

SECTION 1

THE THREE CATEGORIES OF GLANDULAR PREPARATIONS

There are at least three major categories of glandular preparations which are available to health professionals attempting to balance a patient's body chemistry in a natural fashion. Each of these types of glandular preparations is quite different from the other, with different processes used in production, different clinical indications, and different patient responses. It is impossible to treat patients adequately using only one company's source of these materials since no one company makes all three types of products for every gland. The three categories of glandular preparations are:

1. Whole glandular concentrates
2. Protomorphogens (or nucleoprotein extracts)
3. Aqueous tissue extracts (and hormone-type substances)

Various whole glandular products are available from a variety of companies including a number of those previously listed.

The protomorphogens are available from Standard Process Labs. Some of the aqueous tissue extracts (which contain no hormones) are available from Standard Process Labs, and others (which contain hormones) are considered prescription items and handled through the various pharmaceutical houses.

The following models of the differences between the three categories of glandular preparations are supplied to aid the clinician in deciding when to use one of the types or another. Future research may well show these models to be inaccurate, but presently, they provide a framework for understanding the clinical uses of the various products, and hence are discussed here and until a more accurate model of how glandulars function emerges.

Compiled Notes on Clinical Nutritional Products

Whole Glandular Concentrates

The whole glandular concentrates contain all of the chemical nuts, bolts, girders, panels, door jams, window frames, floorboards, etc. which are the basic raw materials necessary for cellular rebuilding following injury or depletion of a specific gland. When the body gets ready to heal an injured or run-down tissue, it needs the availability of all of the chemical building blocks to do so. The whole glandular concentrates supply these to those patients who have such a need. These nutritional supplements must be processed at lower than body temperatures to preserve all of the qualities of the original gland including important enzymes, hormone precursors, etc.

The whole glandular concentrates may be required by the patient independently, or the patient might require products from two of the categories or even three of the categories. Although there is a slight overlap between the three categories, there is so much difference that some patients will simply not respond until the supplement(s) from the proper group(s) are supplied.

Protomorphogen (Nucleoprotein Extracts)

The protomorphogens are used in controlling glandular function in the cases of both hypofunction and certain hyperfunctioning states. Protomorphogens are not whole tissue concentrates, but extracts containing primarily the nucleoprotein substances from the cells of origin. They nearly all have a salty taste since sea salt is added as a preservative and for its trace mineral content.

The theoretical basis for their function is based on an antigen-antibody reaction which takes place in the body following cellular damage and which interferes with the rebuilding process of the cells. Following tissue injury and necrosis, the damaged cells lyse and release their various constituents into the blood stream. For example, following a myocardial infarction, dead heart tissue is broken down as is seen by the increase of the various enzymes in the serum. The circulation now contains the broken down chemical building blocks of heart

Section 1: Three Categories of Glandular Preparations

tissue. The body sees these chemicals as foreign proteins because these molecules are supposed to be in the heart tissue, not in the blood. In response to this supposed chemical antigen, the body makes antibodies. For example, one can measure anti-myocardial antibodies in the serum. Now the patient has a damaged heart, and the body would like to repair it as much as possible. But now there is also an antibody to heart tissue circulating through the system which may interfere with this healing process.

It is as if a building gets knocked down in a tornado, hurricane, or earthquake. The owner of the building sends a message to a garbage removal service to come and clean up the mess, which they do. Then he sends a message to a building supply company to deliver his blueprints for rebuilding the building along with two-by-fours, steel girders, windows, bricks, in other words, all of the necessary building materials, to the site of reconstruction. (These would be comparable to the whole glandular concentrates.) Then he calls a construction company to come over to the site and use the blueprints and the new materials to rebuild the building.

But he forgets to tell the garbage removal service to stop cleaning the place up, and no sooner is a delivery of new building materials and blueprints neatly stacked, then the garbage men come by and carry it away. They are not too bright and cannot distinguish between new and old building materials and so they keep carrying the good stuff away, and the construction company can never get the building rebuilt.

This is a model for the tissue antibody reaction following cellular injury. Although this problem does not occur in every patient, when it is present, the nucleoprotein protomorphogen appears to supply the blueprints for cellular repair while at the same time neutralizing the circulating antibody to the tissue so that the tissue can finally rebuild itself without the garbage men constantly negating the ability to do so.

Compiled Notes on Clinical Nutritional Products

It is easy to see how many patients require both the whole glandular concentrates as well as the protomorphogens in order to get the optimum rebuilding of any injured tissues. We always use applied kinesiology muscle testing and oral nutrient testing to identify the substances to which a patient is most likely to respond.

Some patients have adverse reactions when taking these substances. When these are gastrointestinal in nature, they are often due to the concentrated nature of the products. We always evaluate these patients for potential dehydration and/or hydrochloric acid deficiency. Also, one must be very careful when giving whole adrenal concentrate to patients with high blood pressure, as it seems to stimulate the sympathetic nervous system and it frequently elevates blood pressure even more. The protomorphogen usually works better in these patients.

Aqueous Tissue Extracts (and Hormone-like Substances)

The aqueous tissue extracts are those which contain the gland's hormones and hormone precursors. These are usually prescription items when derived from such organs as the adrenal (e.g., cortisone), thyroid (containing thyroxine), and the ovaries (the estrogens and progesterones). In the case of the glands for which non-prescription, aqueous extracts are available (e.g., thymus, ovary, prostate), the substances are considered nutritional and are discussed individually in later sections of the *NOTES*.

The main purpose of these aqueous tissue extracts (or the hormones from the similar organs) is to support the patient's hormone-dependent tissue functions while the body is unable to do so. For example, in complete adrenal shut down, some form of adrenal hormone is necessary to sustain life until the adrenals begin again to produce these substances. In many recurrent infections, patients derive great benefit from aqueous thymus extract (**THYMEX-SPL**) to support the immune mechanisms of the body in fighting off the infection. At the same time, they may need therapy directed at improving thymus function in the long run. (This may well include the use of the whole glandular concentrate and/or

Section 1: Three Categories of Glandular Preparations

the protomorphogens.) It can therefore be seen how some patients require products from all three categories in order to obtain the optimum response from their bodies.

Relationship of the Thymus and the Parotid

There is an interesting theory worth mentioning regarding the relationship of the thymus gland and the parotid glands to the first stage of digestion. As the theory goes, following cellular damage, tissue specific ribonucleic acid (RNA) containing genetic material from the damaged cells finds its way into the circulation. This material is filtered out and stored by the thymus gland until it comes time to ship it out to the parotid glands. The parotid glands release the tissue specific RNA into the saliva on command when a specific nutrient needed for that specific cellular repair is tasted in the mouth. This RNA somehow combines with the nutrient which is needed for the repair of its cells of origin and thereby activates the nutrients for use in those specific tissues.

For example, if a patient has some retinal damage and needs vitamin A for its repair, how does the body know where to send the dietary vitamin A so that it will do the most good? The kidney, the liver, the skin, and many other tissues use vitamin A, but the retina has the greatest need at the present time. The RNA from the damaged retinal cells is trapped in the thymus until it is needed by the parotid, where it is then shipped. When vitamin A comes into the mouth, the parotid releases this retinal RNA into the saliva and this combines with the vitamin A and carries it, or in some other way activates it, for use in rebuilding specifically the damaged retinal cells. If the thymus and/or the parotid glands are not functioning properly, then this specific activation of the nutrients cannot operate properly.

Once again, we have a theory which may prove to be unfounded. Yet this explanation closely parallels what is seen clinically in the thymus-parotid-nutrient relationships. For this reason, some companies add thymus and/or parotid to many of their other products.