretion of Ca in the urine. The drop in blood Ca causes another body system to dissolve Ca from the bones (taken from the teeth, spine and pelvic bones) to make up the imbalance caused by the Ca lost in the blood.** This process, continued over time, results in the weakened bone structure (osteoporosis) associated with old people. **The body dissolves more Ca from the bones than is needed in anticipation of more phosphoric acid**

**shocks.** The excess of Ca is eliminated in life-sustaining order by (1) excretion in the urine, (2) deposition in joints (osteoarthritis, bursitis, gout, bone spurs, and bunions), (3) accretion into stones (kidney stones, etc.), and (4) deposition in arteries (calcified plaque).

Phosphoric acid is the same stuff that cleans deposited materials in your shower—it is a strong chemical—a tooth will dissolve in it. Phosphoric acid, like coffee, causes the body to use its alkaline minerals (sodium, potassium, magnesium, and calcium) to neutralize the acid. The body loses valuable minerals because the neutral compounds (salts) are excreted in the urine. Sodium depletion causes bile to become acidic and form mucoid plaque on the intestines, which causes colitis and other serious bowel diseases. Potassium and magnesium depletion can contribute to the development of heart disease. Phosphoric acid is physiologically a strong acid that causes the body to reduce secretion of hydrochloric acid (HCl) that is used for digestion of protein and fats and the absorption of minerals. Inadequate digestion results in bloating and flatulence. Poor absorption of dietary iron can result in anemia, and poor calcium absorption, accelerating the trend of osteoporosis. Another not-so-obvious harmful effect of low stomach acidity is the overgrowth of harmful bacteria, yeasts and parasites in the gastrointestinal (GI) tract that had been held in check by adequate HCl. These creatures can break down the protective mucosal lining, penetrate into the bloodstream, lodge in organs and cause the formation of carcinogens that provoke cancer.

## Caffeine

This chemical is an addictive drug that has the ability to stimulate mental alertness, overcome fatigue, and enhance endurance. But, at a price. Caffeine acts by blocking *adenosine* (neurotransmitter) receptor sites in the central nervous system. Adenosine has a generally depressant action in the brain, heart, and kidneys. The resultant stimulation is accompanied by constriction of the cerebral arteries, rapid heartbeat, high blood pressure, and excessive excretion of urine. Caffeine causes the release of adrenaline and an accompanying upshot in blood sugar to meet the need for emergency energy. The pancreas also reacts by secreting insulin to keep the blood sugar level stable. Insulin drives blood sugar levels down by forcing it into cells for oxidation and energy production. Excess sugar is stored as fat. This unbalanced cycling process puts undue stress on the adrenal glands and the pancreas, which are weakened after so much use. Adrenal

exhaustion and the accompanying deficiency of cortisol allow *arachidonic acid* to be released to form *prostaglandin-2* and *leukotrienes* which mediate arthritis. Regular users who are deprived of daily caffeine are subject to mental sluggishness, inability to think clearly, depression, and a dull, generalized headache. All these symptoms are promptly eliminated by caffeine. Even moderate users must have their daily fix and cannot give up their harmful habit.

Caffeine addiction is difficult to break because the penalty to health is not immediately recognized, and, therefore, it is easy to deny. At excessive doses, caffeine will cause aggression, recklessness, shouting, and swearing (road rage). Caffeine given to rats in large dosages will cause them to physically attack one another and fight until death. If given to a lone rat, it will die of frenetic self-mutilation. The addiction of caffeine and sugar and powerful advertising make the soft drink a superior method for the delivery of ingredients that taste great, but are unsuspectingly destructive to health.

## Sugar

A 12-ounce can of soda contains about 33 grams (11 teaspoons) of sugar. An 8-ounce can of *Pepsi* has over 10 teaspoons of sugar. It is difficult to think that something so common, and that tastes so good, can be so harmful to health. The ingestion of sugar (or a high simple carbohydrate diet) actually increases urinary excretion of calcium, magnesium, chromium, copper, zinc, and sodium by impairing reabsorption in the kidneys. The loss of calcium in the blood activates the *parathyroid hormone* (PTH), which causes the release of calcium from the bones—more sugar starts the cycling that is at the root of osteoporosis, arthritis, bursitis, and gout. Sugar causes blood sugar levels to soar—insulin, secreted from the pancreas, shoots up to drive the sugar down—and rapid, unbalanced cycling ensues that eventually wears out the pancreas and makes the cells resistant to insulin—resulting in a disease called *diabetes*. It's no accident that it occurs in the declining years, after having inflicted so much continual damage. Sugar causes the clumping of red blood cells (as seen in live blood analyses). This impedes the flow and effectiveness of delivering oxygen to the cells and removing carbon dioxide from the cells. The result is a detrimental buildup of wastes in the body that accelerates aging.

