

## INSTANT CURE OF THE COMMON COLD

by Walter Last

There is an intimate connection between lactose as in milk products and the common cold. Earlier biochemists must have known something that modern biochemists have forgotten and the medical profession has never known when they named oxidized galactose 'mucic acid'. I found this out 30 years ago while researching health problems related to lactose.

Lactose or milk-sugar consists of one molecule each of glucose and galactose linked together. Glucose, of course, is our main muscle fuel. Babies need galactose as an important building block of the brain, the central nervous system and several proteins. Because of our bigger and more complex brain mother's milk is even higher in lactose than animal milk to ensure that the baby obtains sufficient galactose.

In later life, very little galactose is needed and this can easily be synthesized from other sugars. Therefore, most of the ingested galactose is converted to glucose in the liver and used as body fuel. However the amount that can be converted is rather limited, even in a healthy liver.

This conversion is a slow and complex process requiring four different enzymes. One of these enzymes is sometimes missing from birth, giving rise to a condition known as galactosaemia. In this case continued milk-feeding leads to a build-up of galactose in the baby and causes cataracts, cirrhosis of the liver and spleen, and mental retardation.

If the liver is not healthy or fully functional, it is even less able to convert galactose. This fact has sometimes been used as a clinical liver-function test. If galactose is injected into someone with a defective liver, most of the galactose will be unused and will show up later in the urine.

### Mucic Acid

Unfortunately, under normal conditions only part of the galactose is expelled with the urine. If there is a deficiency of protective antioxidants, then the rest is mainly oxidized to galactaric acid, commonly known as mucic acid. Mucic acid is dangerous to health because it is insoluble. The body cannot let it build up in vital areas and block organ functions or blood circulation. Therefore, it forms the mucic acid into a sticky suspension in water, called mucus.

Thus mucic acid is a main component of pathogenic (disease-producing) mucus. This is very different from endogenous mucus which the body secretes to protect the surface of its mucous membranes, or which is produced in response to the irritation caused by microbes and inflammations. Mucus can also be produced due to high fat levels in the lymph fluid, and may be noticed as a 'lump' in the throat. But none of these have the acid-irritating properties of mucic acid.

The really important difference between mucic acid and endogenous mucus is as follows: endogenous mucus is produced on the outside of the mucous membranes to protect them from damaging environmental influences, while mucic acid is dissolved in the lymphatic fluid. It accumulates on the inside of the mucous membranes and wants to get out.

It is the chief function of the lymphatic system to remove a dangerous substance such as mucic acid from areas of vital importance and transport it to the organs of elimination. It is too dangerous to dispose of through the kidneys, or with bile through the liver, as it would block their outlets, but it has a special affinity for the mucous membranes that line the insides of our body openings. Of prime importance, are the lungs, the respiratory tract and the hollow head spaces, the sinuses and the Eustachian tube (a passage between the mouth and the inner ear).

Mucic acid may also accumulate in these hollow spaces and block their outlets until external factors help to sensitize the mucous membranes sufficiently to allow the mucus to pass through. This is relatively easy in young individuals and those who are over-acid or with a poor sugar metabolism as they have high levels of histamine and inflammatory adrenal hormones. Even minor irritations of the mucous membranes, be it from cold air, dust, air pollution, pollen or germs, will sensitize these to let some of the mucic acid flow out.

Such mucus cleansing may be experienced periodically as a cold, hay fever, wet cough or running nose. In others, the accumulation of mucus, which provides a favourable breeding ground for germs, causes chronic infections in specific areas such as the sinuses, the middle ears, the respiratory tract and the lungs. This may result in a permanent trickle of mucus through the affected mucous membranes.

With a high lactose intake, the lymph channels and lymph glands are usually congested with mucic acid as well. This allows influenza and other infections to spread from the sensitized mucous membranes into the mucus-filled hollow head spaces and into the lymphatic system, causing lymph gland swellings and inflammations.

I have found in many people that the number of colds, influenza and other respiratory infections can be varied at will from none to several per year just by varying the lactose intake. Mucic acid congestion is also the dominant cause of ear infections or glue ear and hearing problems, mainly in children, and especially in Aboriginal children who seem to be inherently very low in the liver enzymes required to convert galactose to glucose.

