

Moo Culture:
Microbes and meditations over milk
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And verily in cattle (too) will ye find an instructive sign. From what is within their bodies between excretions and blood, We produce, for your drink, milk, pure and agreeable to those who drink it. (Quran 16:066, Yousuf Ali Translation)

Almost every spiritual practice views milk as a divine beverage that sustains humanity. Yet, milk has become associated with disease. How is this possible? Many cultures through out history have flourished on diets composed mostly of dairy products. Other cultures incorporated dairy products into their diets as super foods.

More times than not, when we talk about milk, it is assumed that we are referring to cow's milk. The cow is but one of the various milk producing animals, including humans. Ox, water buffalo, goats, sheep, camels, horses, reindeer and antelope all are common milk producing animals. In the United States cow's and goat's milk are the easiest to come by.

In most traditional societies, including colonial America, milk was rarely consumed fresh. Milk was consumed in a fermented form, such as buttermilk, kefir or clabbered milk, to name a few. Then there are nut milks, rice, coconut and soy milks.

The various grades (grade A, B etc. . .) of milk depend on the amount of fat in the product, the type of processing involved and the type of cow the milk was taken from (1) The milk produced by Guernsey and All-Jersey have a higher fat content and because of this creamy taste, they cost more (1). Milk may or have cream on top or be homogenized, no cream on top.

In order to make milk a consistent texture, as opposed to cream on top, the cream is forced through a sieve at high pressure to force the fat molecules to mix into the milk and not float to the top. Pasteurization is accomplished by heating the milk to 161 degrees fahrenheit for 15 seconds. Ultra pasteurization heats the milk to 200 degrees to insure that the milk is dead and very little microbes remain. These two methods alter the nutritional value of milk. Human milk is not pasteurized.

Pasteurization is required to kill the “puss” present in the milk from cows in commercial dairy facilities. This puss is not present in certified raw milk because there is not an issue over lack of hygiene (more on this later). The *Journal of Dairy Research* points out that “the more milk a cow produces, the more diluted the vitamin content of her milk” (Schmid, 206). Further, commercial herds are not grass feed, which further lowers the milk’s vitamin content. This is not to mention the over use of anti-biotics and the health risks they pose. In addition, the over heating and forced molecular change creates a milk that is not fit for human consumption because the protein is changed and this makes it very hard to digest. I’ll address this a bit later when I talk about lactose intolerance.

Also, it is speculated that Crohn’s disease in most people is caused by the Map bacteria that is found in milk (Schmid226-227). The Map bacterium is not naturally occurring in milk, so how did it get there? The cow’s diet is how the bacterium is introduced into milk. Most cows are fed grain. The Map bacterium is found on grain and it can not be killed by pasteurization. However, milk was not always processed this way.

Before the 1940’s it was possible to purchase clean un-pasteurized milk from grass-fed cows. Today in most states it is illegal to purchase un-pasteurized milk and in some states a farmer may not even give it away. The public assumes that since milk is pasteurized using hi-tech stainless steel equipment, that the modern milk supplies is “safe for human consumption,” but let us go back and examine when the public health issue

over un pasteurized milk arose at the turn of the 20th century due to unsanitary conditions in dairies.

Confinement, “Swill” Dairies and Blue Milk

The confinement dairy was a new way of dairy farming that emerged with the rise of the metropolis. As rural communities migrated to urban centers to find jobs in factories during the Industrial Revolution, dairy productivity in these centers could not keep up with demand. There just was not enough cheap land. Thus the confinement dairy was born. Cows were confined to a stall their entire lives. These stalls were too small for the cow to move and many of them spent their entire lives sitting in their own excrement. Many times their tails rotted off.

These poor cows were feed the spent grains used to produce whiskey. This waste that remained after the fermentation and distillation process, which “extracted the starch and the alcohol from the hot grains, and produced an acid refuse of chemically changed grain and water known as distillery slop” was the cow’s main source of sustenance (Schmid 32). This arrangement solved a big problem for distilleries, how would they

dispose of this slop? They came up with the idea of using it as feed for the distillery or “swill” cows, very similar to what the soy industry did with the slop remaining after soy oil production, they added it to the food chain. The cows naturally

refused to eat this slop, so they were starved and deprived of water until they agreed to eat what was offered. The milk that these animals produced was

often times blue and could not be turned into cheese. It held many pathogens and was a variable cesspool. It was a public health nightmare and in large cities, such as New York, half the mortality rates for children could be traced to milk. This sparked the campaign for certified raw milk by a medical doctor (Henry Coit) and the campaign for pasteurization by a philanthropist (Nathan Straus). These campaigns were sparked by the same catalyst, both men lost a child due to tainted milk. One might think that



pasteurization solved the problem and that dairies are held to higher standards today-well you would be quite shocked to discover the truth.

