

Castor Oil Packs & Coldwater Therapy



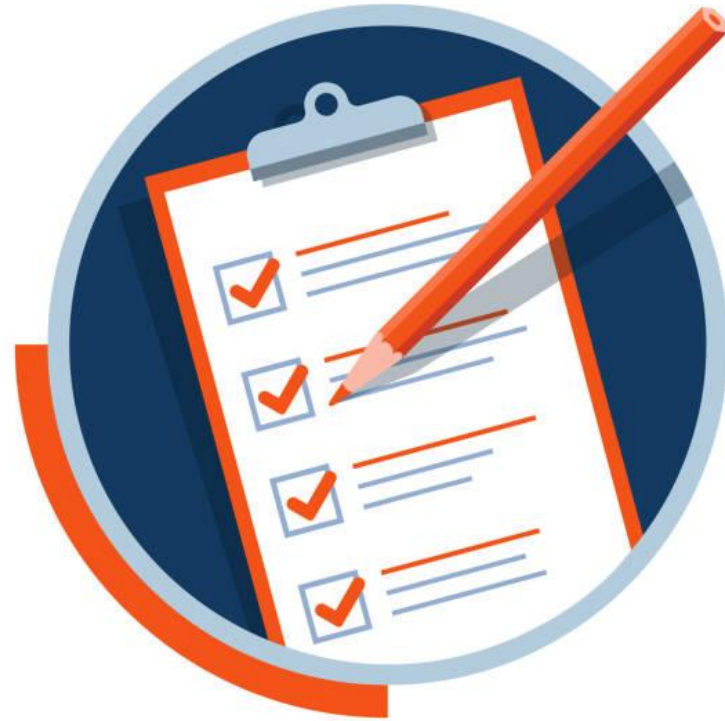
Agenda

Benefits of castor oil packs

Benefits of cryotherapy or cold water therapy

Cold food therapy

Wet Socks



We should always be looking for suggestions that are not food or supplements.

This makes it easier for clients.

Castor oil packs may be helpful for a protocol.

It is something to consider.

There are several ways a castor oil pack can help.



Stimulating Circulation: Castor oil packs are believed to help stimulate circulation in the body, including the liver.

Improved blood flow to the liver can enhance its ability to detoxify the bloodstream by filtering out toxins and metabolic waste products.

Increasing Lymphatic Drainage: The lymphatic system plays a crucial role in removing waste and toxins from the body.

Castor oil packs applied over the liver area are thought to help improve lymphatic drainage, allowing the liver to more effectively eliminate toxins and waste from the body.

Promoting Relaxation: Applying a castor oil pack can promote relaxation and stress relief.

Stress can negatively impact all functions, so anything that helps reduce stress may indirectly support health.

