THYMONEX

Thymomodulin 80mg

Adjuvant Treatment for Bacterial and Viral Infections

- ☑ Immunostimulant — Immune system booster
- ☑ Prevents and cures respiratory infections
- ☑ KFDA / MFDS approved antivirus and antibacterial capsules

NEXUS PHARMA

THYMONEX

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MFDS/KFDA Approved for

- ✓ *Immune System Booster*
- ✓ *Anti-virus medication*
- ✓ *Anti-bacterial medication*
- ✓ *Repriatory Disease Prevention*

[Active Ingredients] Each capsule contains: Thymomodulin.....80mg

[Packing unit] 60 capsules (10 capsules per blister, 6 blisters per box)

[Dosage and Administration] For adults, take 1 capsule, 1~2 times a day

[Storage] Store in air-tight container, protected from light, at room temperature

Drug Information

Product name	Thymonex
Classification Number	429 Other Antitumor
Component Content	Thymomodulin 80mg
Effect and Efficacy	Adjuvant Treatment for hepatitis, respiratory disease bacterial and viral infection
Dosage	Administer 1 capsule (thymomodulin 80mg) for an average adult, 1~2 times a day
Insurance Code	644001580 (non-payment)
Incompatible to the following	1) Patients with allergic reactions to the drug 2) Patient with thymic hyperfunction such as serious myasthenia, and thymoma
High Frequency Disease Codes	J45 Asthma J00 Acute nasopharyngitis [common cold] J01 Acute Sinusitis J02 Acute Pharyngitis J03 Acute Tonsillitis J04 Acute Laryngitis and Tracheitis J18 Pneumonia, Organism Unspecified J20 Acute Bronchitis J30 Vasomotor and Allergic Rhinitis J34 Other Disorders of Nose and Nasal Sinuses J41 Simple and Mucopurulent Chronic Bronchitis J42 Unspecified Chronic Bronchitis J69 Pneumonitis due to Solids and Liquids J96 Respiratory Failure, NEC B19 Unspecified Viral Hepatitis K72 Hepatic Failure, NEC K74 Fibrosis and Cirrhosis of Liver C22 Malignant Neoplasm of Liver and Intrahepatic Bile Ducts

Refer to patient information leaflet (insert sheet) for more information.

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1 Constituent Originating from “Thymus”

Thymomodulin is a peptide constituent with a low molecular weight (<10,000D) that was refined through acid decomposition after being extracted from the calf’s thymus.

2 Safety

Through clinical trials, there were no reports of side effects during the treatment period of Thymomodulin, therefore proving its safety.

