



**PRACTICAL WAYS TO**  
**SUPPORT YOUR**  
**DETOX PATHWAYS**

Dr. Kayla Springer, ND



# In this guide

---



CASTOR OIL  
PACKS

DRY SKIN  
BRUSHING

CONTRAST  
HYDRO

POST TSW

BOTANICALS

BRASSICAS

Dr. Kayla Springer, ND

# CASTOR OIL PACKS

Castor oil (*ricinus communis*) comes from the castor seed, which is native to India. Its therapeutic effects come from its high concentration of ricinoleic acid, which, when used topically, is absorbed through the skin and into the lymphatic system.

## What it does:

- Increases the production of lymphocyte immune cells.
- Increases circulation of lymph and blood flow
- Helpful for gentle stimulation of the bowels,
- Effective for injuries or inflammations such as sprains or strains.



## Notes

- Castor beans are heavily sprayed. Buy organic.
- Castor oil does not come out of the fabric of your clothes very easily. Use old clothes
- Castor oil packs should not be used during pregnancy or menstruation.

## INGREDIENTS

- Castor Oil
- Old flannel cloth, large enough to cover area
- Plastic wrap, large enough to cover the flannel cloth
- Towel
- Heating pad, or hot water bottle (optional)

For detox purposes, it is most effective being placed over the abdomen daily, for a minimum of 20 minutes.

## HOW TO

- Pour a small quantity of castor oil on the flannel cloth until saturated (about  $\frac{1}{4}$  cup to start, and less will be needed each day as cloth stay saturated)
- Place the flannel cloth over effected area. Cover flannel with plastic wrap. Place towel over plastic. Place heating pad/hot water bottle over plastic and set on low heat
- Rest for 30-60mins (careful not to fall asleep with heating pad on -may burn)
- The flannel can be reused daily, dose not need to be stored in fridge.



# CONTRAST SHOWER HYDROTHERAPY

## How it works

Warm water opens the lymphatic and blood vessels, allowing wastes and toxins to be circulated. Switching to cold drives the blood inward, away from the extremities and to the liver and internal organs, flushing the toxins and wastes. This slight shock also stresses the body (in a good way), and releases endorphins, the feel good chemical. When we switch back to warm water, the blood vessels widen again and fresh nutrients and blood vessels are circulated.



## 3:1 HOT – COLD RATIO

I usually recommended starting with 1 ½ minutes hot and 30 seconds cold to start, and working up by 30 seconds each temperature when and if you feel ready (up to about 2 minutes of cold). Repeat three times at the end of your shower and always **END ON COLD**. This will ensure we get the residual benefits of letting the body heat itself up manually.





# CONTRAST SHOWER HYDROTHERAPY

## EFFECTS

- Flushes out wastes and toxins from the muscles, skin and organs
- Increases the amount of white blood cell production
- Helps circulation of blood and lymph via contraction of the muscles
- Encourages our body to warm itself up. This is something that has largely been lost in western society as we become increasingly dependant on temperature controlled environments. A little bit of environmental stress can help the body keep metabolically active.
- Calming effects on mood and sleep.
- Active meditation experience - an opportunity to be 100% focused on our body.
- Helps with fat burning via the stimulation of metabolism and burning of brown fat. Brown fat also helps to keep your body warm. It's been theorized that by suddenly exposing your body to cold water, your brown fat will start to burn your white fat – that is, you'll burning fat with fat.



# DRY SKIN BRUSHING

Dry skin brushing involves using a soft bristled brush to stimulate the skin and blood vessels, which in turn stimulates the lymphatic system. Skin brushing also directly stimulates your skin, removing old dead skin cells and bringing fresh blood and nutrients to the surface. The skin is another important organ of elimination, via sweat. It's usually done in the morning as it can also be quite stimulating and energizing. Dry skin brushing is a quick and easy way to kickstart your body's elimination pathways.

