

***Info shared by Pitbull SA.***

***Manjaro APBT kennel.***

***South Africa.***

***My Website <http://www.pitbullsa.co.za/>***

***My E mail "manjaro@pitbullsa.co.za"***

***My Facebook "Gawie Manjaro"***

***My Facebook page "Manjaro Kennel"***

***My mobile +27827838280.***

***Zello.com "VoIP" – ask for info.***

## ***Glycobiology – Glyconutrients & Saccharides.***

***Importance of Glyconutrients/Saccharides for dogs.***

Glyconutrients are special carbohydrates (monosaccharides) found in foods that provide the building blocks that enable the cells within the body (animal or human) to communicate effectively.

They are known to form the "name tags" of the cells so that the cells can recognize which cells are good or bad, and which cells are lacking in certain nutrients.

**Saccharides.**

There 200+ known saccharides however the *Harper's Biochemistry college textbook* identifies 8 as essential for the cellular communication and recognition.

Fucose (not to be mistaken for fructose)

Galactose

Glucose

Mannose

N-acetylgalactosamine (GalNAc)

N-acetylglucosamine (GlcNAc)

N-acetylneuraminic acid (Neu5Ac)

Xylose

### Looking at Glyconutrients.

Glyconutrients are not vitamins, minerals, amino acids or even enzymes, but are in a class of their own as nutritional supplements that are derived from plants.

Glyconutritional supplements are formulated based on new understanding in the biochemistry of how the body maintains health at the cellular level.

Healthy cells lead to healthy tissue - healthy tissue leads to healthy organs - and healthy organs lead to healthy bodies.

Today as dogmen we are more and more becoming aware of the importance in treating underlying causes of disease and in maintaining good health – in food we offer our dogs to eat.

A glyconutritional approach is a more "holistic" approach as it gets at the root cause rather than treating only the symptoms.

These important **glyconutrients and saccharids** are seriously lacking in our dogs diets (and also in our own) especially in modern diet of cooked and/or processed foods and also with un-balanced raw feeding.

Our dogs ancestors -- have spent thousands of years eating wild and natural foods – a variety of food items available, and let's face it, this is what their systems are designed for. It has only been in the last several decades that they -- along with us, their owners - have been exposed to commercially prepared/processed foods, as well as the chemicals, harmful toxins, pesticides and food preservatives these foods now tend to contain - chemicals that their bodies cannot tolerate.

In addition, artificial ingredients in these commercially processed foods can be the reasons to trigger an immune response that, quite literally, can make our dogs sick.

### Every disease is brought on by:

a deficiency of vital nutrients  
free radical damage to cells  
then a malfunctioning immune system.

There are less and less “phytonutrients, vitamins, and minerals” found in the soil which nourish the grasses and plants matter, berries, fruit and vegetables that are used to feed the animals being used for food available at the local market and the also found in what we feed or dogs (commercial or home prepared).

Feeding our dogs of course effects our dogs health (as well as our own) then more so due to the lack of vital nutrients including glyconutrients.

Glyconutrients have been called "the most nutritionally dense food on the planet".

Glyconutrients contain high levels of saccharides & adaptogens which are known to increase energy and stamina by improving our dog's ability to consume and use the vital element, oxygen.

**Adaptogens** improve cardiovascular health by strengthening the heart and circulation, and continue to work over time while your dog is resting by supporting muscle growth and repair.

Therefore it is suggested that dog feeders look into adding glyconutrients to their dog's diet thus caring for their dog in a natural way.

Decades of consuming nutritionally questionable commercial food products, the proven harmful effects of over vaccination, combined with the unfortunate dependency on steroids and antibiotics have - according to many reliable sources - greatly contributed to a national decline in animal health.

The innate ability of our dog's body to heal itself has been and are seriously compromised by the lack of absorbable species appropriate nutrition.

Glyconutrients are compatible with any type of treatment prescribed by both conventional and alternative practitioners.