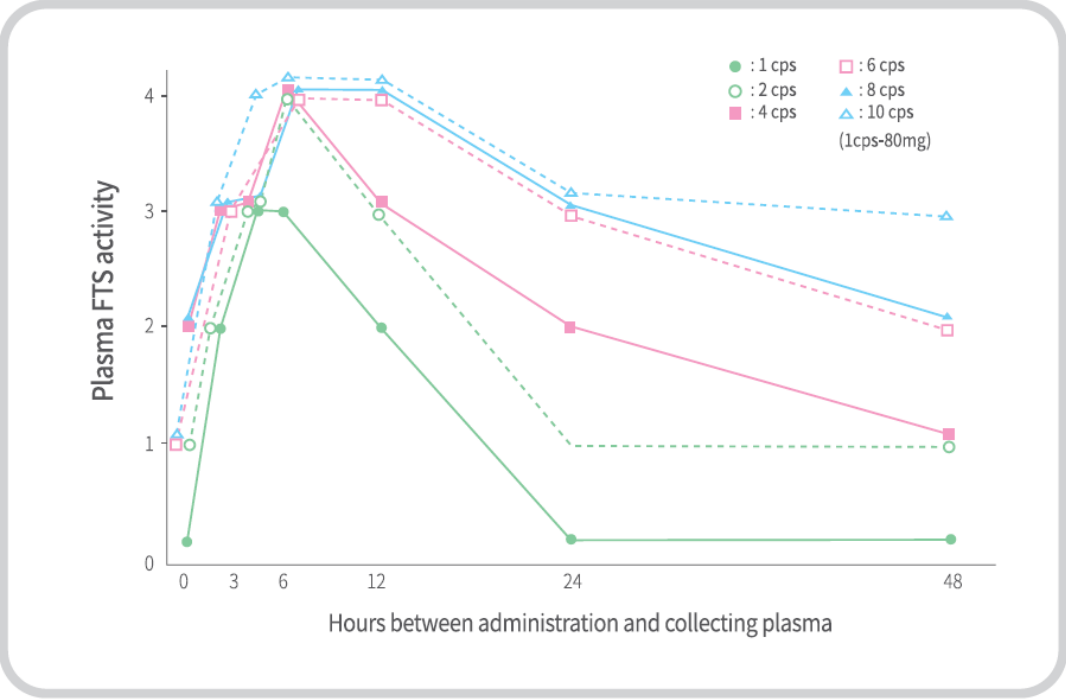
3 Involvement in Immune Reaction

Thymomodulin together with immune modulation activity, have improved chronic infectious diseases through the modulation of biological reaction.

Intestinal Absorption of Thymomodulin was deemed effective in elderly patients

Clinical trials of Thymomodulin oral administration on patients age 70 and above showed that blood concentration of *FTS (the substance modulating the maturation of T-cell) peaked within 2 to 6 hours of administration, and the increased levels were maintained for 12 hours.

*FTS (Facteur thymique serique = serum thymic factor): Peptide inducing T-cell differentiation.



[1]Med Oncol Tumor Pharmacother. 1989;6(1): 5-90. [2]Int J Tissue React. 1989;11(1):21-5 [3]JChemother.

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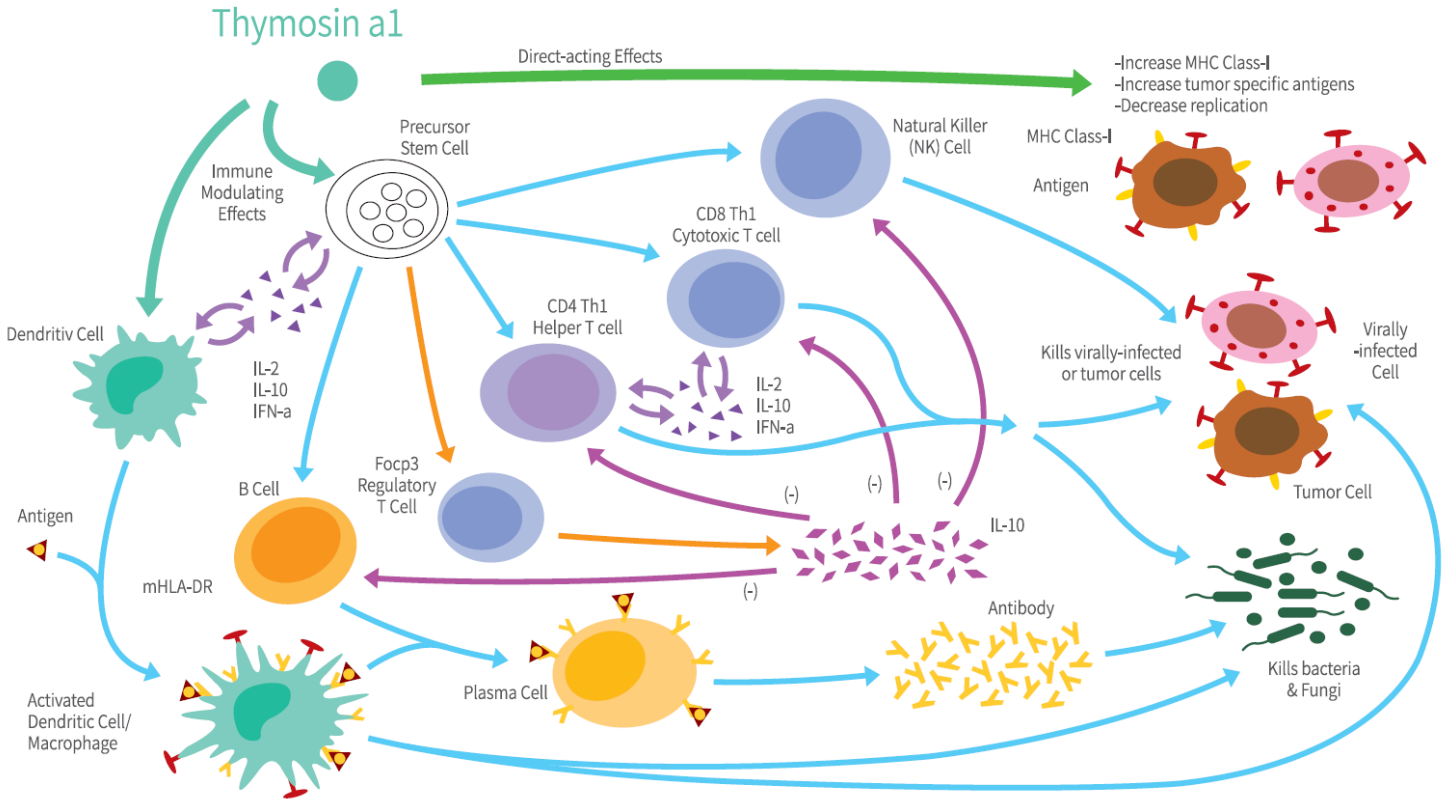
Action Mechanism