## HOW TO

Always brush towards the heart, using firm, small strokes upward, or in circular motion. Harsh exfoliation is never the point; be sure not to press too hard or use a brush that's too stiff. You don't want to cause too much irritation or break the skin.

- Begin brushing with strokes on the soles of your feet, brushing from the tops of the feet, around the ankles and upward on the legs towards the heart. Take an extra few minutes brushing behind the knees, as this is a hub for lymph vessels.
- When you get to the stomach and abdomen, brush in a clockwise direction.
- Brush all around the neck in a downward direction. There are many glands here, including the thyroid which is the master metabolic controller.
- Next, start at the fingertips, brushing both the back of the hands and the palms, then upward on the arms toward the torso. Focus on the inner arms from elbow to armpit where lymphatic channels run.

## BENEFITS

- Exfoliates dead skin cells and stimulates cell renewal
- Enhances circulation of skin, bringing in fresh nutrients
- Assists lymphatic drainage
- Opens surface capillaries, bringing warmth to the surface
- Assists in elimination of toxins through the skin
- Energizes and revitalizes by increasing blood flow





# Things for after TSW

## Epsom Salt Baths

The magic is in the magnesium. Magnesium affects the mood, muscles, and is a cofactor in a number of systems. It can help soothe the skin and draw toxic elements out of the body. Salt can be a good disinfectant for skin, but it can also irritate it. Always listen to your body.

## Sauna

Sweat it out! The skin is one of the secondary emunctories, meaning it's one of the ways our body detoxes. (This may and probably is not appropriate if you're going through TSW - save for later)

## Eat more raw garlic

Garlic is high in allicin, a powerful antimicrobial compound. Most powerful when crushed and raw. Beware - this could cause die off symptoms.



# Botanicals and Supplements

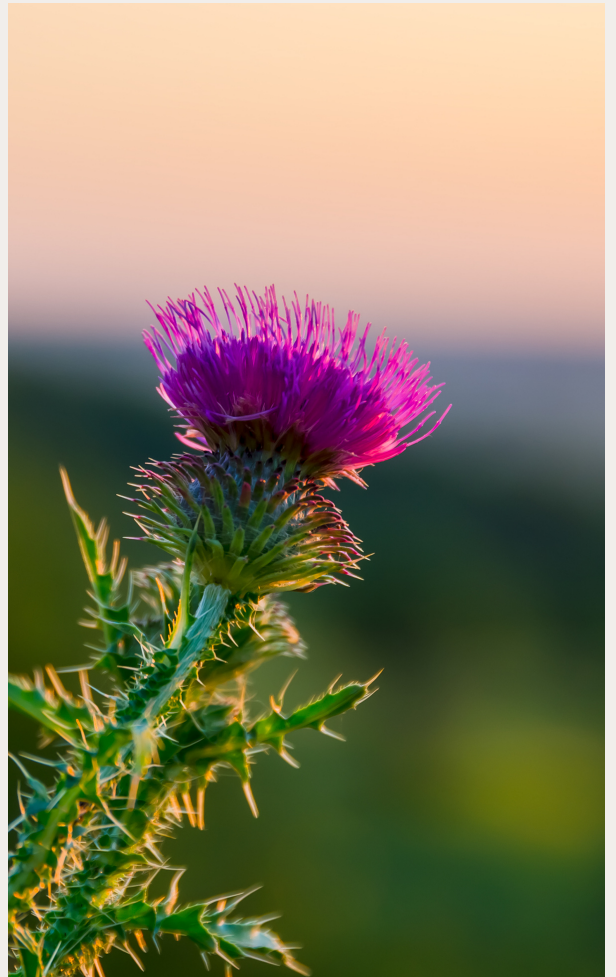
Different compounds found in herbs and supplements can work on different aspects of the detox pathway. It's important to work with your Naturopathic Doctor to identify which area your body needs support.