A friend described to me her visit to an Aboriginal school in Central Australia: " Pretty much all the children had glue ear, and thick green running noses; as they didn't own hankies it was very obvious. In every classroom the teacher was provided with a special microphone as at least 80% of the children were believed to have hearing loss. It was very sad to see - and preventable if they were allowed to return to the bush and their bush food!!! Many processed foods these days have hidden skim milk added, even to things that don't need it - you have to read the fine print."

In most cases it is not a lactose allergy but a galactose overload that is responsible for this excessive mucus. While in the case of those suffering from cow's milk allergy somewhat more lactose may be tolerated when it comes from goat's milk, in most individuals the lactose in goat's milk or in tablets will be equally as mucus-forming as that from cow's milk. If commercial products with added lactase (the lactose-splitting enzyme) are being used by lactase-deficient adults, then this is likely to generate more mucic acid congestion and other health problems in these individuals.

#### The Common Cold

It is generally said that without treatment the common cold lasts on average 7 days and with treatment it lasts about one week. This light-hearted quip hides the enormous health damage caused by the common cold, or more specifically by its treatment. It is estimated that the common cold accounts for about 40% of time taken off work and millions of school days missed by children each year. But this is only the tip of the iceberg. The main damage is caused by antibiotic treatment. While not as excessively used at present as it was in the past, it is still quite common despite the medical knowledge that it is not effective against viruses that cause the cold. The rationale used to be that patients wanted something to be done, and also that it may prevent a potential bacterial co-infection of the lower respiratory tract.

As the common cold is the most frequent infectious disease in humans with the average adult contracting two to four infections a year and the average child getting between 6-12 colds, it is obvious that this amounts to a huge overall prescription of antibiotics. I regard this widespread use of antibiotics as a main cause of diseases in our society (see [www.health-science-spirit.com/medicaldisease.html](http://www.health-science-spirit.com/medicaldisease.html)). This is due to the disruptive influence of antibiotics on our intestinal flora with a resulting overgrowth of pathogenic microbes, especially *Candida* and other fungi. These factors are the basic underlying cause impairing our immune system, and leading to asthma, allergies and autoimmune diseases as well as contributing to the development of cancer, especially of the blood and lymph system.

According to medical theory, the nasal mucus congestion of the common cold is caused by the rhinovirus, and elaborate rituals have been devised to stop or minimize its transmission between individuals. Once I was warned by a friend, who was a medical doctor, not to come close as she had a cold. I told her that is not how it works and that I cannot "catch" her cold. To prove it I asked her to blow her nose and give me the wet tissue. I then wiped that into my nostrils, and sure enough, I did not catch her cold. I also believe that when we cannot catch a cold, we cannot catch influenza either. In the 30 years since I became aware of mucic acid I have not had influenza.

The only commercial remedy that has shown a real effect in shortening the common cold is zinc, and most effective is zinc acetate as patented by George Eby ([www.coldcure.com](http://www.coldcure.com)). Each lozenge releases 18 mg of zinc and needs to be dissolved in the mouth. You can make zinc acetate by dissolving zinc oxide in vinegar. But there is a non-commercial remedy that is even more effective than zinc lozenges, and that is the sugar cure.

#### The Sugar Cure

Keep a teaspoonful of sugar in the mouth and move it around slightly until it is dissolved after a minute or two, then spit it out and take another teaspoonful. Fine sugar is best for this purpose as it dissolves faster. Continue with this for several hours until the cold symptoms, such as mucus congestion of the nose and sinuses, have disappeared and you can easily breathe through the nose. This also tends to remove any headaches and other discomfort.

I have found that a heavy cold can be stopped in about 4 hours using this method - a light cold may require less time. For influenza or other persistent mucus congestion this may have to be repeated for several days. The sugar draws mucus dissolved in lymph fluid into the mouth and so gradually clears the head spaces. As a precaution, if you feel that you are susceptible to getting colds, or if you have a runny nose or other congestion of head spaces, you may use the sugar cure for one or two hours and repeat it once a week or as required.