Thymosin a1 is the pharmacological activation part of Thymomodulin, and through it, the maturation of T-cell and B-cell is expedited, strengthening of the antibody synthesis to improve the phagocyte reaction of the neutrocyte.



Abbreviations: IL = interleukin; IFN = interferon; MHC = major histocompatibility antigen; mHLA = monocyte human lymphocyte antigen; NK = natural killer; Tc1 = cytotoxic Th1-like cell subset of T cells; Th1 = T helper 1 subset of T cells; TLR = toll-like receptor

Thymomodulin prevents virus and bacteria infection by boosting the immune system.

1 Immunostimulant Effect

Increase in NK cell activity
Increase of Helper T cell and expedited differentiation
Increase in cytokines such as IL, IFN-alpha
Increase in Cytotoxic T cell
Increase in DC (Dendritic cells) activity

2 Immune Damping Effect

Increase in Regulatory T-cell

3 Direct Action Effect

Increased manifestation of antigen protein such as MHC within virus infected cells

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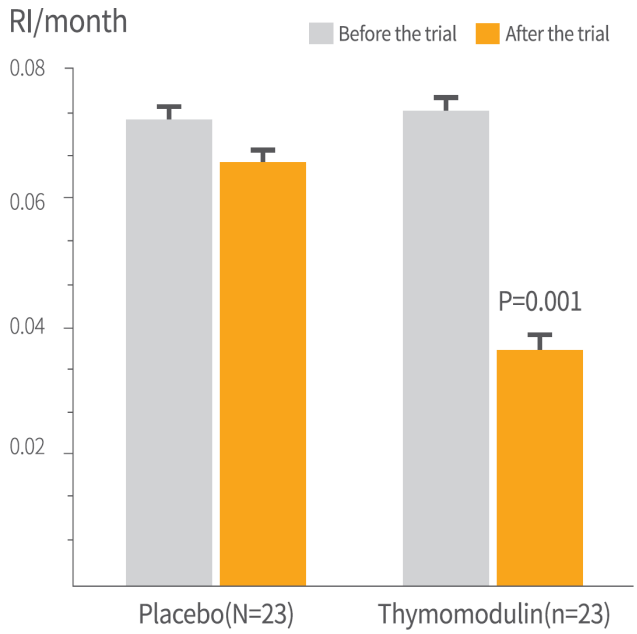
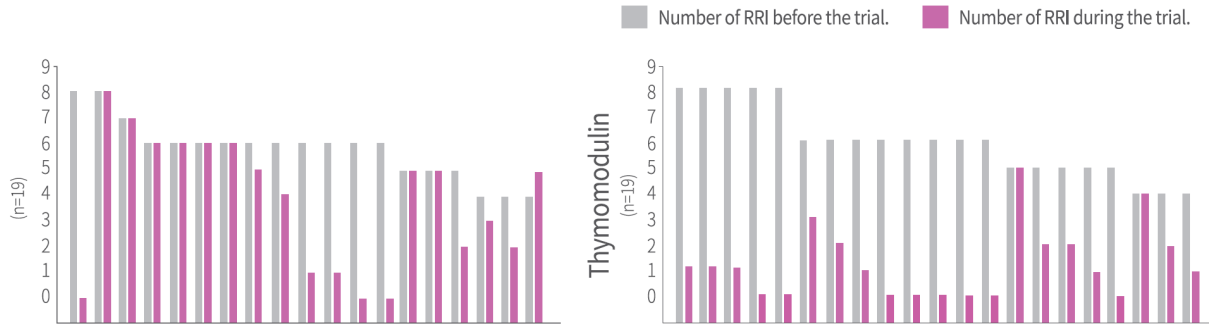
Respiratory System

Treatment effects of Thymomodulin learnt from the results of various clinical tests on Patients suffering from Respiratory Infection diseases



Thymomodulin significantly reduces respiratory infections

Clinical Trials on patient subjects suffering from RRI (Recurrent Respiratory Infections) showed that the Thymomodulin treatment group had a significantly lower RI occurrence frequency.



