# LOOKING AFTER YOUR

# LYMPHATIC SYSTEM

DIET & LIFESTYLE GUIDE

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#### WHAT IS THE LYMPHATIC SYSTEM?

#### IT IS AN IMPORTANT SYSTEM THAT HELPS OUR BODY ELIMINATE WASTE.

The lymphatic system is a complex network of nodes, vessels and immune cells and is responsible for distributing and draining lymph fluid throughout the body. It is one of the body's main cleansing systems and it is the lymphatic system's job to keep the cells of the body clean from toxins and bacteria, ultimately supporting immunity.

Waste from cellular metabolism and toxins from the bloodstream are sent into the lymph fluid for removal. These 'wastes' include excess fluid, debris, dead blood cells, pathogens, cancer cells and toxins. **A build-up of toxins and metabolic waste can typically occur in a lymphatic system that is overworked and congested.** This results in an increased risk of inflammation and reduced immune

function.

The lymphatic system lies just below the skin and this directly influences the skin's capacity to act as an **organ of elimination**. **A congested lymphatic system puts an increased burden on the skin**, as it tries to deal with this build-up, which can contribute to inflammation, poor complexion and other skin problems.

The lymphatic system also works with the circulatory system to **deliver nutrients, oxygen and hormones** from the blood to the cells that make up the tissues of the body.

Unlike the circulatory system, **the lymphatic system has no pump**. It requires the action of surrounding skeletal muscle to keep things moving. In other words, **exercise is vital for healthy lymph**, **immune system function and skin health**.

Dry skin brushing, deep breathing exercises, gentle massage and a clean, vegetable-based diet can all contribute to improved lymphatic, immune and skin health.

This ebook will guide you through ways to optimise lymphatic function in order to increase waste removal and improve your health and wellbeing.

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#### WHAT IS THE LYMPHATIC SYSTEM?

#### MAJOR SITES OF LYMPH TISSUE

**Lymph nodes:** Lymph nodes are bean-sized collections of lymphocytes and other immune system cells throughout the body. These nodes are located inside the chest, neck, abdomen, and pelvis. They are connected by a system of lymphatic vessels.

**Spleen:** The spleen is an organ under the lower ribs on the left side of the body. The spleen makes lymphocytes and other immune system cells. It also stores healthy blood cells and filters out damaged blood cells, bacteria, and cell waste.

**Bone marrow:** The bone marrow is the spongy tissue inside certain bones. This is where new blood cells (including some lymphocytes) are made.

**Thymus:** The thymus is a small organ behind the upper part of the breastbone and in front of the heart. It's important in the development of immune cells, the T-lymphocytes.

Adenoids and tonsils: These are collections of lymph tissue in the back of the throat. They help make antibodies against germs that are breathed in or swallowed.

**Digestive tract:** The stomach, intestines, and many other organs also have lymph tissue.

**Appendix:** The submucosa of the appendix contains many masses of lymphoid tissue, indicating a possible role in the lymphatic and immune systems.



# IDENTIFYING SLUGGISH LYMPHATIC ELIMINATION

## TAKE THE FOLLOWING QUIZ TO ASSESS YOU LYMPHATIC FUNCTION.

- Do you often experience breast pain or benign lumps?
- Do you experience oedema, bloating or fluid retention? After travel on aeroplanes do you experience swelling?
- Do you have frequent infections, cold, flus etc.?
- Do you feel like you lymph nodes are often swollen and/or tender? i.e. in neck, armpits or groin area?
- Are your eyes puffy or swollen?
- Do you experience chronic sinusitis or sinus congestion?
- Do you have enlarged adenoids/tonsils?
- Do you have congested or blocked pores and/or acne?
- Do you experience unexplained chronic fatigue?
- Do you often get headaches?
- Do you have cellulite?
- Do you sweat excessively?
- Do you currently experience/have you had tonsillitis and or recurring ear infections/blockages?
- Are you exposed to many chemicals on a daily basis? e.g. perfumes/dyes/solvents?
- Have you had your appendix removed?
- Do you often experience a sore throat without being 'sick'?
- Do you feel like you have trouble losing weight despite eating well and exercising?
- Do you experience stiffness in your joints, especially after waking?
- Is your skin often itchy and/or dry?
  - Do you feel 'sluggish' or experience brain fog?