Sugar held in the mouth does not damage the teeth as it is too concentrated for bacterial activity, just like pure honey applied to wounds. It is only after one stops the sugar cure, and remaining sugar gets sufficiently diluted in the mouth that it will encourage bacterial growth, but by then one can rinse the mouth with water. Someone who cannot or does not want to use sugar may also try salt instead, or mix salt with sugar, or use honey.

The effectiveness of the sugar cure shows that it is not the rhinovirus that is the main factor in triggering a cold but rather the presence of mucic acid congestion. This is also confirmed by findings that some individuals are carriers of this virus without getting a cold, while in others cold symptoms may be triggered by cold air without the presence of viruses.

While antimicrobial treatment may ease any symptoms attributable to the virus, as with zinc acetate, it does not stop the typical mucus discharge of a cold until the congestion has been cleared. Nevertheless, with a heavy cold, influenza and other respiratory infections it may be beneficial, in addition to the sugar cure, to use an antimicrobial such as MMS or Lugol's solution for a day or two before switching to high doses of vitamin C.

Using the sugar cure periodically is especially important for elderly individuals who are or have been regularly using milk

products and now have a respiratory disease, hearing problems such as deafness, or eye diseases such as cataracts or glaucoma, or poor blood circulation to the brain and dementia, or a combination of any of these. As they are no longer protected by frequent colds they either need to avoid lactose-containing products or regularly use the sugar cure. With chronic congestion of the head spaces and respiratory system it is advisable to use in addition other home remedies for draining mucus, such as postural drainage, nasal irrigation and steam inhalations.

#### Related Diseases

Mucic acid is the underlying cause of some related diseases, especially affecting the respiratory tract, the sinuses, and the inner ears. In this context frequent colds may be seen as a safety valve which prevents or averts more serious health problems due to the accumulation of mucic acid.

Asthma and sinus congestion seem to result mainly from a combination of mucic acid accumulation and sensitivity to moulds as caused by intestinal dysbiosis (overgrowth of the intestinal tract with pathogenic microbes). I remember a patient who was fond of yogurt and, for health reasons, prepared it from skim-milk powder. This produces yogurt with a much higher lactose content than yogurt from full-fat milk. When I persuaded her to use somewhat less yogurt and prepare it only from whole milk without additional skim-milk powder, her asthma disappeared for good. The asthma-causing skim-milk yogurt provided approximately 50 grams of lactose per day, while she was asthma-free on whole-milk yogurt with about 5 to 10 grams of lactose daily.

Lung irritation caused by accumulated mucic acid also means that the lungs are more prone to be affected by food allergies and chemicals. This could result in inflammatory swellings of the bronchial tubes. The mucic acid sensitized mucous membranes of asthmatics also react strongly to air pollutants such as smoke, pollen and sulphur dioxide. Mucus congestion in the lungs allows bacteria to infiltrate. Some strains of these bacteria convert sugars into alginic acid - another type of sticky mucus. Commonly, where there is intestinal dysbiosis combined with *Candida* overgrowth, the linings of the lungs can become sensitized to airborne moulds. Also dead teeth may induce mucus congestion. With all lung diseases mucic acid congestion must be strictly avoided.

A runny nose can usually be stopped simply by avoiding milk and yogurt. The same underlying cause may lead to hay fever in certain individuals, with pollen taking on the role of the rhinovirus in irritating the mucous membranes inside the nose. In this case the sugar cure may need to be used repeatedly even after avoiding lactose intake.

Influenza is similar to a heavy cold, but with a much stronger viral infection. I believe the main reason for this stronger infection is the overacidity and more extensive mucus congestion of the lymph system which now provides a breeding ground for the influenza virus. A main effect of this is the depletion of the body stores of vitamin C which then causes the feeling of exhaustion along with muscular aches and pains. Therefore, in addition to the sugar cure, use 10 grams or more of vitamin C and, in case of vomiting and diarrhoea, plenty of juices or other fluids that supply potassium and sodium. With all infections it also helps if there is a good supply of the minerals magnesium, selenium, iodine, and zinc.

