

## *Philadelphia Personal Health*

At Philadelphia Personal Health, an innovative health care model, we recognize the vital role that molecular, genomic, psychosocial, cultural and behavioral factors play in our well-being. We know that cellular function is constantly in flux from internal and external stressors. To truly improve and maintain the quality of a patient's health, we must look "upstream" to understand the physiology and pathophysiology and not simply treat the end result.

### *PPH believes in educating and empowering*

**The Physiology of Aging:** Every day we lose cells from our tissue and organ systems. This is a necessary part of homeostasis or maintenance of the human body in its functioning state. Aging occurs when there is an imbalance in the replacement rate/rate of loss, of cells involved in this process.

#### **CAUSES OF AGING**

Several biological functions are involved in the aging process. All are necessary for life, but the balance of each function determines HOW we age.

**Glycation:** High blood sugar causes progressive damage to the body. Sugar molecules attach to proteins causing structural damage and negatively impacts how your cells function.

**Inflammation:** Excessive quantities of hormones, such as eicosanoids and immune system chemicals such as cytokines cause chronic sub-clinical inflammation. Chronic inflammation is now recognized as playing an important role in the development of diabetes and atherosclerosis. Poor diet, lack of exercise and other life style choices have a significant impact.

**Oxidation:** Unstable oxygen molecules known as free radicals, result in *oxidative stress*. *Oxidative stress* damages DNA, protein, and carbohydrate molecules in your body's cells, and play a role in chronic and degenerative disease and aging in general.

#### **OTHER FACTORS OF AGING**

**Methylation:** A cellular process in which certain genes are activated and de-activated. Look for the Genetics link in the services area for a good deal more on methylation.

**Telomere Reduction:** Telomeres are repeating sequences of DNA found at the end of chromosomes that determine how many times a cell will divide. Telomeres shorten with each cell division, resulting in less efficient cell division that impedes the body's ability to repair and regenerate. PPH has the ability to test telomere length.

PPH while working to improve your overall health will naturally address and reduce many factors that contribute to the aging process.