#### THERE IS ALSO A 'GLYMPHATIC SYSTEM'...

#### THIS RECENTLY DISCOVERED SYSTEM CLEARS WASTE FROM THE CENTRAL NERVOUS SYSTEM

Until recently it was thought that there was no lymphatic tissue, or clearance system for the central nervous system - i.e. the brain and spinal cord etc.

Not only was this found to be untrue, but it was discovered that **the brain has two types of lymphatic systems**. The first system includes vessels that go into and around the brain, and is referred to as the lymphatic system for the brain. The second carries cerebrospinal fluid and immune cells around the brain and is involved in removing waste products. This network is referred to as the glymphatic system - alluding to the glia, or neurons that the brain's lymphatic vessels are made of.

Researchers have found evidence that when the two systems malfunction, the brain can become clogged with toxins and overwhelmed with inflammatory immune cells.

Researchers have since found that the glymphatic system doesn't work properly in individuals with Alzheimer's disease, traumatic brain injuries, Multiple Sclerosis, migraines, stroke, and even glaucoma. Scientists are now looking to ways to improve glympatic flow through a variety of clinical therapies.

It is important to note that the glymphatic system is very active during sleep and is mainly non-active during wakefulness. This highlights the importance of sleep when it comes to the elimination of neurotoxic waste products.

It appears the glymphatic system is also essential for the delivery of glucose, lipids (i.e. fats), amino acids and neurotransmitters to the brain, and therefore your glymphatic system is an important part of mood stability and cognitive health.

#### BODY BRUSHING THE ESSENTIAL GUIDE

Body brushing helps speed up the process of eliminating waste via lymph stimulation. It can help to encourage blood flow through the channels and clean out the metabolic waste that can build up in the tissues and lymph nodes.

Our skin is the largest waste elimination organ in the body. Body brushing exfoliates the skin and removes dead skin cells that may be clogging up pores and interfering with toxin elimination. This process also assists with the prevention of dry skin, as it stimulates sebum secretion from the sebaceous glands, leading to softer, lustrous skin.

You will need a soft, natural-fibre body brush. A firm brush for the feet, legs, buttocks and arms and a softer bristle for the torso (front and back). If you only have one brush, then use lighter pressure on the more sensitive areas. Start with the extremities of the body (i.e., hands or feet).

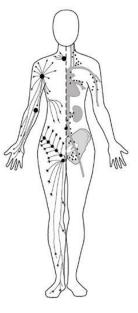
Stroke the brush in one upward movement towards the major lymph nodes in the body, such as the groin, armpits and base of neck. A couple of exceptions to this rule is that you can brush back and forth between the fingers and toes and use small circular strokes in a clockwise direction on the stomach, following the movement of the gut. Brush towards the heart.

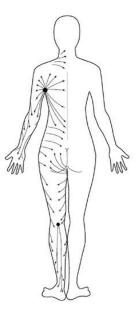
Work from left to right, which is the natural direction when massaging the body. Aim for three to five minutes a day.

Follow dry body brushing with some form of hydrotherapy; this may be a bath, shower, steam room, body mud mask or massage.



- Avoid using on breasts and genitalia area.
- Avoid on sensitive skin, varicose veins, open wounds, inflamed skin or painful rashes.
- Avoid on sunburnt areas.
- Avoid in an active cancer or over enlarged lymph nodes.
- Seek practitioner advice before brushing if pregnant
- Stop brushing if an allergic reaction appears







#### **HYDRATION & WATER**

### WHY DRINKING ENOUGH WATER EACH DAY IS IMPORTANT

#### 30 mL per kilogram of body weight, per day.

More if you are exercising, sweating more than usual, experiencing a fever, drinking coffee or alcohol, or if you are in an artificially heated environment.

It is simple - without water, lymphatic fluid cannot flow properly. Lymphatic fluid is made up of approximately 95% water. When you become dehydrated, this lymphatic fluid becomes thick and can stagnate.

Avoid sugar-laden soft drinks, processed juices, sports drinks, and alcohol, which add an additional metabolic burden on the body as well as too much caffeine, which dehydrates the body.

Keeping your body well hydrated will also increase energy, improve your digestion and increase other systems of elimination in the body.