Leukaemia may well be another consequence of a lymphatic system that is badly congested with mucic acid. It is especially striking that the incidence of leukaemia among 2-3 year olds is 4 times greater than that of 1 year olds and nearly 10 times greater than that of 19 year olds (<http://seer.cancer.gov/publications/childhood/leukemia.pdf>). This closely matches the use of cow's milk for these age groups as well as the reduced need for galactose as children grow older.

A key problem with cow's milk may be the lack of enzymes due to pasteurization. It may not be a coincidence either that Nathan Pritikin, famous for his much-publicized diet to prevent cardiovascular diseases, developed leukaemia. The original Pritikin diet was very high in skim-milk products. I suspect that mucic acid also contributes greatly to lymph cancer. Galactose overload is also linked to cancer of the ovaries.

Leukaemia stands in between the acute mucus-related infections of childhood and the chronic degenerative diseases that commonly develop with advancing age. Because our metabolism and immune system slow down as we become older, our mucous membranes tend to become rather insensitive. As a result, mucus release through colds and runny noses becomes rare, and most of the mucic acid remains stored in the body. This may then lead to respiratory disease, deafness, cataracts and possibly dementia.

Even infants may develop cataracts when they cannot convert galactose to glucose. Therefore, galactose overload is also an important cause of cataracts in adults. Besides cataracts, there are other diseases that are usually considered to be typical for the aging body, but that may occur prematurely in infants with galactosaemia. These include liver degeneration, edema and reduced memory, dementia or senility, the latter being equivalent to mental retardation in infants with galactosaemia.

Mucus congestion may also contribute to degenerative lung diseases such as emphysema. Sometimes the lungs simply fill up with mucus. A young man once died in my presence because his lungs and breathing passage were filled with sticky mucus. He literally drowned in it. With each breath I could hear the air bubbling up through the mucus. Not surprisingly, he was of indigenous (Maori) descent.

#### The Medical Hygiene Hypothesis

Modern medicine has invented the hygiene hypothesis to explain the greatly increased incidence of infections, allergies and autoimmune diseases in contemporary society. This says that the reason for this dramatic increase is our rather sterile way of living, with children being no longer exposed to the full range of environmental microbes so that they can build up an immunity to them in early life. While there is some truth to this, the main reason is more likely to be iatrogenic - caused by the medical system.

When the intestinal flora of a baby or its mother has been damaged by antibiotics or by being raised on pasteurized milk, then the immune system is so compromised that exposure to a lot of different pathogenic microbes will only make the condition worse. Therefore, the massive amounts of antibiotics used over the decades in the treatment of the common cold and related respiratory infections will be a key reason for the present steep rise in allergies and autoimmune diseases. This goes hand in hand with the medical promotion of pasteurized cow's milk, and especially of high-lactose skim milk products, as desirable food.

In contrast, the success of the sugar cure in protecting us from the common cold and possibly influenza and respiratory infections shows an important principle of natural medicine: if we remove the cellular metabolic waste on which infectious microbes thrive, then they cannot take hold in a body and cause an infection. Alternatively we may say infections are nature's attempt to heal the body by using microbes to reduce its cellular waste piles.

How much Lactose is Safe to Use?

Most of the world's adult population - with the exception of the Caucasian race - cannot split lactose into its two components - glucose and galactose. Commonly after the age of three, production of the lactose-splitting enzyme lactase declines, and this can cause indigestion and diarrhea if the diet contains appreciable amounts of lactose. This condition is known as lactose intolerance. However smaller spaced-out amounts may still be tolerated as intestinal bacteria may split or digest some of the ingested lactose.

Lactose intolerant people can tolerate lactose better if fermented milk is used, as in the form of yogurt or kefir, where the lactose is partially split by lactic-acid bacteria. Alternatively, a lactose-splitting enzyme or lactase is now commercially available and may be added to milk. However, lactose intolerance is only a minor problem compared to the much more serious health problems caused by galactose. Lactose intolerance actually appears to be a wise precaution of nature rather than a regrettable accident, because it helps to protect us from the great danger of galactose overload as most Caucasian adults and older children who can digest lactose are unable to use galactose efficiently or dispose of it safely.

