

Issue 23  
April 01 - May 15 2006

Quality, service, and caring are the foundations of our company. At ProMedics, we care about the quality of our products and the service we provide.

**ProMedics  
Nutraceutical Ltd**  
PO Box 155  
2498 West 41st Avenue  
Vancouver BC  
V6M 2A7

## ***Is Inadequate Protein Synthesis Impeding Your Patient's Progress?***

**Since body proteins are involved in all physiological processes and form the foundation of health, it is important to consider their role when addressing the underlying causes of health challenges.**

Proteins are synthesized in the body from amino acids. Chains of amino acids fold in different ways to create the structure or shape of the different types of proteins that make up the body.

The shape of a protein determines its biological activity or function. On the basis of their three-dimensional structure, proteins can be classified as fibrous proteins (long, linear, pleated sheets) or globular proteins (roughly spherical shaped).

**Inadequate protein synthesis can affect any of the types of proteins or the structures they form, for example:**

### **FIBROUS PROTEINS:**

#### **a. Structural**

##### **Collagen:**

Type I skin, bone, tendon, blood vessels, cornea,

Type II cartilage, intervertebral disk, vitreous body

Type III blood vessels, fetal skin

Type IV basement membrane

Elastin: trachea, lungs, large blood vessels, elastic ligaments and joints

Keratin: skin, hair, nails

#### **b. Movement**

Actin/Myosin - muscle cells

Microtubules - cilia (respiratory tract, fallopian tubes)

### **GLOBULAR PROTEINS:**

a. Enzymes: digestive enzymes (amylase, protease, peptidase), antioxidant enzymes (peroxidase; e.g. glutathione peroxidase used in detoxification)

b. Transport molecules: hemoglobin, K<sup>+</sup> Channel

c. Hormones: insulin, growth hormone, calcitonin, glucagon, luteinizing hormone, thyrotropin-releasing hormone, antidiuritic hormone, oxytocin, ACTH, gastrin, angiotensin I & II

d. Neurotransmitters: endorphins, enkephalins

e. Immune cells: antibodies, complement proteins

f. pH buffer proteins: albumin, hemoglobin

**For more information on helping people meet their daily essential amino acid requirements call ProMedics at: 877-268-5057**

## ***Are You Contaminated?***

**Yes there are chemicals in your body too. Which ones? At what levels?  
What does it mean? Take the quiz on  
<http://extras.insidebayarea.com/bodyburden/bodyburden.html>**