Warm herbal teas and broths are especially beneficial to the lymphatic system and circulation - even more so when they include spices and herbs that also act as lymphatic and/or circulatory stimulants. Ginger or calendula for example.

- Water
- Cocnut water
- Herbal Teas (see the next page for herbs that support lymphatic function)
- Fresh vegetables juices
- Smoothies
- Soups
- Broths



#### HERBAL TEAS

#### TO SUPPORT LYMPH

- Calendula (flowers)
- Echinacea (root)
- Burdock (root)
- Fenugreek (seeds)
- Cayenne (powder)
- Dandelion (root or leaf)
- Red Clover (flowers)
- Cleavers (leaves)
- Ginger (rhizome)

#### CALENDULA

Gentle lymphatic remedy which is used for swollen and painful lymph nodes. Herbalist Matthew Wood says that Calendula is specific for "those places where the sun don't shine," such as the armpits, the nodes along the neck, and the groin region. The flowers of the calendula plant make a wonderful tea. You can also add petals to your salads.

#### ECHINACEA

Stimulates the immune system to mount a more efficient response facilitating clearance of bacteria/viruses while also speeding healing time. Echinacea acts as a blood purifier and lymphatic cleanser. It contains Cichoric Acid which is in part responsible for the cleansing of both blood & lymph.

#### **BURDOCK ROOT**

Bitter digestive stimulant herb that has gentle lymphatic, kidney and liver cleansing properties and a particular affinity for the skin. Recommended for increasing blood circulation to skin surface and thereby improving quality & texture of skin.

#### LYMPH CLEANSING HERBAL INFUSION RECIPE

2 parts calendula flowers 2 parts cleavers 1 part echinacea or burdock root

Place the herbs in a small saucepan and cover with cold water. Heat slowly and simmer, covered, for 20-45 minutes. The longer you simmer the herbs, the stronger the tea will be. Drink 2-3 cups a day.

#### FOOD AS MEDICINE

#### TO SUPPORT LYMPH

- Green leafy vegetables
- Beetroots and beetroot leaves
- Berries, cherries and currants
- Ginger, garlic, cinnamon, black pepper and turmeric
- Seeds and nuts (e.g. hemp, chia, pumpkin seeds)
- Spirulina
- Seaweeds
- Lemons & other citrus fruits

#### **RED FRUITS & VEGETABLES**

Ayurvedic medicine teaches that naturally red foods like berries, pomegranates, cherries, cranberries, and beets keep the lymph moving freely. Beets are particularly valuable as they help thin the bile for healthy fat digestion, scrub the intestinal villi where the lymphatic vessels originate, and help keep the lymph flowing.

#### **HEALTHY FATS**

Nuts and seeds provide the essential nutrients and healthy fats that we all need to live healthy, long lives. Almonds, pumpkin seeds, avocado oil, coconut oil, chia seeds, olive oil improve your vascular tissue and help your body absorb vitamins and minerals.

#### **GREEN POWER**

Deep green vegetables and herbs have intense cleansing properties that help the lymph fluid and blood make their way through the body. Chlorophyll is the 'blood' of the plant and is the phytonutrient that makes these veggies a green colour. Also consider adding seaweeds and sea vegetables to your diet in small amounts. lodine in these is thought to benefit lymph stagnation.

#### LYMPH CLEANSING SMOOTHIE RECIPE

1 cup berries

1 cup spinach leaves or/and other greens like beetroot leaves 3/4 cup coconut water or plain water or cooled calendula tea 1 tsp chia seeds

- 1 tsp hemp seeds or hemp powder
- 1 tsp spirulina powder

Pop all ingredients in a blender and pulse until smooth.

#### DEEP BREATHING EXERCISES

#### AND MOVEMENT

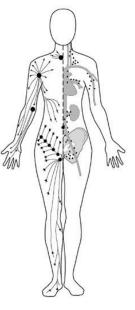
The lymphatic system does not have a built-in pump like the heart, which propels blood through the circulatory system, where it gets oxygenated, filtered, and circulated. Therefore, the lymphatic system relies on the contraction and relaxation of the muscles and joints to move the lymph.

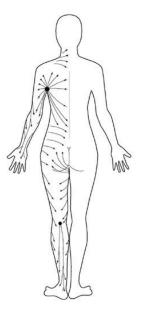
The rhythmic tensing and relaxing of the muscles during physical movement wring out the tissues and propel clear lymph fluid through the lymphatic channels, but this 'exercise' doesn't need to be complicated or intense.