Sugar impairs immune function by competing with Vitamin C for transport into white blood cells. In turn, that reduces the ability of white

blood cells to engulf and destroy invading bacteria, which leads to chronic infections. Sugar supports the growth of harmful bacteria and yeast in the GI tract which lead to not only painful and itchy infections, but, also, to infestations in the blood and body organs. In the United States, about 50% of all carbohydrates eaten are sugar. The average adult eats 150 pounds of sugar each year. A teenager eats 300 lbs./yr.—and the trend is rising rapidly. Food manufacturers are currently deceiving the public by taking fat out of foods and adding sugar to enhance taste. It is then deceptively advertised as “fat free” to attract people who want to lose weight, but do not know that the body will convert excess sugar to fat anyway (it is estimated that 50% of Americans are overweight).

### Aspartame, Saccharin, and Caramel Coloring

*Aspartame* is a sweetener that has found its way into almost everything to replace sugar. When aspartame is digested it breaks down into three chemicals: *aspartic acid*, *phenylalanine*, and *methanol*. *Aspartic acid* is an excitotoxin that causes serious chronic neurological disorders—it can overstimulate neurons to such an extent that sensitive neurons are slowly destroyed before any obvious behavior symptoms are noticed. *Phenylalanine* can decrease *serotonin* (a brain neurotransmitter related to emotion and sleep). Low serotonin can lead to emotional disorders, depression, and poor quality sleep. *Methanol* is a poison that is metabolized by the liver into *formaldehyde* (a deadly neurotoxin, carcinogen, mutagen, and teratogen [birth defects] and *formic acid* (the active chemical in bee and ant stings). *Methanol* is a cumulative poison whose symptoms include headaches, tinnitus, shooting pains, memory lapses, numbness, and nerve inflammation. The most prominent symptoms are blurred vision, retinal damage, and blindness. *Saccharin* is a sweetener that is also a carcinogen (causes cancer) in animals. In 1978, the National Academy of Sciences concluded that *saccharin* is a potential cancer-causing agent in humans, and that it promotes the carcinogenic effects of other agents. The Food and Drug Administration’s position is that *saccharin* should not be used in food, but it is used as a table sweetener! Caramel coloring is obtained by heating sugar until a brown color and characteristic flavor develops. Caramel coloring has negative genetic effects and is a cancer-causing agent.

### Carbon dioxide and Aluminum



*Carbon dioxide* is probably the least obnoxious thing in a soft drink. It is a waste product of metabolism that is exhaled. So, why should we ingest something that the body is trying to eliminate? When it was found that phosphoric acid eats-away enough aluminum from the container to be harmful, the problem was 'solved' by plastic-coating (*Teflon*) on the interior of the aluminum can. However, phosphoric acid still leaches toxic amounts of aluminum into the soft drink despite the plastic coating. Aluminum is deposited in the brain and bone tissue. Aluminum results in the formation of neurofibrillary tangles in brain tissue—the same type of lesion seen on the brains of individuals who suffer from Alzheimer's disease. Aluminum exposure increases the amount of bone breakdown, while, at the same time, reducing new bone formation. Aluminum causes excessive loss of calcium in the urine. The resulting osteoporosis can be accompanied by severe bone pain. The most common source of aluminum ingestion is antacids and processed cheese.

### Parents are top influence on soft-drink consumption among kids

Study in *Journal of the American Dietetic Association* looks at trends in what kids drink and why.

CHICAGO - Flavored, carbonated drinks have been around for about two hundred years. And their popularity continues to grow--overtaking more nutritious beverages among some age groups, especially children and adolescents.

Researchers from the University of Minnesota surveyed 560 children ages 8 to 13 years old on how often they drank soft drinks and the factors that influence soft drink consumption.

### Among other findings, researchers found:

- \* Parental soft drink intake has a stronger influence than children's peers. Parents who consume soft drinks on a regular basis may relax soft drink consumption rules and restrictions for their kids.
- \* Approximately 30 percent of children reported drinking soft drinks daily and 85 percent reported they usually drink regular, not diet soft drinks. Soft drink consumption was higher among boys compared with girls and intake increased with age.