## **Milk Thistle**

Milk thistle is the liver protector herb. Research has shown that it promotes the regeneration of diseased liver cells and protects them against some poisons. This gives it a role in any chronic liver disease and especially those due to alcohol, drug, or dietary abuse. It's also helpful in cases when the liver is working hard, like when detoxing

## **Dandelion**

Those annoying weeds that grow in your yard are also powerful medicines. The leaves are useful in the urinary system, while the root acts on the liver to protect it from oxidative damage and increased glutathione concentration.



## **N acetyl cysteine**

Otherwise known as NAC, these amino acids are direct precursors to glutathione, one of the body's most powerful detox molecules as it directly supports the liver.

## **Fiber**

Foods high in fiber like flax, psyllium, and veg help draw toxins into the stool and out of the body.





# BRASSICAS AND CRUCIFEROUS VEGETABLES



Brassicas are a family of vegetables super high in key nutrients needed to support liver function and detoxification, including glucosinolates and isothiocyanates, sulfur, vitamins E and C as well as selenium.

- Isothiocyanates help support both phase I and II liver detoxification
- Sulfur attracts heavy metals and other toxins and assists their safe transport out of the body. Sulfur is also required to make glutathione, one of the body's most valuable antioxidants.
- Vit E, C and selenium: powerful antioxidants



*Broccoli, kale, cabbage, cauliflower, Brussels sprouts, bok choy, collard greens, rocket, watercress, rutabaga, turnips and turnip greens, daikon, wasabi, kohlrabi, radish, maca*



# Sources

1. Norman RE. et al.. Environmental exposures: an underrecognized contribution to noncommunicable diseases. *Rev Environ Health*. 2013;28(1):59-65.
2. Moulton PV, Yang W. Air pollution, oxidative stress, and Alzheimer's disease. *J Environ Public Health*. 2012;2012:472751.
3. Fourth National Report on Human Exposure to Environmental Chemicals Updated Tables. January 2017. Volume One. [https://www.cdc.gov/exposurereport/pdf/FourthReport\\_UpdatedTables\\_Volume1\\_Jan2017.pdf](https://www.cdc.gov/exposurereport/pdf/FourthReport_UpdatedTables_Volume1_Jan2017.pdf).
4. Liska D. et al.. Detoxification and biotransformational imbalances. *Explore (NY)*. 2006 Mar;2(2):122-40.
5. Marinković N. et al.. Polymorphisms of genes involved in polycyclic aromatic hydrocarbons' biotransformation and atherosclerosis. *Biochem Med (Zagreb)*. 2013;23(3):255-65.
6. Hodges RE and Minich DM. Modulation of Metabolic Detoxification Pathways Using Foods and Food-Derived Components: A Scientific Review with Clinical Application. *J Nutr Metab*. 2015;2015:760689.
7. Oates L. et al.. Reduction in urinary organophosphate pesticide metabolites in adults after a week-long organic diet. *Environ Res*. 2014 Jul;132:105-11.
8. Detoxification in Naturopathic Medicine: A Survey. (2011). Allen. J., Montalto. M., Lovejoy. J., and Weber. W., 1175-1180.
9. Gaby, A. (2017). *Nutritional medicine*. Concord, NH: Fritz Perlberg Publishing.
10. Grant D. (1991). Detoxification Pathways in the Liver. *Journal of Inherited Metabolic Disease*. 421-430.
11. Hodges, R. M. (2015). Modulation of Metabolic Detoxification Pathways Using Foods and Food-Derived Components: A Scientific Review with Clinical Application. *Journal of Nutrition and Metabolism*.
12. Martha Reid, M. (2017, May 12). Detox-What is it. Retrieved from Doctor's Chocie: <https://www.doctorschoicenaturopathic.com/detox-what-is-it/>
- . Wirngo, F., Lambert., Jeppessen, P. *Rev Diabet Stud. Diabetes*. T. P. (2016)