Deep breathing involves movement of the diaphragm and abdominal muscles that help push lymph through the vessels.

Oxidation and lymph congestion increases when you are physically and/or emotionally stressed, so having an effective routine for coping with daily stress is key. Deep breathing and relaxing movement activities, like yoga or tai chi are perfect for reducing stress while simultaniously increasing lymphatic flow. The gentle twisting and stretching involved in yoga tends to also boost lymphatic flow.

- Find a quiet and comfortable place where you can sit or lie down where no one will bother you for a while.
- Sit or lie in a comfortable position with your back straight.
- Close your eyes and imagine yourself in a relaxing place.
- Take a couple of "cleansing breaths" (breathing in through your nose and out through your mouth) and find a comfortable position, either sitting or standing.
- Breathe in through your nose and out through your mouth using your abdominal muscles so your diaphragm can flex and contract.
- Inhale slowly. This should take about 10 seconds. (You can count in your head to 10) so that your lower abdomen rises and falls. Now, exhale slowly for another 10 seconds.
- Try to get into a routine and practice deep breathing for 5-10 minutes each day.







#### OTHER THINGS TO TRY

#### **MASSAGE & LYMPHATIC DRAINAGE**

Excessive muscle contraction can lead to tightness in all of the tissues, restricting the flow of lymph. Massage can help to reduce this by relaxing tissue and encouraging lymphatic movement. If you can't afford, or don't have time, for a massage - using foam rollers can also be helpful.

Lymphatic drainage is a unique, gentle massage technique used to stimulate the flow of lymphatic fluid around your body in order to promote fluid circulation.

#### **INFRARED SAUNAS**

Infrared sauna therapy works by increasing sweat production so more toxins are removed from tissue. It can also improve blood flood and help with tissue healing, which is critical for lymphatic health.

#### 'REBOUNDING' A.K.A. TRAMPOLINING

Simply jump on a mini trampoline for 10 to 30 minutes each day.

#### **DETOXING YOUR ENVIRONMENT**

It's quite simple - if you are exposed to a reduced amount potentially harmful substances daily, the less work your lymphatic system has to do in order to clean up. Reduce your use of commercial cleaners, cosmetics, personal care products etc. Ditching your underwire bra and switching to an aliminium-free natural deodorant are also two excellent ways to start.

#### EAT AN ANTI-INFLAMMATORY, WHOLE-FOOD DIET

Foods that put stress on the digestive, circulatory and immune systems include common allergens/food sensitivities - such as dairy, gluten, soy or corn, for example). Low-quality animal products, refined vegetable oils and processed foods that contain chemical toxins are also to be avoided. Key anti-inflammatory foods are listed below.

#### **GET RESTFUL SLEEP**

Since the glymphatic system does it's cleaning up of the central nervous system at night while you are sleeping, it make sense to prioritise sleep each night.

- Green leafy vegetables
- Cruciferous veggies broccoli, cauliflower etc
- Berries
- Omega-3 foods like salmon and wild seafood
- Nuts and seeds
- Unrefined oils like extra virgin olive oil
- Herbs and spices

#### LYMPH LOVING RECIPES

#### FENUGREEK AND GINGER TEA

Soak 1 teaspoon fenugreek seeds an a bowl of cool water for 5 to 10 minutes.

Strain and then infuse the seeds, along with a slice or two of fresh ginger, in a cup of boiled water for a further 5 to 10 minutes. You can use a tea infuser, or simple strain you tea of the seeds once brewed. **Note:** avoid fenugreek during pregnancy

#### CELERY, PARSLEY, CARROT, BEETROOT & GINGER JUICE

Place one carrot, a large handful of fresh parsley, 2 sticks of celery, 1/2 beetroot and a 3 cm piece of fresh ginger in a juicer. Serve immediately.

#### LYMPH-LOVING SOUP

1 tablespoon olive oil
1 large onion, chopped
2 cloves garlic, crushed
A thumb-sized piece of fresh ginger, grated
1/2 tsp ground turmeric or fresh grated turmeric root
2 broccoli heads and stalks (preferrably organic), diced
500 mL homemade vegetable broth
4 celery sticks, diced
Pinch of seaweed flakes (e.g. dulse or wakame) or sea salt
A pinch of black pepper
2 cups of shredded fresh green leafy veggies - e.g. spinach, kale, silverbeet, chard, watercress, parsley etc.

