A Near-Perfect Food

As if flavor weren't enough, cheese is good for you

By Max McCalman

Max McCalman is the author of three books on cheese, the most recent being *Mastering Cheese, Lessons for Connoisseurship from a Maître Fromager*, and dean of curriculum for www.artisanalcheese.com. At 57 years old and 150 pounds, he is a picture of health and vitality — and he eats cheese every chance he gets.



oday, mainstream media always seems to be publishing articles recommending various foods for conquering health problems, and I always hope to find cheese on those lists of beneficial foods. Why? Because I believe cheese has so many healthful qualities that it's one of the best foods to eat and enjoy every day. Instead, to my keen disappointment, cheese turns up on lists of foods to avoid!

To make matters worse, occasionally those same references lump entire food categories, such as dairy products, together as if all dairy products were somehow poisonous. Regardless of the bad rap cheese suffers at the hands of misinformed media, consumption is growing and connoisseurship is on the rise.

I would hope part of what's driving this cheese wave is an appreciation that cheese is a "near-perfect" food a belief dear to my heart. My last book touched on the nutritional values of cheese, but since its publication, I have found several more healthful qualities that are generally unknown. I also want to point out I'm talking about natural not processed cheeses, and better cheeses have more of the trace nutrients that make cheese so near-perfect.

Cheese contains varying amounts of conjugated linoleic acid (CLA), tyrosine, and a host of other enzymes, vitamins, minerals, and easily digested sources of protein. In fact, when you enumerate all the vitamins and minerals offered by cheese, it will remind you of the ingredient list found on multivitamin bottles. Even better than in multivitamins, however, the nutrients found in cheese are more bio-available. They're more readily absorbed and utilized by our bodies.

Yet a couple of nutrients are missing, which is why cheese is the near-perfect food. The amount of vitamin C in cheese is negligible or entirely absent, although in some of the newer cheeses that contain fruit, vitamin C may be available in trace amounts. Cheese also lacks fiber and while fiber isn't generally considered an essential nutrient, it's essential for good bodily functions. Cheese also lacks sufficient water, so



it isn't as though you can live on cheese alone.

Surprisingly, another component missing in cheese is calories. Because of its high flavor profile, satiety is reached long before sufficient daily calories are consumed. Because of its high flavor to calorie ratio, adding natural cheese, especially some of the more piquant cheeses, is one of several ways cheese can be part of a weight-reduction regimen.

Unfortunately, it isn't just the media that feels cheese is unhealthy. Even within the cheese industry, I often hear comments suggesting that cheese can't really be all that good for you — or that one should try to limit cheese consumption. Those negative assessments generally center on the potential for weight gain and clogged arteries; however, our palates give out long before our stomachs cry out that we're too full to eat any more.

Curiously, some cheese lovers have avoided cheese thinking it might lead to bad breath. Yet, for all the cheese competitions I've attended, cheese breath is never apparent. In fact, niacin, a nutrient found in cheese, may have the opposite affect.

Cheese does have its addictive properties and I believe they're partly due to its primordial characteristics —

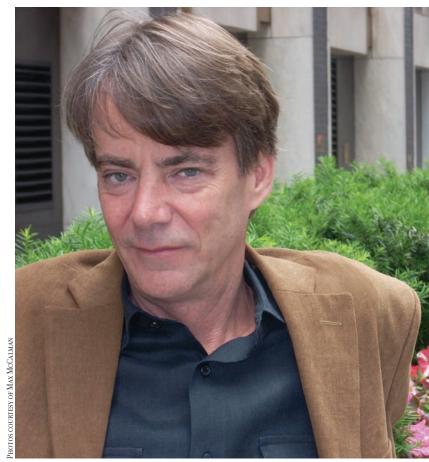
it's derived from milk, our very first food. Since milk is designed to be universally satisfying, the "addiction" may occur because cheese offers some of those same marvelous gustatory pleasures we experienced as young children.

forgetting the guilt and learning to enjoy

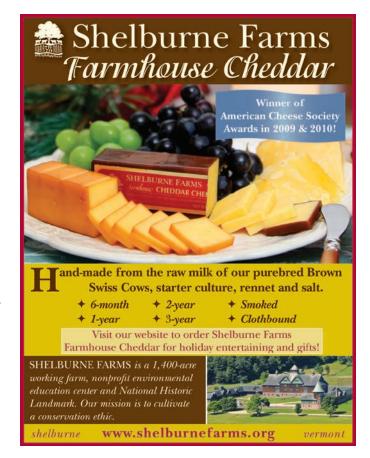
Within the last few years I've recognized a growing number of people catching the cheese bug. Cheese lovers were popping up everywhere — and a rather happy and healthy group they seemed to be. It reminds me of when I was the maître fromager at Picholine, the fine dining restaurant in New York City. Guests who enjoyed a cheese course departed blissfully, while most of those who did not seemed to leave comparatively dour.