Comparison between total number of RRI
in the year before and during the trial in the two groups of patients

	Total number of RRI before the trial	Total number of RRI during the trial
Placebo	110	72
Thymomodulin	125	26

$p < 0.00024$

[7]Pediatr Med Chir. 1990 May-Jun;12(3):229-32.
[8]Pediatr Med Chir. 1988 Nov-Dec;10(6):603-7.

A 4 month long double-blind clinical trial on RRI patients during winter showed that the Thymomodulin group had significantly less frequent occurrences of RRI.

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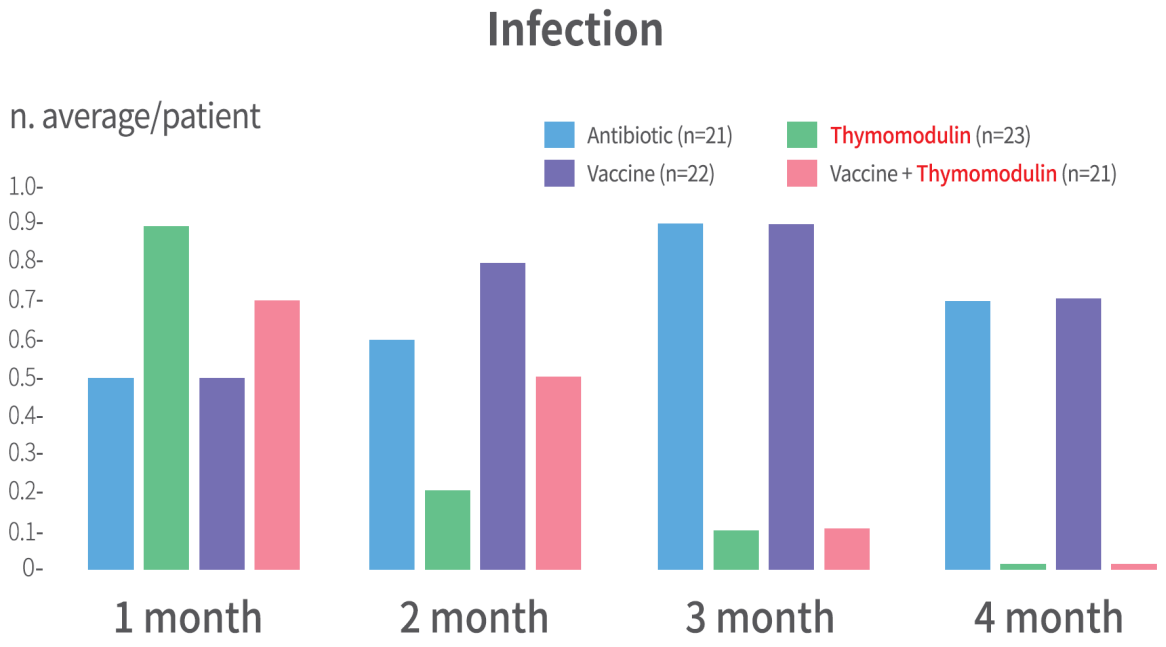
Respiratory System

After conducting a 4 month clinical trial on RRI patient subjects on 4 different treatments (Antibiotics, Vaccine, Thymomodulin, Vaccine/Thymomodulin combination), the results showed the Thymomodulin group had a significant reduction ($p<0.001$) in infections in comparison to other treatment groups (independent administration of antibiotics or vaccines)



Clinical trials on RRI subject patients suffering from chronic bronchitis showed that patients being treated with Thymomodulin started to show a significant decline in number of days with bronchitis symptoms accompanied by fever – after just 2 months of administration. The usage of antibiotic/mucolytic agents also decreased significantly.

	1st month	2nd month	3rd month	4th month	5th month	6th month	p level
Cough	1.72 ± 0.9	0.63 ± 0.8	0.36 ± 0.6	0.09 ± 0.3	0	0.09 ± 0.3	< 0.01
Catarth	1.54 ± 0.8	0.63 ± 0.8	0.27 ± 0.4	0.09 ± 0.3	0	0.09 ± 0.3	< 0.01
Days of illness	1.72 ± 2.5	0	0	0	0	0.36 ± 1.2	< 0.05
Use of antibiotics	0.72 ± 0.9	0.09 ± 0.3	0	0	0	0.09 ± 0.3	< 0.05
Use of mucolytics	0.90 ± 1.1	0.45 ± 0.8	0.18 ± 0.4	0	0	0.09 ± 0.3	< 0.05

Thymomodulin reduces symptoms and fever in bronchitis

[9] Minerva Med. 1987 Sep 15;78(17):1281-9.
[10] Int J Tissue React. 1989;11(1):21-5.