Saute onion, ginger, garlic and turmeric in the olive oil, heated in a large saucepan over medium high heat - stirring. Cook for approx 5 minutes, or until onion is translucent.

Add stock, broccoli, celery, salt/seaweed and pepper and bring to the boil with lid on saucepan. Reduce heat and simmer for 10 minutes, or until the stalk parts of broccoli are soft. Add green leafy veg, put lid on saucepan and simmer until they soften and turn bright green. Stir. Cool soup slightly and blend until smooth with hand blender or food processor/blender.

**SERVES 2** 

#### LYMPH LOVING RECIPES

#### **RAW RAINBOW VEGGIE & GINGER SALAD**

50 g raw cashew nuts (or replace with walnuts) 30 g sunflower seeds (or replace with hemp or pumpkin seeds) 2 carrots 1 raw beetroot 1 zucchini 1 red capsicum, seeded and sliced 1/2 small white cabbage, cored and thinly shredded 2 spring onions, sliced 1 lime, cut into quarter wedges

#### Dressing:

A thumb-sized chunk of fresg ginger - peeled and grated or chopped 1 tablespoon olive oil Juice of 1 lemon 1/2 teaspoon ground turmeric Pinch of seaweed flakes, such as dulse or wakame Handful of fresh mint leaves Handful of fresh coriander leaves (or use parsley instead)

To make ginger dressing, put half of the seeds and nuts into a food processor with all other dressing ingredients listed. Blitz until you have created a course-textured, pesto-style dressing. Add some more olive oil if you wish to make it thinner.

Peel carrots and beetroot and then cut them into thin matchstick sized pieces... or roughly grate them instead.

Use a vegetable peeler to cut the zucchini into long, thin ribbons.

Place all the veggies into a large mixing bowl and mix through the dressing. Top with the remaining nuts and seeds and serve with a lime wedge.

#### **SERVES 4**

TIP: INCLUDING SOME RAW FRUITS AND VEGETABLES IN YOUR DAILY DIET CAN STIMULATE LYMPHATIC FUNCTION. JUST REMEMBER TO CHEW YOUR FOOD WELL!

#### LYMPH LOVING RECIPES

#### SPICED MUNG BEAN CURRY

100g dried mung beans, washed and soaked in water at least 6 hours or overnight first 2 tablespoons ghee (or coconut oil) 1 red onion (or brown onion) 1 thumb-sized piece of fresh ginger, peeled and finely chopped 2 garlic cloves, crushed 1/2 teaspoon cumin seed 1/2 teaspoon coriander seeds, ground 1 tsp fenugreek seeds 4 cardamom pods 1 cinnamon stick 1 teaspoon ground turmeric (or fresh turmeric, grated) 150 grams tomatoes, chopped (or canned) A pinch of seaweed flakes (e.g. dulse or wakame) or sea salt 100 mL coconut milk Juice of 1 lime

Serve with 1 cup (per person) steamed greens - e/g/ kale, chard, silverbeet, bok choy or broccoli & a serve or cooked quinoa or brown rice

#### COOKING THE MUNG BEANS:

Drain the soaked mung bean, rinse and then place in a large saucepan and cover with three times their volume of water. Set to a high heat and bring to the boil. Continue to boil for 20 minutes until the beans are almost cooked and soft. Drain and set the beans aside.

Set a medium-sized saucepan on high heat and add the ghee/coconut oil, then add onion, ginger and garlic. Cook, stirring, for 5 minutes. Add all the spices with a splash of water and cooked, stirring, until fragrant. Then add the tomatoes and continue cooking until tomatoes are softened.

Reduce heat and add 50 mL water and simmer for 15 minutes, stirring occasionally. Once simmered, add in the seaweed/salt, coconut milk and lime juice. Add thecooked mung beans and combine. Simmer for another 15 minutes. Serve with cooked quinoa and greens

#### **SERVES 2**

TIP: MUNG BEANS LOOK LIKE LITTLE LYMPH NODES OR GLANDS! THIS CURRY IS FULL OF LYMPH-LOVING FOODS.