

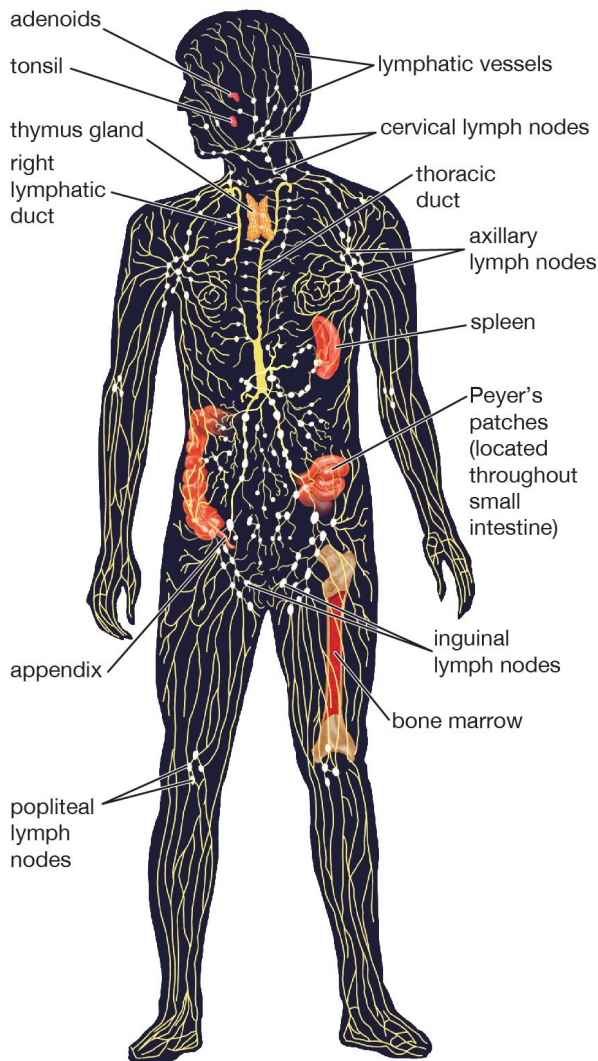
Immune-lymphatic System

Immunity— composed of our immune-lymphatic system—is the expression of how the “self” survives and resists in transitions. Our physical immunity is our body’s capacity to be in unity with our environment. Our immune + lymphatic systems work together to support us as we experience physical, emotional, spiritual, and environmental transitions, such as seasonal shifts. Our immunity is our body’s first defense system for any unwanted entity, including allergens, viruses, toxins + stress!

Role of the Immune-lymphatic System

Our immune system helps us create healthy boundaries with organisms [bacteria, microbes, viruses, energies + spirits], while our lymphatic system transports fluids with fighting white blood cells. Strong immune-lymphatic system clear infections and keeps the body’s fluids in balance. It does this by:

- maintaining a healthy balance of beneficial organisms in the body
- resisting and neutralizing harmful or excessive organisms (pathogens)
- repairing tissue and healing wounds
- eliminating cellular waste
- communicating with and responding to the nervous system (stress response)



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Parts of the Immune-lymphatic System

A large portion of our immune system is present in the lymphatic system, which is the big filter for our body, our inner ocean in constant cleansing + monitoring mode. Our lymphatic system is a network of tissues and organs that help rid the body of toxins, waste and other unwanted materials.

- **Lymphatic System:** a network of tissues and organs (nodes) that help rid the body of toxins, waste and other unwanted materials; transports lymph, a fluid containing infection-fighting white blood cells, throughout the body
- **Tonsils/Adenoids:** patches of tissue found in the throat that trap bacteria and viruses
- **Leukocytes:** white blood cells; circulate through the body via the lymph



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and blood vessels; 2 types—phagocytes attack invaders, lymphocytes remember and recognize invaders and help attack