In societies that traditionally used milk products, individuals were protected from galactose overload by a series of defences. Commonly lactose content was reduced by fermenting, and making cheese and quark and butter while discarding most of the whey. These individuals had an intestinal flora that converted much of the ingested galactose into energy. They had strong liver enzymes to convert any absorbed galactose into glucose. Finally, on a traditional diet they would have had sufficient antioxidants to minimize the formation of mucic acid, and instead would just discharge any surplus galactose with the urine.

Most of these protective defences are greatly reduced or no longer available in modern society. Therefore, preventing excessive mucus accumulation in the body is much easier than trying to remove it afterwards. It is a sensible precaution to reduce your intake of lactose to an amount that does not cause mucus congestion or related problems. See Table 1 for the lactose content of some common dairy products.

TABLE 1: LACTOSE CONTENT OF DAIRY PRODUCTS

butter	0.5%
cheese, quark, cottage cheese	0.1 - 4%
goat's milk	4.3%
cow's milk	4.9%
yogurt and ice-cream (with skim-milk powder)	5 - 25%
skim-milk powder	52%
whey powder	70%

With a lactose content of 52 per cent in skim-milk powder, you may now realize how dangerous is the current fad of using low-fat ice-cream, yogurt, cottage cheese and so forth, instead of full-fat products. Such low-fat foods are made from skim-milk powder and may contain three to five times as much lactose as the equivalent full-fat foods. Skim-milk powder is also commonly added to a wide variety of processed foods, such as bread and other baking products, sausages and margarine. Therefore read the label and avoid foods that list 'non-fat milk solids' as one of the ingredients.

I estimate that the average daily amount of lactose that healthy Caucasian adults with good liver functions can handle without the danger of long-term galactose overload is less than 10 grams, or the equivalent of a glass of milk. The liver will be able to convert a larger amount of galactose into glucose if lactose is ingested in several spaced-out amounts rather than in one single lot. However, those who are prone to mucus problems or who are afflicted with a galactose-related disease do well to have a much lower or near zero lactose intake.

The traditional way of reducing the lactose content of milk products is by fermenting with lactic acid bacteria. This converts part of the lactose to lactic acid. The increasing acidity now precipitates most of the protein, mainly casein, which forms into curd on top and clear watery whey underneath the curd. The whey contains most of the remaining lactose together with some dissolved whey protein and the growth factor IGF-1. IGF-1 is implicated as a promoter of tumour growth, and especially of hormone-sensitive tumours (e.g. breast, ovary, uterus, prostate).

If the curd is well drained and preferably pressed down, then it contains very little lactose and IGF-1, as in cheese and fermented cottage cheese, generally called quark. However in Anglo-Saxon countries commercial cottage cheese is not fermented and often made from skim milk, and therefore with a higher lactose content. However there is no problem in using skim milk or skim milk powder when making properly fermented quark. Even commercial yogurt may be made "safe"

by fermenting it at home in a yogurt-maker until curd and whey separate, and then use only the pressed curd or quark.

While animal milk is the highest food source of galactose, there are also some other somewhat surprising sources as can be seen in Table 2. These may perhaps explain the incidence of colds in societies that are not normally using milk products, although western-style processed food containing lactose now seems to be worldwide.

TABLE 2: GALACTOSE CONTENT OF SOME FOODS

Dried Figs	4100 g/100 g
Honey	3000 mg/100 g
Celery	850 mg/100 g
Beets/Beetroot	800 mg/100 g
Grapes	400 mg/100 g

There is also the possibility that other factors may predispose us to catching a cold by providing a suitable breeding ground for the rhinovirus. A possible candidate is the combination of over-acid tissue and lymph fluid with sensitivity to fungi or moulds. This should be addressed if we want to improve our health. Nevertheless, I am confident that for most individuals in western societies the key to the prevention of the common cold and related diseases is by avoiding mucic acid formation through the tight control of lactose ingestion. -

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