Many of those cheese folks seemed to be generally happy anyway, but they always appeared to be especially pleased after dinner. Perhaps they suspected something in cheese that made it unusually alluring, ending the meal in a much more convivial mood. Or maybe it was because cheese contains tyrosine, thought to be instrumental in reducing stress and increasing feelings of contentment.

Regardless, there's a growing appreciation of cheese, especially the better quality, natural cheeses, most often referred to as specialty cheeses. Initially, many people thought increased cheese consumption was merely another dining trend, but 30 years of continued growth seems to dispute this thought. Since the early 1970s, the United States has seen per capita consumption increase three-fold, yet we still have a long way to go before we catch up with



Fit and healthy Max McCalman consumes a lot of cheese



the world's leaders. Greece claims the highest per capita cheese consumption in the world — higher than France or Italy.

I must interject something about myself here, especially since I'm a cheese-eating advocate. Frequently, I'm asked questions such as: How are your cholesterol levels? If you eat so much cheese, why aren't you fat? If I'm lactose-intolerant, don't I have to avoid cheese? If my own cholesterol levels are high, can I still eat cheese — my favorite food?

I'm 57 years old and I weigh 150 pounds. I eat an average of four ounces of cheese per day — that's almost two pounds per week or 100 pounds per year. The average American eats roughly 32 pounds of cheese per year.

My good cholesterol level, the HDL, is 105, and my bad cholesterol level, the LDL, is 65. My blood pressure remains steady, around 120 over 80. I'm sure these numbers are partly a reflection of my having good genes and a fairly active lifestyle. However, these are exceptionally good numbers for someone my age and it seems I haven't suffered because of my much higher-than-average cheese consumption.

I'm not a doctor or a scientist, but it was those types of comments and questions that spurred me to do more research. It's why I decided to start my latest book — *Mastering Cheese, Lessons for Connoisseurship from a Maître Fromager* — with a chapter entitled "Cheese is good and



good for you." Over the years I've consulted with cardiologists, neurologists, nutritionists, internists, and dairy scientists to find answers.

A large factor in the growing appreciation of cheese is the recognition it's a near-perfect food. Personally, I can't think of any food that's better. The nutritional values of eggs and various cheeses are compared in a lovely little book called *French Cheese*, by Patrick Rance. Along with higher nutritional values, Rance points out, cheese also enjoys an excellent food-safety track record; it appears to be far safer than the egg.

If we accompany cheese with fruits and vegetables, we have it all. It can be our sole protein and has kept many a community alive and healthy during winter months when animal protein was non-existent.

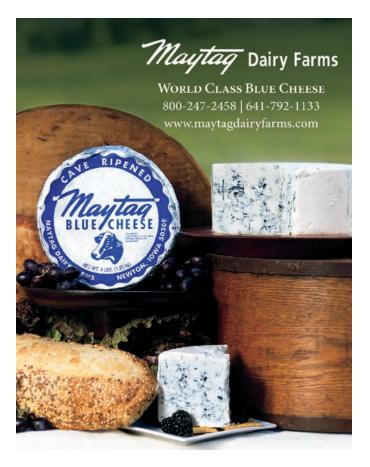
Hippocrates eloquently stated it over two thousand years ago, "Our food is our medicine and our medicine is our food." Today, most nutritionists recommend we derive our nutrients from the foods we eat instead of relying on supplements.

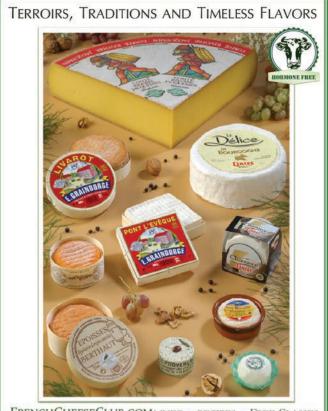
Other than finding out cheeses made from different milks are delicious, there may be a subliminal reason for the explosion in the popularity of goat, sheep and mixed milk cheeses. Cheeses produced from goat or sheep milk contain different relative nutritional values



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than cow's milk cheeses, whether we're aware of these differences or not.

The influence of terroir and species isn't just one of aesthetics; they affect both taste and nutrition. Different pastures and grazing techniques exert their subtle influences. The care and health of animals is another important influence. Pasture grazing and use of hormones — really the lack of hormones — affects the quality of the milk. When animals are stressed due to confined living arrangements or induced to produce more milk than they would naturally, the quality of the milk declines.

The many nutrients derived from milk are, for the most part, available at some level in all types of cheese as well as dairy products in general; it's the relative compositions of those nutrients among the different milk types that are different.