These essential carbohydrates as super nutritional supplements that are derived from plants ... will strengthen the body's inner environment which, in turn, enhances the energy that stimulates the immune system, as well as a process called cell communication. This communication network results in all of the organs working with one another in an orderly sequence of body reactions.

Without these activities, good health is impossible to attain.

Although most formulations of glyconutrients supplements are generally produced for human consumption at this time, holistic veterinarians and veterinary naturopaths and knowledgeable dog feeders have also recognized the importance of glyconutrients in supporting the handling of health challenges with their dogs and other animals.

### Healing Glyconutrients - optimum cell-to-cell communication.

*Dr. Hugo Rodier M.D.*

"Most of the Nobel prizes in Medicine and Biology have been awarded to the concept of cell communication, which is how our 100 trillion cells get their metabolic function coordinated (*J. Science, November 26th, 2004.*)

They do this through a system of messages, which are well-known molecules like hormones, neurotransmitters, enzymes, etc.

They form a vast network of communication, which should have never been separated into different components."

The Psycho-Neuro-Immune-Endocrine system of cell communication to coordinate metabolism is now considered to be the cornerstone of health and function in cutting edge research (The intricate interface between the immune system and metabolism, *J. Trends in Immunology 2004;25:193.*)

### Where you can find Glyconutrients and/or saccharides for your dogs.

#### NingXia Red Juice

Chinese Wolf berries or Go-ji (*Lycium barbarum*)

A rich source of saccharides/glyconutrients.

*see article on Wolfberries supplement NingXia Red Juice*

Wolfberries.

Rock-solid scientific evidence discovered at major universities around the world back up the historical usage of the Wolf (Go-ji) berry with 71 different studies now published proving its benefits.

One of the most exciting things about the ongoing research is that more and more studies on the wolfberry - Goji berry ... are being published each year, including 11 published in 2004, 9 published in 2005 and 4 more published in 2006!

These studies cover many aspects of health including the brain, vision, immune

system enhancement, and many others. You can view abstracts of these studies by going to [www.pubmed.org](http://www.pubmed.org) the United States Government sponsored Website, and typing in the Latin name for the Go-ji berry, "Lycium barbarum".

### **Directors & instructions carriers in cell communication.**

Wolf (goji) Berries contain 22 Polysaccharides or phytonutrient compounds that work in the body as **directors and carriers of the instructions that cells use to communicate with each other.**

These polysaccharides are "Master Molecules" that command and control many of the body most important defence systems.

The Wolf Berry (Goji) exhibits a balanced polysaccharide profile and a uniquely potent Spectral Signature.

*Dr. John Axford, MD* – Glyco-biology is one of the last frontiers of science to be conquered and it's going to be at the cutting edge of a large number of discoveries and therapies."

"Sugars are going to be the molecules of the next decade.

Called "Go-ji" by Native Chinese, wolfberries have been used in traditional folk medicine for over 5,000 Years. Ancient Chinese medical texts extolled wolfberries for strengthening the eyes, liver, and kidneys as well as fortifying the "qi" (chi) or life force. An early medical work, *Shen Nung Ben Tsao* (475-221 B.C.), noted "wolfberry benefits ranging from replenishing vital essences to strengthening and restoring major organs."

The physician's handbook, *Ben Cao Gang Mu*, written during the Ming Dynasty (1368-1644 A.D.) reported, "Taking in Chinese wolfberry regularly may regulate the flow of vital energy and strengthen the physique, which can lead to longevity."

Arthur Young, DVM - "Dogs are commonly afflicted with stubborn allergies that are a source of much distress--and expense--for their owners. And, very commonly - just as with their owners - medical interventions that mainly focus on treating the symptoms are quite ineffective."

The findings of "Glyco-biology" suggest that this prevailing approach may be barking up the wrong tree, so to speak, and that a nutritional intervention that,

instead, supplies the body with crucial micronutrients that are lacking is likely to be far more effective.