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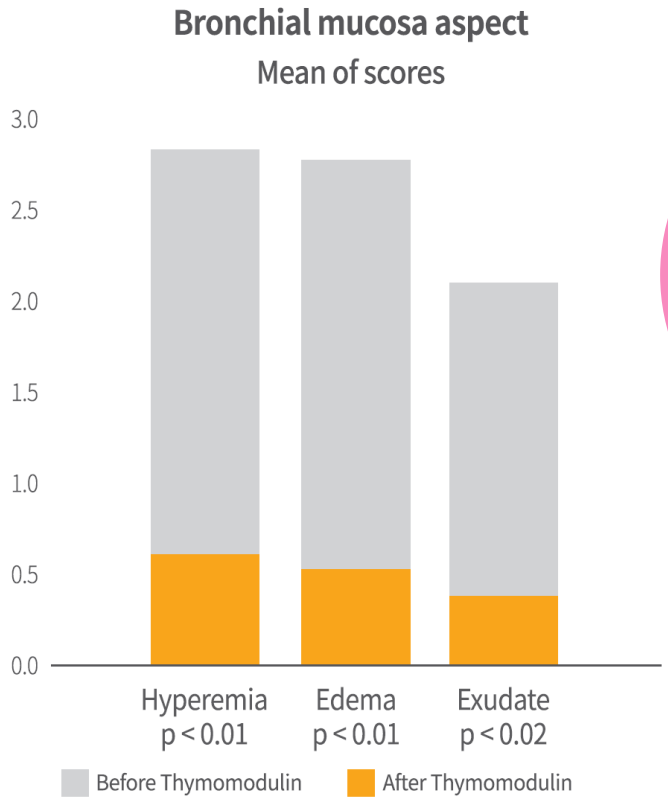
Respiratory System

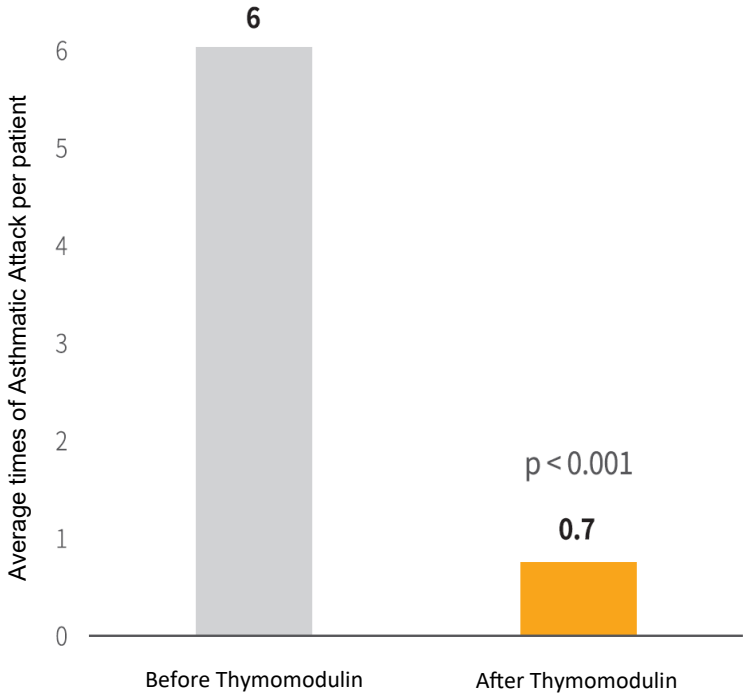
Results from the clinical trial on RRI subject patients suffering from chronic bronchitis showed that there were forms of acute inflammation on the bronchial tubes observed through bronchial endoscopy before the treatment. However, after a period of 6 months administering Thymomodulin, bleeding, edema and exudation of the bronchial tubes significantly declined compared to before the treatment was administered.



Thymomodulin greatly reduces bleeding, edema and exudation in bronchial tubes

The clinical trial on bronchial asthma patients showed that Thymomodulin significantly reduces the frequency of asthmatic attacks.

Thymomodulin reduces asthmatic attacks



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