\* Ninety-six percent of respondents said that they liked or strongly like the taste of soft drinks. Those children who reported that they "strongly liked" the taste of soft drinks were 4.5 times more likely to drink soft drinks five or more times per week.

\* The odds of drinking soft drinks almost daily was twice as likely for those who watched television 3.5 hours or more a day than those who watched less television.

\* The availability of soft drinks at home and the availability of soft drink vending machines in school were both strongly associated with children's soft drink consumption.

The researchers say additional research is needed to verify these findings in a larger representative sample of children.

"Research has shown that parents are primary role models for kids and that includes their eating habits, too," said registered dietitian and ADA Spokesperson Althea Zanecosky. "Parents need to be aware of what their kids are consuming and encourage foods and beverages that are packed with nutrients. As your best guideline, be sure soft drinks are not crowding out water and other nutritious beverages like unsweetened fruit juices."

# Woman Drinks 12 Diet Cokes a Day

Health Expert Fears Too Much Soda Could Lead to Bone Damage

May 19, 2007



89 comments

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Although many Americans can't start their day without a cup of coffee or tea, die-hard fans of diet sodas claim there's no substitute.



FILE: Marty Sutton of Jonesville, Ind., selects a case of caffeine free Diet Coke at the Handi Foods... ▼

(Darron Cummings/AP Photo)

Elton John, Victoria Beckham and even former president Bill Clinton admit to being hooked on Diet Coke, and they're not alone.

For many, diet sodas fulfill a craving for sweets while giving drinkers a jolt of caffeine with few or zero calories.

Amanda Sanchez, a 29-year-old working mother of two, is a self-professed Diet Coke junkie.

"It's my water. It keeps me going. It's the fluid that keeps me alive," Sanchez said. "I really think I am addicted. I really think it would be very hard for me to stop."

She drinks more than a case of Diet Coke a day, or 12 cans, almost one for every hour she is awake.

"It's her main staple. I consider it a food group in our house," said her husband, Henry Sanchez.

She drinks it at home and at work.

"You hear the popping the top," her co-worker Elizabeth Perkins said. "You know when Amanda shows up to work. You can hear it in the Coke."

Sanchez says that Diet Coke helps her make it through her day.

"I really like the fizzy of the diet soda. I really like the coldness and the taste and the sweetness," she said. "If anything goes wrong, I will just grab a diet soda and it's all better."

Diet Coke and other diet sodas are hugely popular in the United States, with consumers spending \$21 billion a year on the low-calorie drinks.

While the drinks may be low in calories, they have plenty of caffeine, which can be addictive.

"People do indeed become addicted to caffeine very rapidly, and they also withdraw from caffeine very rapidly," said Dr. Harris Stratyner, an addiction specialist at Mount Sinai Medical Center. "It can make their sleep patterns disturbed. It can make them restless, wired, anxious."

There is no major study that says drinking diet sodas is bad for you, but some health experts say it may have health consequences down the road.

"There is some evidence that the acid load of soda, regular or diet, has an adverse affect on bone health," said Dr. David Katz, nutrition expert at the Yale School of Medicine. "I would be very worried that if you are drinking 12 cans a day, diet or regular, it's potentially going to do damage to your skeleton, and eventually that can be a very serious problem."

## **Comments**

I have been addicted to diet coke for several years (okay, I would say 25 yrs or so). I have tried many times to quit. One time I actually succeeded, but then I got confident and thought, Oh, I can just have one here and there and it will be all right. NOT! It wasn't all right. The minute I had even

just one, I was hooked again and the addiction began all over. I have experimented trying to find out exactly what about diet coke is addicting. Every time I try to quit, I get horrible headaches, sometimes even migraines. I have tried quitting and substituting other caffeinated beverages in an effort to stop the headaches, but it doesn't work. No matter what I try to substitute, I still get the headaches. So I determined that it was not caffeine that was the problem. I finally came to the conclusion that it is the nutrasweet. It is a chemical and as such can affect the chemicals in your brain (logical deduction), therefore, it is likely what is causing the problem. I am presently attempting, one again, to quit diet coke. The headaches have sent in. If I can just get through the headaches without going back to my 84 ounce a day habit (3-24 oz bottles daily, sometimes more), I might just kick it. When I do, I have realized that I am just like anyone else addicted to drugs or alcohol. I have to get off and stay off and can never touch it again. Wish me luck, eh?  
mercyrainz Apr-29