Glyco-biology has now established that every cell in the mammalian body requires eight essential saccharides molecules in order to function effectively. These sugars combine with protein and fat molecules into glycol-forms that attach themselves to the surfaces of every cell in the dog's body.

Under an electron microscope, they look like weird trees growing on the cell surface.

One of their most important functions there is to **allow cells to communicate effectively with each other**. To the degree that these saccharides are deficient, cell-to-cell communication tends to break down and some form of illness starts to develop.

An insufficiency of these saccharide molecules is particularly disastrous for the immune system, because it causes the cells of the immune system to become, in effect, partially blind. These cells can then become over-reactive in attacking allergens of all kinds and even in attacking the tissues of the body - on the other hand, ironically, they may become under-reactive in attacking true pathogens that are serious threats to the body."

The benefits of glyconutrients/Saccharides for dogs cover various types of animals and a variety of disease conditions, similar to their effects in humans.

**NingXia Red Juice** as supplement is a rich source of glyconutrients/saccharides. Experts say that NingXia Red's high levels of "adaptogens" increase energy and stamina by improving your animal's ability to consume and use oxygen. Adaptogens also improve cardiovascular health by strengthening the heart and circulation, and continue to work overtime while your dog is resting by supporting muscle growth and repair.

Chronic imbalances in the immune system such as cancer, diabetes, kidney and liver failure, heart disease, digestive problems, skin problems, gingivitis, arthritis, allergies, ear infections, yeast over-growth, etc. have been on the increase in dogs as domestic animals and pets. Our pets are dying much

younger and having more symptoms of anxiety, depression and aggression than ever before.

Have you ever stopped to wonder why?

Interestingly all these signs of imbalance were once only human ailments; rarely if ever seen in our pets.

So what is the common link?

What if anything can be done to prevent or reverse these problems?

Thinking about it, our own diets, and what we feed our dogs is mostly processed, commercial foods and cooked ... heat processes diets - we live in a fast, convenient food age. These processed diets and fast, junk foods are taxing both our own and our pet's immune systems. Our pets are being vaccinated more and more frequently and we are using toxic chemicals in, on and around our homes, yards and our pet's bodies as well as our own, more than ever before.

**The use and abuse of antibiotics, steroids, chemical pesticides.**

Mostly in what you feed your dog - are thereby taxing the liver, kidneys and over all immune system while they continue to drive the cause of the symptoms further and further into the body.

Modern, conventional human and veterinary medicine focuses mostly on and addresses the symptoms of unrest and imbalance instead of looking for the underlying causes of symptoms.

Aside from trauma, the process of death, at the cell level, is oxidation.

The death of cells is caused by an invading molecule called a "free radical" which invades cells causing their death. These invading free radicals are part of our dogs (and our own) daily environment. The chemical preservatives in processed dog foods, water, chemical pesticides for fleas, ticks and heartworms (yes even those sold by your pet store), are not recognized as anything more than a toxin to the body, can potentially, become a free radical.

To keep it simple, when a free radical enters the body and the immune system is not functioning optimally, three things can occur.

Should the free radical attack a cell membrane, allergies and/or their symptoms will occur.

Should the molecule attack the fat globule that nourishes the cell, the cell then dies. This is associated with aging and inflammation in the body.

Should the free radical attack the nucleus of the cell, which has the reproductive map of the cell (DNA) cancer can develop.

Immunodeficiency combined with a weak antioxidant defence system are the primary causes of illness.

When the dog's body is constantly bombarded by free radicals it is virtually impossible for the antioxidant defence system to be consistently at peak performance.

To a great degree, immune activity is aided by antioxidants.

Antioxidants are substances that act as shields or barriers to prevent the invading free radicals from doing harm to cells. Antioxidants not only increase the number of white blood cells, they also enhance antibody formation. The only logical solution is to help the ailing antioxidant defence system through the supplementing of antioxidants in what the dog get to eat.