



Glossary for Nutritional Medicine Course

Adaptogens: include herbs suitable to facilitate the body's adjustment under stress.

Autoimmune diseases: chronic diseases where the immune system responds to your own organs and tissues. Examples of autoimmune diseases are multiple sclerosis and rheumatoid arthritis.

Biochemistry: the study of the chemistry of life (from the Greek bios = life and chemistry).

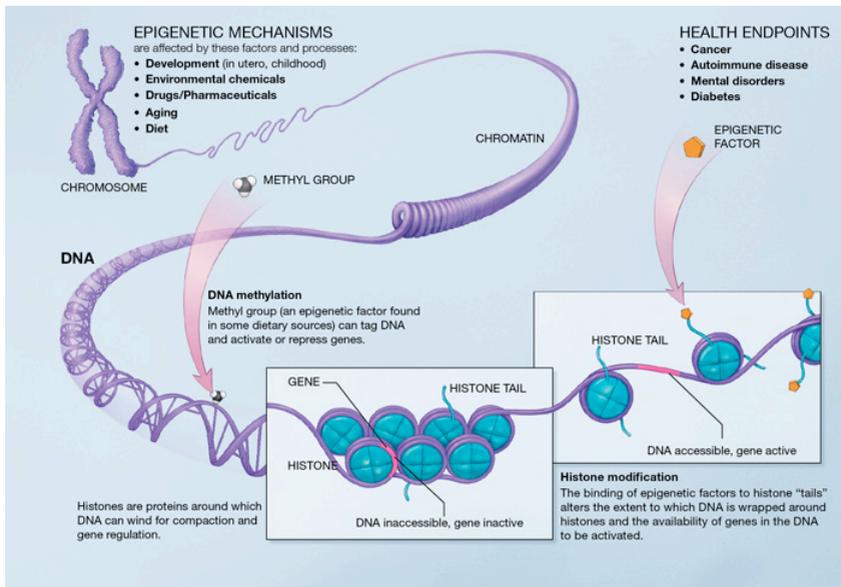
Chronic Diseases: diseases whose effects persist beyond 3 months.

Co-factors: non-protein base nutrient substances, necessary for enzyme activation. They can be substances taken in via diet such as vitamins and minerals or produced in cells such as coenzyme Q10.

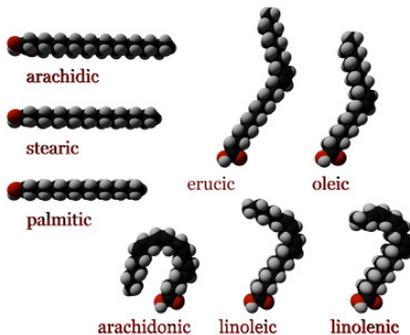
Dyspepsia: from the Greek dis = difficult, pepsis = digestion. Difficulties associated with digestion that may occur with pain or swelling felt mainly in the epigastric area (stomach).

Edema: fluid accumulation in a tissue.

Epigenetics: science that studies external factors (non-genetic) affecting and regulating gene expression. It comes from the Greek Epi = above and genetics. It literally means whatever stands above or prevails over genes. Epigenetic factors affect the development of major chronic diseases such as cancer, cardiovascular disease, obesity and diabetes, with an incidence greater than 80% compared to genetic factors.



Fatty acids: include long chain molecules constituting nearly the entirety of complex lipids of both animal and vegetable fats. If unattached from other molecules, they are referred to as free fatty acids. Play an important role as fuel in energy production at the cellular level because they generate a high number of ATPs when metabolised. They are necessary for the production of cell walls, hormones, neurotransmitters and modulate immune and inflammatory responses.



Food pyramid: is an outline guide divided into sections that offer in groups the amount of recommended food to be consumed in a healthy way.

Genomics: science - a branch of molecular biology - that studies the genetic heritage of living organisms, genes.

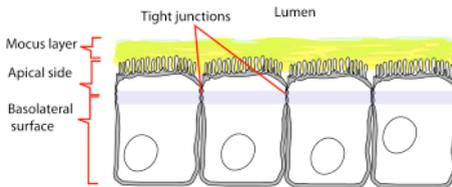


Applied Nutritional Medicine

The set of genes of an organism is defined as genome. The genetic heritage of the human organism is contained in 21,000 genes.

Gene expression: is the process whereby one synthesises a functional protein starting from the gene information. Proteins may be structural, which form organs or tissues, or enzymes that in turn promote metabolism.

Leaky Gut Syndrome: condition of hyper-permeability of intestinal mucosa. In physiological conditions, the intestinal mucosa is impermeable and the cells lining the intestinal tract form the main barrier between its content and blood circulation. These cells are linked by very strong bonds called tight junctions. Only substances digested and dissolved in the molecules composing them are absorbed through intestinal mucosa cells. When this impermeability is compromised, toxins, undigested protein molecules and microbes pass into the bloodstream triggering unwanted conditions, such as inappropriate allergic and immune responses.



Metabolomic supplement: supplement formulated based on the knowledge of metabolomics and hence designed to facilitate the execution of precise metabolic pathways, such as carbohydrate metabolism, Krebs cycle, formation of protein etc.

Metabolism: comes from the Greek "metabole" which means "to transform" and refers to all stages, biochemical and physical, necessary for converting food into energy.

Metabolomics: science that studies the products of chemical reactions occurring in a living organism. These products are called metabolites and the set of metabolites of an organism is called the metabolome. The human body contains about 5000 metabolites.

Metabolic pathway: series of chemical reactions where a main chemical is modified. These chemical reactions are catalysed (increase of reaction speed) by specific



Applied Nutritional Medicine

enzymes. To function properly, each enzyme requires nutritional factors like vitamins, minerals and amino acids. These factors are called co-factors.

Natural diet: the diet a species must follow according to its genetic heritage. Sheep, for example, eat grass while lions are carnivores. The natural diet for the human species has not been yet formulated.

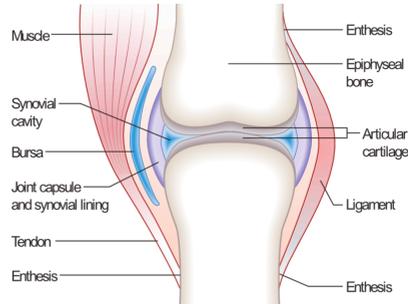
Nutrigenomics: science that studies the effect of nutrients on gene expression.

Phenylketonuria: a congenital (genetic origin) disease characterized by a mutation (change in the structure of a gene) of the gene encoding the hepatic enzyme, phenylalanine 4-monooxygenase, which is necessary to metabolise the amino acid phenylalanine. As people suffering from this congenital metabolic disease consume phenylalanine, they accumulate toxic products that can be measured in urine. If this this metabolic disorder is not identified and treated, it may lead to serious health problems such as seizures and mental retardation.

Proteomics: science that studies the structure and function of proteins. The set of proteins of a living

organism is the proteome. There may be 10,000,000 variations of the proteins contained in a human body.

Rheumatoid Arthritis: inflammatory autoimmune disease that can affect various tissues and organs, but primarily the joints and, in particular, the membrane that lines the joint capsule internally.



Stomatitis: inflammation of the lining in the oral cavity.

Stress: it is the hormonal response to a factor that threatens the survival of a living organism. Stressing factors - stressors - can be physical (cold, hot), chemicals (toxins, nutritional deficiencies), mechanical (shock, weight) or mental (problems with work, family, social, etc.).

Probiotics: living microorganisms that can confer health benefits to the host.