- **Bone Marrow:** soft, spongy tissue found in the hollow interior of long bones; produces white blood cells (B cells and immature T cells), red blood cells, platelets and stem cells
- **Spleen:** headquarters of the immune system; largest lymphatic (detoxification) organ; blood filter; recycles red blood cells and stores white blood cells and platelets
- **Thymus:** gland that produces **T-lymphatic cells** (T-Cells, lymphocytes that attack identified invaders)
- **Antibodies:** blood protein produced in response to and counteracting a specific antigen/pathogen; make pathogens ineffective and sensitive to **macrophages** (mobile white blood cells)
- **Skin:** dynamic organ made of several layers of cells which contain elements of the innate and the adaptive immune system; acts as a barrier or sheath and considered first line of defense
- **Mucous Membranes:** natural barrier that defends the body against invading microorganisms
- **Intestinal Wall:** barrier that houses 70% of the cells that make up the immune system, including **Peyer's patches**—small masses of lymphatic tissue found in the wall of the small intestine and responsible for preventing growth of pathogens
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How the Immune-lymphatic System Works

- Pathogen enters the body
- Lymphocytes multiply in lymph tissue to fight pathogen
- Helper T cells send signals to B cells to produce antibodies
- B cells enter lymph nodes and other lymph tissue
- Antibodies travel through blood to destroy pathogen
- Antibodies attach to pathogen and weaken it
- Macrophages surround and kill pathogen
- Destroyed pathogen is filtered through lymph nodes and removed by spleen

Types of Immunity

Our immunity has memory! Each cell has a memory bank of how they combated specific pathogens, so that we may be able to recognize + fight smarter the next time. This is how + where they remember:

Innate Immunity

General protection/surface barriers. The inborn ability to protect against and fight off pathogens; natural barriers like the skin, mucous membranes, nose hairs and the intestinal wall. These regions want to attract unwanted organisms before they enter the body.



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Adaptive Immunity

Protection that goes to take down bacteria. Protection that develops throughout one's life from exposure to disease and vaccinations [if you believe in them]. This portion is made up of white blood cells + phagocytes (eat cells).

Passive Immunity

Borrowed protection such as antibodies from breast milk.

Nourishing the Immune-lymphatic System

Our immunity is under attack in modern society by systemic oppression, intergenerational trauma, retraumatizing, stress, inequitable access to healthy foods, rest + stillness. To build our immunity, we must meet our basic needs:

- Food
- Shelter
- Clothing
- Sleep and a sense of safety
- Clean air and water
- Community and support (including education and healthcare)
- Clear roles (a sense of purpose and belonging)

Methods, techniques and therapies for nourishing the immune system through a holistic and intersectional lens:

- Immunity boosting/supporting herbs
- Ancestral foods, especially raw foods, lemon water + anti-inflammatory, including: broccoli, ginger, berries
- Movement + exercise daily (bring your body to perspire)
- Rebounding (bouncing + being inverted!)
- Massage (gentle + vigorous massage promotes circulation)
- Dry brushing (removes exterior waste, opens pores, stimulates circulation)
- Grounding (being on the earth)

Herbal Actions for the Immune-lymphatic System

- **Immunomodulators:** herbs that help regulate the immune system
Ex: Echinacea (Echinacea purpurea and E. angustifolia), Wild Indigo (Baptisia tinctoria), Calendula (Calendula officinalis), Eucalyptus (Eucalyptus spp.), Juniper (Juniperus communis), Myrrh (Commiphora molmol), Gentian (Gentiana lutea), Sage (Salvia spp.), Oregano



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(*Origanum vulgare*), Thyme (*Thymus vulgaris*), Yarrow (*Achillea millefolium*), Rosemary (*Rosmarinus officinalis*), Usnea (*Usnea spp.*), Wormwood (*Artemisia absinthium*), Mugwort (*Artemisia vulgaris*), Sweet Annie (*Artemisia annua*), Elderberry (*Sambucus spp.*), Garlic (*Allium sativum*), Ginger (*Zingiber officinale*), Elecampane (*Inula helenium*), Osha (*Ligusticum porteri*), Lomatium (*Lomatium dissectum*), Licorice (*Glycyrrhiza glabra*), Balsamroot (*Balsamorhiza sagittata*)

