# Xtra-Cell® Thymus<sup>nf</sup> Non-Frozen Liquid Extract

### **DESCRIPTION**

Xtra-Cell<sup>®</sup> Thymus<sup>nf</sup> provided by Douglas Laboratories<sup>®</sup>, is an innovative liquid extract consisting of a complex spectrum of proteins and peptides known as thymic factors obtained from porcine thymus tissue, with additional immune-supporting ingredients of Zinc, Echinacea, and Reishi mushroom. Xtra-Cell Thymus<sup>nf</sup> is provided as a convenient, great tasting pomegranate-flavored spray.

## **Xtra-Cell™ Liquid Extracts**

Xtra-Cell® Thymus<sup>nf</sup> is manufactured and purified via a patented\* low temperature process that involves homogenization, fractionation, and ultra filtration of porcine thymus tissue. The molecules present in this product are selected based on their size and low molecular weight (6,000 - 50,000 Daltons), and are isolated in their native state. Once the molecules are selected, the liquid is aseptically bottled to ensure optimal potency, freshness and bioavailability. This unique process can be applied to different starting materials, allowing for the creation of liquid extracts that are targeted for specific applications. The extract created from this tissue is highly bioavailable and of high quality.

### **FUNCTIONS**

The thymus gland is essential for the maturation and maintenance of the immune system. It functions by releasing certain thymic factors that affect its own regulation as well as the functions of other cells throughout the body. These thymic factors (including but not limited to thymosins, thymopoietin, thymic factor X, and serum thymic factor) tend to reach their peak at puberty and decline with age. These peptides are important for the healthy maturation and activation of T lymphocytes, which can in turn activate B-lymphocytes and macrophages and contribute to a healthy immune system. Supplementing with extracts that provide thymic factors may be important to maintaining normal immune function.† Xtra-Cell Thymus<sup>nf</sup> provides a broad range of thymic peptides. One of the basic concepts of glandular therapy is that the oral ingestion of animal glandular material may result in the strengthening of the corresponding human gland. The result is a broad general effect indicative of glandular function. Thus, glandular therapy supports the tone, function, and/or activity of the corresponding gland.† This principle is a mainstay of oriental therapy.

Zinc is an essential trace element required for the activity of over 300 enzymes and is involved in most major metabolic pathways. As a cofactor of the antioxidant enzyme superoxide dismutase (SOD), zinc can be considered an antioxidant nutrient. Zinc supplementation has been shown to increase the antioxidant activity of SOD, and provide increased free radical protection.†

Echinacea, used traditionally by Native Americans for a wide variety of functions, is now recognized for its immune supportive properties. † Clinical studies have demonstrated that Echinacea shows significant support for monocytes and natural-killer (NK) cells in both the spleen and bone marrow.† Reishi mushroom has been used in Traditional Chinese Medicine for at least 2,000 years and research suggests that it also supports immune function.†

## **INDICATIONS**

Xtra-Cell® Thymus<sup>nf</sup> may be a useful dietary supplement for those who wish to support immune function.†

## **FORMULA (#99463-1XCNF)**

Serving Size 2 sprays (0.8 ml) Servings Per Container 37 Amount Per Serving: Zinc......0.7 mg (as zinc gluconate) Thymic peptides .....500 mg

# Xtra-Cell® Thymus<sup>nf</sup> Non-Frozen Liquid Extract

(from porcine thymus aqueous extract)
Reishi mushroom......1 mg
Ganoderma lucidum 10:1 Extract
Echinacea..........1 mg
Echinacea angustifolia 6:1 root Extract

Other ingredients: Purified water, glycerin, fructose, natural pomegranate and vanilla flavors, potassium sorbate, citric acid.

\*Extraction process covered under U.S. patent number 5,985,839

#### SUGGESTED USE

Adults pump 2 sprays into mouth and then swallow. Repeat twice daily or as directed by your healthcare professional.

### SIDE EFFECTS

No adverse effects have been reported.

WARNING: This product may not be suitable for children 12 years of age or younger, pregnant or nursing women, persons taking immunosuppressants, or persons allergic to pork products. Consult a healthcare professional before using.

#### **STORAGE**

Store in a cool, dry place, away from direct light. Keep out of reach of children.

### REFERENCES

Galli M, Crocchiolo P, Negri C, et al. <u>Drugs Exp Clin Res 1985;11(9):665-9</u>. Genova R, Guerra A. <u>Int J Tissue React 1986;8(3):239-42</u>. laffaioli RV, Frasci G, Tortora G, et al. <u>Thymus 1988-89;12(2):69-75</u>. Lin CY, Hsu HC, Chen CL, Shen EY. <u>Ann Allergy 1987;58:379-84</u>. Valesini G, Barnaba V, Benvenuto R, et al. <u>Eur J Cancer Clin Oncol 1987;23(12):1915-9</u> Burger RA, Torres AR, Warren RP, et al. Int J Immunopharmacol 1997;19:371-9. Jones K. Reishi mushroom: *Alt Compl Ther* 1998;4:256–66 [review].

## For more information on Xtra-Cell® Thymus visit douglaslabs.com

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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You trust Douglas Laboratories.
Your patients trust you.