

GLANDULARS--WHATS THE DIFFERENCE?

by Ronald L. Myers, CNC

Controversy has surrounded the use of animal glands in human therapy since at least the 1950's. Before that time, going back as far as the mid 19th century, therapeutic use of glandular material was met with uncritical, almost wild enthusiasm. The idea that glandular materials have special nutritive or medicinal value has been with us since antiquity. Paul Niehans, the father of modern glandular therapy states: "Cellular therapy has its roots in the oldest traditions of medicine. The conviction that the administration of the organs of **young** animals has a strengthening and curative effect is found at the very beginning of the art of healing. In the oldest medical document we possess, the papyrus of Eber, preparations manufactured from animal organs are mentioned. In 1400B.C. the Hindu doctor Susrata recommended Hindus' suffering from impotence to eat the sex glands of tigers. Homer relates that Achilles ate the bone marrow of lions in order to increase his strength and courage. In the "Materia Medica" of Aristotle and of Pliny the Elder there are allusions to extracts of organs used in medical therapy". (Niehans, P., *Introduction to Cellular Therapy*, Pagent Books, Inc., New York, NY, 7-42).

Despite the documented use and known value of glandular tissues across the ages, in our modern, enlightened age the controversy surrounding "glandular therapy" has centered on two areas of concern. First, what evidence is there that intact glandular tissue is absorbed by the gastrointestinal system; are they not degraded into simple compounds (amino acids) making them no different from any other protein eaten? And second, even if some of the glandular tissue is absorbed intact, what evidence is there that these tissues exert specific effects on intended target glands?

These issues need to be addressed, because until very recently there existed very little scientific verification for glandular therapy. For decades the consensus was that all foods were broken down into their smallest components before absorption. But over the last 30 years many researchers have shown that macromolecules can be absorbed. Research by W. A Hemmings, MLG Gardner and others has shown that macromolecules, intact peptides and antigens are absorbed from the diet across the gut barrier.(1),(2) These findings give credence to the use of glandular therapy. It is evident that large tissue specific molecules indeed can be absorbed and exert specific biological effects. In fact, Gardner has unequivocally stated that this "hypothesis...that proteins are hydrolyzed to amino acids...and that only free amino acids are absorbed...is untenable".

European studies using stained or radioactively tagged cells have shown an active accumulation of ingested cells by tissues in question, as predicted. (3) Other researchers found when an organ of an experimental animal is traumatized, the uptake of the corresponding cells or cell fragments is more rapid by the traumatized organs than by normal organs.(4) Human studies have also been performed, though the results are more difficult to quantify since subjects are (usually) not available for post-therapy dissection and tissue analysis.

As with every empirical method of therapy, glandular therapy has not been spared the criticism of being deficient in scientific foundation. Thanks to a growing body of research of the type cited above, these criticisms are now invalid. The long known effectiveness of glandular therapy has now been proven by credible scientific researchers. We no longer have to speculate as to how glandular therapy "might work", we can now point to reproducible studies that show us how it works.

Now let's explore the differences between adult source and neonatal (new born) source glandular tissue.

Glandular therapy is also known as cellular therapy or organ-specific nutrition. The cells that make up the tissues of the various glands and organs are specialized and have specialized nutritional and biochemical requirements. Some of these requirements are known, and it is reasonable to suspect that additional ones, still unknown, are of equal importance. Organ-specific nutrition can provide these requirements.

Different methods of providing organ-specific nutrition have developed over the years. In ancient times, practitioners advised their charges to *eat* specific glands or organs of animals to correct various states of dysfunction. Dr. Paul Niehans, the father of modern "glandular" therapy, injected freshly minced glandular tissue from embryonic or neonatal animals to treat a wide array of conditions. In the new millennium, the method used by most physicians is supplying their patients with *tableted* glandular material to be included as part of their daily regimen.

Because glandular tissue in tablet form is the method of choice for delivering organ-specific nutrition, some discussion of the methods of glandular tablet preparation and quality or AGE of the raw material is of value. Methods of preparing substances for tablets have varied widely. Salt extraction, harsh organic solvent treatments and freeze-drying are the most common.

SALT EXTRACTION alters the osmotic properties of the cell compartments and alters enzyme activities across the board during processing. The frozen glandulars are macerated. Water is added to this mixture, and then it is centrifuged at high speed. The pulp-ice mixture is then separated and salt added. The water is taken off and the product dried. The final product has a substantial salt content.

ORGANIC SOLVENTS resembling unleaded gasoline such as hexane and ethylene dichloride are used in processing some glandular materials. This is known as "solvent extraction" and this involves mixing of organic solvents and water, which form their cellular matrix by dissolving barrier lipids, along with substantial amounts of vitamin A, anti-stress steroids, lecithin and other valuable substances. Some enzymes are soluble both in water and in solvents and are also lost. The subsequent use of these materials would significantly reduce enzyme activity to the cells or interstitial fluid. Some harsh organic solvents cause cross-linking of enzymes, vitamins, mitochondrial factors and nucleoproteins; these are banned by the EPA as air pollutants and are thought to be carcinogenic by many scientists at the National Cancer Institute.

FREEZE-DRYING of glandular materials avoids many of the problems of salt or solvent extraction but leaves water-soluble nutrients trapped behind barrier lipids. These may be released during normal digestion, they themselves being digested. Tablets of this material are similar to dried meat. (Glandular processing methodology provided by William A., Ellis, D.O.).

Within the last 25 years a completely new way of processing glandular materials has been developed. It is based on two concepts -- **NEONATAL ANIMALS AND CRYOSOLVATION**. The animal used as the source of glandular tissue is to be neonatal (1 - 3 *days* old) as opposed to adult (2 - 5 *years* old). Relevant tissues are removed immediately (not as an afterthought to the production of hot dogs). These are processed with mild, food-grade solvents, traces of which are non-toxic and nonmutagenic. Enzyme activity is halted by the use of extreme cold. The use of food-grade solvents in this extreme

cold is called "cryosolvation". Lipid peroxidation is prevented during processing by the use of high vacuum, extreme cold and the presence of antioxidants (SOD and Catalase).

The development of neonatal glandular products was actually an outgrowth of work being conducted by Biotics Research Corporation's own CDC licensed genetic toxicology laboratory. This was the first mobile laboratory capable of responding to an environmental crisis that required an immediate assessment of possible chromosomal damage.

The benefits of *neonatal* glandulars go beyond those derived from improved, non-toxic, non-destructive processing methods. They are listed below for your consideration.

- Optimum organ reserve (4 - 10 times greater than necessary to sustain life).
- Capable of providing the known and unknown (but important) specialized nutritional and biochemical requirements of the target tissues.
- The source of the raw material is known by the manufacturer. This is many times not the case with adult source, slaughterhouse by-product glands on the market today. Glands are collected from many different sources (different animals, different ages, various degrees of health from different slaughter-houses, etc.).
- Glands come from newborn animals (1 - 3 days old) calves, harvested specifically for Biotics Research Corporation. These are not slaughterhouse by-products, but high quality *primary* products.
- Unlike adult source glands, these have not accumulated the effects of aging and environmental exposure.
- Unlike adult tissues, these materials are in a state of anabolic growth.
- Dr. Bill Ellis said his testing of neonatal glandulars showed them to be 3 - 5 times as effective as their adult source counterparts.

Until recently, organ-specific nutrition was still in the primitive stages with processing methods unchanged for thirty, forty or even fifty years. But a new age has dawned in which the early methods can be left behind. Higher standards of quality and efficiency are now available to the conscientious practitioner. The choice is up to you and now you have the knowledge to choose the best for your patients.

References

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