

## Thyvolve™

### Product Information



**Thyvolve Formula** is designed for regenerating the Thymus Gland and reversing the age dependent process of Thymus involution. It is a synergistic herbal analog formulation of six (6) plant species, including are phytotherapeutic extracts of: *Selaginella involvens*, *Pinus sylvestris (Pollen)*, *Curcuma longa*, *Zingiber officinale*, *Elitaria cardamomum*, and *Cinnamomum verum*. This formula provides regenerative support to the Thymus.

#### The Thymus Overview

The deterioration of the immune system with progressive aging is believed to contribute to morbidity and mortality in elderly humans due to the increased incidence of infection, autoimmunity, and cancer. Dysregulation of T-cell function is thought to play a critical part in these processes. One of the consequences of an aging immune system is the process termed thymic involution, where the thymus undergoes a progressive reduction in size due to profound changes in its anatomy associated with loss of thymic epithelial cells and a decrease in thymopoiesis. This decline in the output of newly developed T cells results in diminished numbers of circulating naive T cells and impaired cell mediated immunity. A number of theories have been forwarded to explain this 'thymic menopause' including the possible loss of thymic progenitors or epithelial cells, a diminished capacity to rearrange T-cell receptor genes and alterations in the production of growth factors and hormones. As the primary site of T cell development, the thymus plays a key role in the generation of a

strong yet self-tolerant adaptive immune response, essential in the face of the potential threat from pathogens. The thymus undergoes rapid degeneration following involution as part of the aging process. The thymus is capable of regenerating and restoring its function to a degree. Potential mechanisms for this endogenous thymic regeneration include keratinocyte growth factor (KGF) signaling, and a more recently described pathway in which innate lymphoid cells produce interleukin-22 (IL-22) in response to loss of double positive thymocytes and upregulation of IL-23 by dendritic cells. Endogenous repair is unable to fully restore the thymus, particularly in the aged population, and this paves the way towards the need for exogenous strategies to help regenerate or even replace thymic function. thymic decline also occurs as an inevitable chronic process, in which the thymus gland undergoes involution with age. Thymic involution differs from aging in other organs that cannot be reversed.

***Selaginella involvens***, Stimulate and regenerate the Thymus.

***Pinus sylvestris (Pollen)***, a source high in natural Growth Hormone.

***Curcuma longa***, Known to be a powerful anti-oxidant.

***Zingiber officinale***, Supports T-cell development.

***Elitaria cardamomum***, Cardamom, a source of Zinc.

***Cinnamomum verum***. Known to be a powerful anti-oxidant.

**Thyvolve** is uniquely extracted from organic herbs using organic cane alcohol and deep ocean mineral water, as the extraction solvent. Utilizing advanced all-glass apparatus **Thyvolve** undergoes hours of reflux extraction that applies heat and ethanol to enhance the bioavailability of the resultant extraction.

- **Highly bio-available due to heat and alcohol reflux extraction**
- Made from the extraction of **organic-sourced herbs** .
- **Organic**, Non-GMO, Gluten free
- Extracted with **Maui-grown organic sugarcane alcohol** and deep ocean mineral water.