Our Modern Milk Supply

Nothing can be more certain than that the quality of milk is greatly influenced by the state of the health of the animal producing it". So said the reformer Robert Hartley in his book on the state of milk production at that time in 1842 (Schmid pg 38).

Some of the earliest and most compelling documentation of dairy used as a super food comes from the work of Weston A. Price. In the 1930's, he documented the use of summer butter in the Swiss Alps. Cultures in Asia (India, Middle East), Africa (Massi) and in Europe have subsisted and thrived on milk products. Schmid recounts a story of the Kalenjin people of Kenya who attribute their incredible ability as long distance runners to a special fermented milk drink.

Let us suppose that it is true that milk is indeed bad for us and causes various disease states. Then we have to ask the question, why have humans consumed milk un pasteurized and fermented for at least 10, 000 years and have reproduced and not been afflicted with degenerative diseases? It is safe to say that some humans have been drinking milk for a long time. So, could it be the way that milk is produced and processed that is the culprit rather than the milk itself?

Fortunately the "swill" dairy was eradicated, but its legacy of compulsory pasteurization remains with us and for all the same reasons-lack of sanitation. The "swill" dairy was replaced with the confinement dairy.

Confinement dairies particularly dot the California central valley. To the passer-by it appears not to be a healthy environment for the cow and the stench is overpowering. There is not a blade of grass to be seen and the cows can be viewed in large holding pens. Since they live in such unsanitary conditions and because the use of growth hormones, anti-biotics are overused in an effort to make the milk safe for sale.

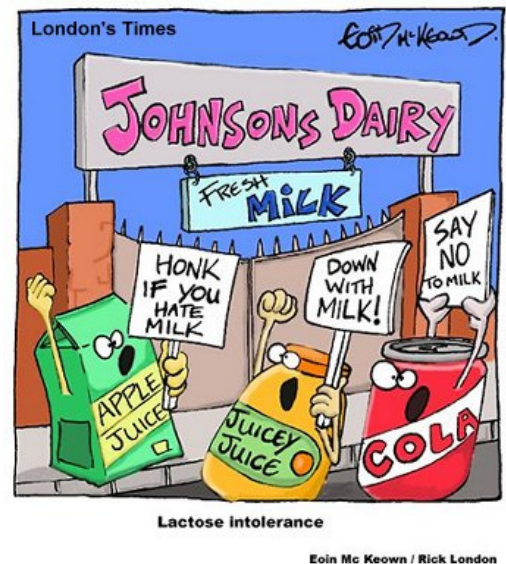
The growth hormone rBGH (synthetic recombinant bovine growth hormone) is used to increase the productivity of the cow. More milk per cow means more money. Yet, you can have too much of a good thing. The cows are prone to developing mastitis (inflammation of the mammary or tit of a cow) because their udders are too full it causes the produced of puss. This puss enters the milk and remains there. They are also forced to stand, since most are in stalls which causes problems with there hoofs. Infirm animals can not produce healthy milk. In the end, milk is like white blood. With this poor quality and lack of real hygiene present in the dairy industry, it is not surprising to find out that many people are lactose intolerant.

Lactose Intolerance

Lactose is a disaccharide milk sugar composed of glucose and galactose. In order for the body to process lactose, the enzyme lactase must be present. Lactase is produced in the intestinal track on the top of fingerlike projections called villi. If the production site is damaged or unable to produce lactase, the individual will present with bloating, gas, and diarrhea. This is known as lactose intolerance.

The first clue that there is something wrong with America's milk supply is when someone moves here from another country, who was never lactose intolerant, suddenly is lactose intolerant. When this person has the good fortune to discover raw, un pasteurized milk, he is cured of his lactose intolerance. This is a scenario that plays out in the offices of many natural health care practitioners.

Raw, whole milk is much easier for our bodies to digest and use. Since whole milk contains all of its fat, it can be digested because fat must be present. Also, fat is necessary for the absorption of the fat soluble vitamins like, A,D, and E. In un pasteurized milk, the proteins are not damaged and there are no hormones. There is also no Map bacterium.



It is possible to produce safe un pasteurized milk. We have the technology, but it is cheaper to produce contaminated milk from sick and maltreated cows and then boil it, then for individual farmers, corporations, supermarkets, government officials and citizens to accept their own personal responsibility. As individuals we must be willing to pay a fair price to the farmer and we have to lobby our public officials to do the sane thing and allow un pasteurized milk to be sold to those who want it and to not simply offer



This woman made her choice.

pasteurization as a lesser of two evils. Pasteurization is a quick fix, but it does not solve the underlying problem-dirty milk. Whether or not one is an advocate for or against pasteurized milk, that problem can not be reasoned away or refuted. In the end, we all must educate ourselves so we can make the best informed decision for ourselves, our families and our communities.

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