

Keeping Young & Healthy with Bovine Colostrum—Some Real Facts about Slowing Premature Aging

Dr. Al Fox is one of the world's leading experts on colostrum. The following article demonstrates the many ways that a quality first milking colostrum product can help to prevent premature aging.

by Alfred E. Fox, Ph.D.

The trials and tribulations of getting older are something that everyone has to face. For those that are in tune with their body and aware of their health status, there is something that you can do to help keep you young and healthy longer. Why succumb to natural deterioration of your body when you can influence your own destiny? The answer is a nutritional diet, moderate routine exercise and daily dietary supplementation with a high quality **first milking bovine colostrum**, and here is why.

Orchestrates Body's Immune Response

Regulating the immune system—that is, having the switches available to turn the system on with sufficient intensity to respond effectively to a challenge, orchestrating how the response will play out, pushing the response to its maximum and having the right players to clean-up after the job is done—this is something that most of us take for granted everyday of our lives.

The only time that we recognize that something is out of step is when we become ill and, then, we run to the doctor and seek out chemicals to put into our bodies so that things will go back into phase—hopefully. The reality is that things were probably out of phase long before your body screamed for help and that you likely could have avoided becoming ill if you were only conscious of some facts.

First, you need to realize that unless you are thirteen years old or less, your body's health-support mechanisms have already begun to deteriorate and they will not get any better unless you do something about them. Before puberty, when you were just a young child, the very foundation of your immune system was being established by a small gland-like structure in the upper chest, the thymus. Within this structure, the cells mature that will determine the appropriate type of response your immune system should mount after an insult, and then cells from the same source will regulate the quality and intensity of that response. After puberty, the thymus begins to shrink and ultimately almost disappears by age fifty or sixty. So, although the immune system develops more immunologic memory with time, it gradually loses the ability to efficiently, effectively orchestrate and direct the actual immune response itself. Seems like a terrible waste of a good thing, doesn't it?

And here is what you can do about it. Scientific studies have shown that **insulin-like growth factor (IGF-1)**, a major component of first milking bovine colostrum, and the IGF super-family of proteins can restore and maintain a fully functional thymus, even in adults.

In addition, colostrum contains the alpha and beta chains of the hormone **thymosin**. These chains act independently and in concert to regulate



the functions of the thymus. Further, colostrum contains **proline-rich peptide** (also called **thymulin**), which is known to down-regulate the immune system and keep the response to a foreign substance under control.

Other studies have shown that including only small amounts of colostrum in the daily diet of adult animals significantly enhances the ability of their white blood cells to respond to infection and destroy invading bacteria.

So, the answer to keeping your immune system tuned up, under control and capable of responding efficiently and effectively to an insult is to make sure that you supplement your daily diet with high quality first milking colostrum.

Prevents Premature Aging

Now, let's talk about controlling deterioration of cells and diminished metabolism. There are very small quantities of **growth hormone** in complete first

milking colostrum, but growth hormone is an extremely potent hormone; thus, not much is required.

Growth hormone directly affects almost every cell in the body and significantly influences the development of new cells, causing them to generate at a more rapid rate when a sufficient quantity of the hormone is present. Scientific studies have shown that one of the benefits of ingesting even small amounts of growth hormone is limitation of the deterioration of cells associated with the aging process. In addition, more recent studies have shown that small doses of growth hormone can accelerate repair of the muscle damage associated with congestive heart failure.

Insulin-like growth factor-1 and its closely related counterpart insulin-like growth factor-2 (IGF-2) are potent hormones found in association with almost every cell in the body. IGF-1 is the most potent and best described of this pair. These molecules are present in all mammals and, in every case, have a very similar chemical structure regardless of the species. IGF-1 is absolutely necessary for normal cell growth and for the development of the fetus in the uterus. Both IGF-1 and growth hormone are found in colostrum and required for normal development and tissue maintenance. The chemical structure of the IGFs is very similar to insulin; that is where their name comes from.

Scientific knowledge about the IGFs, what they do and how they act on cells in the body, has developed very quickly during the past few years. It is now known that there are specific sites, called receptors, on almost all cells in the body capable of interacting with IGF-1. These sites have a structure that fits perfectly with part of the IGF-s molecule and this interaction triggers a series of chemical events within the cell.

There are also at least six different proteins present inside the cell and on the surface of the cell that react to the attachment of IGF-1 to its receptor. These control the actions of IGF-1. In addition, inside the cell there are at least 87 other related proteins either

capable of binding to IGF-1, altering its actions, or influencing its effects. The key event that triggers the effects of any of these proteins appears to be the activity of IGF-1.

The multitude of available IGF-binding proteins and related proteins available in the cell is indicative of the many potential effects that the binding of IGF-1 to its specific cell-surface receptor can have on cells. To keep these many effects under control, some of the binding proteins act as checks and balances, allowing the secondary chemical switches in a cell to be turned on and then turning them off when it is appropriate. Therefore, IGF-1 is like the captain of a ship. When it binds to its specific receptor, the ship can move forward, but there are all kinds of systems in place to keep it moving at the right speed and in the right direction.

The main triggered events include activation of the process by which the cell grows and reproduces itself and maintenance of the metabolic pathways by which the cell converts glucose into glycogen and uses amino acids to create proteins. This is why IGF-1 is so important to tissue maintenance and muscle repair.

As we age, the ability of our body to create an adequate supply of IGF-1 is diminished. Thus, by eating a well-balanced diet and maintaining a constant supply of IGF-1 in our body, we can keep the ship moving at the right speed and in the right direction. (One of the fascinating aspects that we have found with

colostrum is that we don't see very dramatic increases in circulating IGFs. That is because colostrum is such a natural food for the human body and each individual nutrient and protein in colostrum so aptly designed to be used by the body, there is almost perfect utilization.)

And when we exercise, this nearly complete utilization of IGFs from first milking colostrum becomes even more critical since there is an increased demand for glycogen to provide energy to our muscles and the preference is to build more muscle protein. Even more importantly, as we age the cells in our body do not reproduce themselves as well and, since IGF-1 along with growth hormone is a primary factor in the ability of cells to grow and reproduce, it is highly desirable to have an appropriate level of IGF-1 and growth hormone in the circulation through dietary supplementation to limit the ever increasing rate of cell death.

Colostrum is an amazing resource of substances necessary to support the development and repair of cells and tissues and to assure the effective and efficient metabolism of nutrients.

However, it is very important to recognize that all colostrum products are not the same and, despite the claims made by their manufacturers, they do not all contain every beneficial component at an optimum concentration and, in many cases, they have been manipulated and may be missing some of the essential components. ❖

Colostrum Prescription—Importance of First milking Colostrum

When choosing a colostrum product, you should be certain that it is made from only first milking bovine colostrum collected within six to eight hours after birth of the calf and that the colostrum is “complete” and that none of the components have been removed, including the fat.

Editor’s note—TBR Labs first milking colostrum products are recommended by Dr. Fox and are available at natural health centers and from health professionals. For anti-aging purposes, we recommend at least six capsules per day of TBR Labs first milking colostrum. For weight loss and to take advantage of the leptin factor in colostrum, use TBR’s Lepti-Trim Daytime capsules with leptin. If you have any trouble finding a source, call TBR Labs toll-free at (800) 916-3681.