- **Deep Immune Tonics/Immunomodulators:** herbs that regulate stress, health of lymph, circulation, + digestive systems, and health of elimination organs, particularly building + restorative with folk with weak immune systems

Ex: Reishi (*Ganoderma lucidum*), Ashwaganda (*Withania somnifera*), Codonopsis (*Codonopsis tangshen*), Eleuthero (*Eleutherococcus senticosus*), Elderberry (*Sambucus spp.*), Licorice (*Glycyrrhiza glabra*), Astragalus (*Astragalus membranaceus*), Ginsengs (*Panax spp.*), Cordyceps, Maitake, Shiitake (*Lentinus edodes*), Chaga, Schizandra (*Schisandra chinensis*)

- **Surface Immune Stimulants:** short term immune support for fighting infections
 - Anti-viral
 - Antibiotic
 - Anti-fungal
 - Antimicrobial

Ex: Echinacea (*Echinacea purpurea* and *E. angustifolia*), Wild Indigo (*Baptisia tinctoria*), Calendula (*Calendula officinalis*), Eucalyptus (*Eucalyptus spp.*), Juniper (*Juniperus communis*), Myrrh (*Commiphora molmol*), Gentian (*Gentiana lutea*), Sage (*Salvia spp.*), Oregano (*Origanum vulgare*), Thyme (*Thymus vulgaris*), Yarrow (*Achillea millefolium*), Rosemary (*Rosmarinus officinalis*), Usnea (*Usnea spp.*), Wormwood (*Artemisia absinthium*), Mugwort (*Artemisia vulgaris*), Sweet Annie (*Artemisia annua*), Elderberry (*Sambucus spp.*), Garlic (*Allium sativum*), Ginger (*Zingiber officinale*), Elecampane (*Inula helenium*), Osha (*Ligusticum porteri*), Lomatium (*Lomatium dissectum*), Licorice (*Glycyrrhiza glabra*), Balsam root (*Balsamorhiza sagittata*)

- **Lymphatic System Tonic:** herbs that cleanse and move the lymph by stimulating an immune response, such as promote lymphatic drainage, reduce congestion of the lymph nodes, supporting detoxification

Ex: Cleavers (*Gallium aparine*), Poke (*Phytolacca decandra*), Figwort (*Scrophularia nodosa*), Blue Flag (*Iris versicolor*), Red Root (*Ceanothus americanus*), Calendula (*Calendula officinalis*), Echinacea (*Echinacea purpurea*, *E. angustifolia*), Burdock (*Arctium lappa*), Red Clover (*Trifolium pratense*), Bayberry (*Myrica cerifera*), Balsam root (*Balsamorhiza sagittata*)

- **Circulatory Stimulants:** herbs that promote blood flow through body tissues, which helps bring nutrients and white cells throughout the body

Ex: chilli, ginger (*Zingiber officinale*), prickly ash (*Zanthoxylum americanum*), rosemary (*Rosmarinus officinalis*), mustard (*Brassica*), and cinnamon (*Cinnamomum verum*)

- **Diaphoretic:** herbs that bring on a fever response, supporting a fever achieve its goal
Stimulant: Ex (*Capsicum annuum*), Ginger (*Zingiber officinale*), Yarrow (*Achillea millefolium*), Thyme (*Thymus vulgaris*), Oregano (*Origanum vulgare*), Garlic (*Allium sativum*), Onions (*Allium cepa*), Prickly Ash (*Zanthoxylum americanum*), Wild Bergamot (*Monarda fistulosa*), Clove (*Eugenia caryophyllum*), and Wild Ginger (*Asarum canadensis*)



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Relaxant: *Ex Elderflower (Sambucus spp.)*, *Boneset (Eupatorium perfoliatum)*, *Lemon Balm (Melissa officinalis)*, *Blue Vervain (Verbena hastata)*, *Lobelia (Lobelia inflata)*, *Pleurisy root (Asclepias tuberosa)*, *Catnip (Nepeta cataria)*, *Peppermint (Menta piperita)*, *Spearmint (Mentha spicata)*