For example, goat milk has more vitamins A and D but less vitamin B12, folic acid, zinc, and CLA than cow or sheep milk. Cow milk has more folic acid and zinc but fewer vitamins A and D than goat or sheep milk. Sheep milk has more protein, calcium, CLA, vitamins B2 and B12 but less sodium than goat or cow milk.

Compared with milk, cheese contains the same nutrients in higher concentrations with quality fats, proteins, minerals, and vitamins, but less water and far less lactose.

In one of the first steps in the production of cheese, lactose is converted into lactic acid. This step occurs naturally through the souring of milk. As milk acidifies, the lactose is converted into lactic acid. The lactic acid bacteria present in the milk consume the lactose and leave the lactic acid behind. A couple of steps later, after the coagulation of the milk and its separation into curds and whey, most of the remaining lactose drains away with the whey. By this point, the curd, from which most cheese is produced, is mostly lactose free. That remaining trace amount of lactose in the curd is gradually acidified.

Other benefits derived through the conversion of milk into cheese occur through the breakdown of the milk proteins into amino acids; still others are derived from the breakdown of fats into fatty acids. Our digestive systems may be able to cause some of those conversions to occur — the conversions of proteins into more easily utilized peptides and amino acids and of milk fats into fatty acids. However, through the processes of cheesemaking, much of that work has already been done for us making cheese easier to digest than milk.

Now, let's consider the fat in cheese — the component so strongly associated with cheese. Anecdotally, I can offer my own example of what eating a ton of cheese can do to your girth: It would appear it's been having a diminishing effect on me; the belt is buckled a little tighter each year, the pants tailored to a smaller waistline.

Good examples are the Greeks who have the highest per capita consumption of cheese in the world and who don't have the obesity problems Americans have. The French, who also consume considerably more than we do, also have far fewer problems with obesity. Think *French Women Don't Get Fat* by Mireille Guiliano.

The making of cheese results in the fats breaking down

into more easily absorbed fatty acids such as CLA. Multiple studies of CLA in human diets show it tends to reduce body fat — some studies show it reduces abdominal fat — improve serum lipid profiles and decrease whole-body glucose uptake. In other words, these two propensities of CLA explain how cheese can help reduce body fat.

Some studies show CLA may help lower cholesterol and prevent atherosclerosis. In animal studies, it has demonstrated several benefits, including increase in lean muscle mass, reduced risk of diabetes, reversal of arteriosclerosis, and a marked reduction in tumor growth. Several studies have shown CLA kills skin cancer, colorectal cancer, and breast cancer cells in in vitro studies. CLA happens to be a potent antioxidant, inhibiting several cancers in studies with mice. There are several types of CLA; the type found most abundantly in dairy appears to be the champion cancer fighter, cis-9, trans-11 CLA

Significant levels of CLA are found only in milk from grass-fed dairy animals. In general, the longer the cheese is aged, the lower the CLA. The washed-rind *B. linens* cheeses — such as French Epoisses or Cowgirl Creamery's Red Hawk — have more CLA, as do high-fat cheeses, as measured in terms of CLA per gram of total fat. Ewe's milk has higher CLA content than cow's milk, which is higher than goat's milk.

Other fatty acids derived from cheese include essential fatty acids (EFAs) such as omega-3s that are also found in fish oils. Heat destroys EFAs — one reason why it may be better, whenever possible, milk not be subjected to excessive heat treatment, as in pasteurization. **CC**

Max's discussion of the health benefits of eating cheese will be continued in the next issue of CHEESE CONNOISSEUR.

Resources:

Inhibition of carcinogenesis in Breast Cancer — Journal of Nutrition, Amaru & Field. Colon Cancer — US Nat'l Library of Medicine, Nat'l Inst. of Health, Coakley, Banni, et al. Anticarcinogens — Dept. of Surgical Oncology, Roswell Pk. Center, Inst., Buffalo, N.Y., Ip, Scimeca, Thompson, et al. Atherosclerosis, skin cancer, stomach cancer, mammary, colon — Wistar Institute, Philadelphia, Krtichevsky. Atherosclerosis, cancer, hypertension, immune functions — Dept. of Medicine, Univ. of TX, San Antonio, Blattacharya, Banu, et al. Breast Cancer, Norris Cotton Cancer Center, Dartmouth Med. School, Lebanon, NH, Donnelly, Olsen, et al.

Abdominal Weight — Iowa St. Univ., Larsen Wiegard, et al.

Obesity — Int'l Journal of Obesity, Dept. of Nutritional Sciences, Univ. of Wis. Madison, Watras, Buchholz, et al.

Obesity — Scandinavian Clinical Research, Norway, Blankson, Stakkestad, et al. Total Serum Cholesterol — Dept. of Nutrition & Fd. Science, Univ. of Pai Basq, Navarro, Miranda, et al.

Total Serum Cholesterol — Dept. of Inditition & Fa. Science, Univ. of Pai Basq, Inavario, Mitanaa, et al.

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