

The ovaries are involved in female reproduction. Bovine ovarian tissue is sometimes advised to help some woman sleep at night, reduce the production of acne, improve mood, sometimes aid in menopausal issues, and for some women, increase fertility.<sup>11</sup> As it has effects that differ from thyroid support, it is often advised to take ovarian tissue before bed. Ovaries produces hormones such as estrogen and estradiol.

Bovine orchic tissue (testicles) is sometimes taken by males for reproductive health and libido. The testicles produce hormones such as testosterone and DHT.

The pancreas is instrumental in the regulation of blood sugar and is one of the most important organs related to a healthy digestive system. The pancreas produces trypsin and is operational in intermediate protein metabolism.<sup>5</sup> Bovine pancreas is often used to assist in the digestion of grains and other foods. The pancreas also produces hormones such as insulin and glucagon.

Bovine prostate tissue sometimes is advised for erectile dysfunction and swollen prostates. For some it also seems to improve libido, especially when combined with herbs like Korean red ginseng and maca.

Cytotrophic bovine extracts of spleen have historically been taken by people with allergic reactions (hives, canker sores, cold blisters), lymph node swelling, blood concerns (anemia, lymphocytosis), demineralization accompanied by hyperirritability, as well as those with lowered resistance to infections and boils.<sup>12</sup> Some have suggested that bovine spleen “may aid in the elimination of allergic breakouts.”<sup>5</sup>

Bovine thymus tissue is often used for immune system support. It is sometimes taken by people with staph, strep, and other bacterial concerns. Because it has few ingredients, it is useful to consider for those with other allergies, young children, and even pregnant women when they need immune system support. Bovine thymus has also been historically recommended when hyperglandular conditions, like hyperthyroid, hyperadrenal, etc., are encountered.<sup>13</sup> Oral supplementation with bovine thymus has been shown to be capable of enhancing T-lymphocyte activity, probably due to a thymosin-like activity.<sup>14</sup>

Bovine thyroid tissue (note: bovine thyroid glands are thyroxine-free, thus do not result in a shutting down of the thyroid gland when taken). Thyroid tissue is used by people with symptoms associated with low thyroid such as afternoon tiredness, poor circulation, poor

temperature tolerance, headaches, low metabolism, diminished female libido, weight concerns, and sometimes dry skin.<sup>15</sup> It is normally best not to take thyroid tissue late in the day (at breakfast and lunchtime is best for most people), as any thyroid support product can affect sleep if taken late in the day. Some people will find that their appetite will temporarily increase when taking it, but not only does this tend to normalize, it normalizes to the point that most people will find that they crave junk food, caffeine, and similar items less, but water, fruits, and even vegetables more. Bovine thyroid sometimes helps people who are trying to quit smoking. The thyroid produces hormones like T-1, T-2, T-3, T-4 (thyroxin), calcitonin.

Bovine uterus tissue can help some women with childbirth and post-partum issues. It is also sometimes helpful for mood issues for some women.

### **General Information on Glandulars**

Some of the best natural health products contain glandular ingredients and many doctors have used glandulars for years with great success. Glandular organs, such as heart, aorta, and liver, have been a food source in the human diet for centuries. The consumption of glandulars is believed to provide nutritional support to the corresponding gland in the human body. Glandular therapy has alternative names such as: organotherapy, cell therapy where extracts are injected; and live cell therapy which normally uses extracts orally or intravenously.

Glandulars contain nutritional peptides, enzymes, and substances believed to be hormone precursors. Although some believe that oral consumption of dried glandulars is no different than consuming any other protein-containing food, this belief appears to be based on the fact that the stomach breaks down proteins into their constituent amino acids and that there is no benefit from consuming foods containing specific peptides. However, this belief ignores the fact that some ingested protein is not broken down into its constituent amino acids.

Evidence suggests that with oral consumption of glandular extracts, a small percentage (5-10%) of their peptides are not broken down into their constituent amino acids but are available for intact absorption in the small intestine.<sup>16-19</sup> A small amount of these absorbed peptides then circulate and some of them appear to assist the human body (especially for ill

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