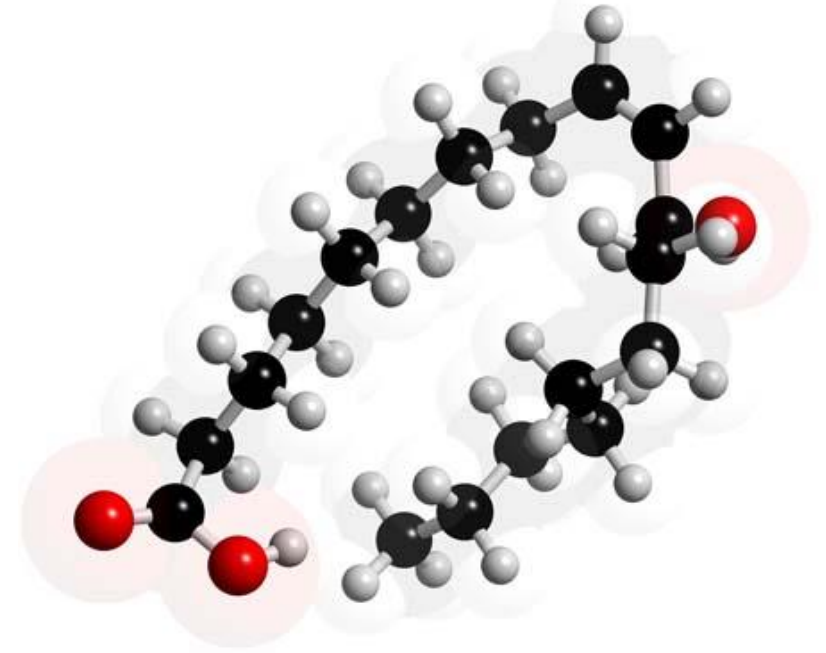
Also supports liver detoxification



A 2000 mouse study aimed to compare the anti-inflammatory effects of ricinoleic acid (RA) and capsaicin in various acute and subchronic inflammation models.

Results showed that while both RA and capsaicin initially increased acute inflammation, repeated topical application led to significant inhibition of inflammation and reduction in tissue substance P levels (neuropeptide, used by neurons in the brain to communicate with each other).

RA has potential as a non-pungent anti-inflammatory agent suitable for peripheral use.

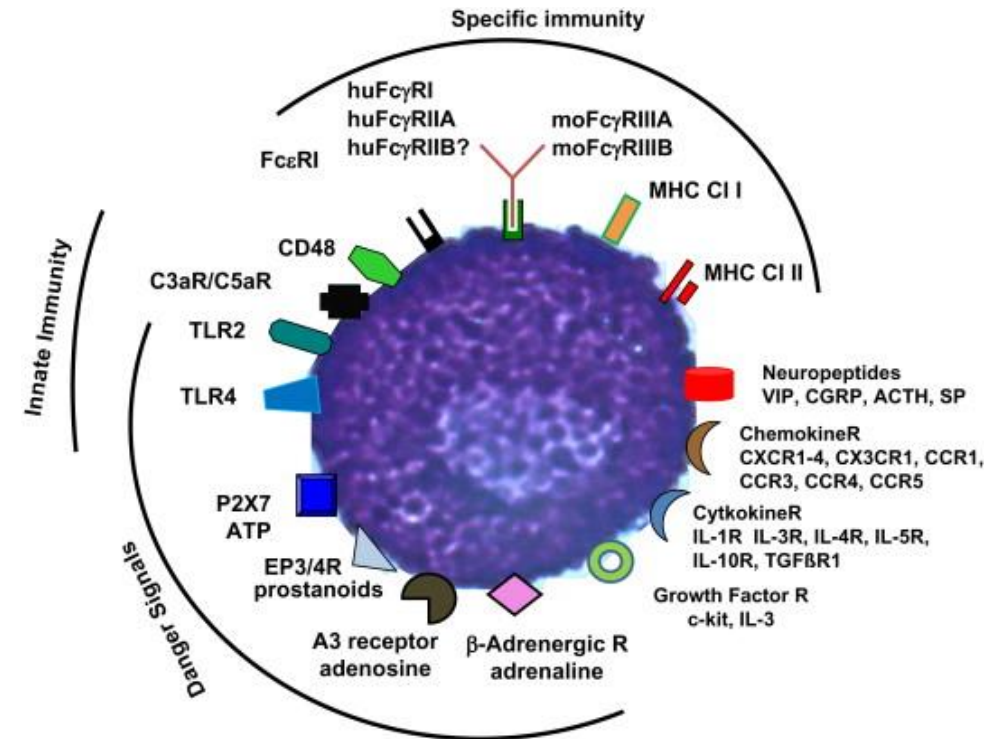


Along with the high content of ricinoleic acid, castor oil contains carotenoids and tocopherols.

These compounds contribute to its anti-inflammatory, and antioxidant properties

Research has shown that ricinoleic acid can activate E-type prostanoid receptors which bind to prostaglandins and stimulate intestinal peristalsis

This can help constipation and can also help induce uterine contractions



Castor oil and ricinoleic acid easily penetrate deep into the skin and they enhance the transdermal penetration of other chemicals.

Is also considered to help protect the skin and support hair eyelash and eyebrow growth

Can help escort hormones out of the body



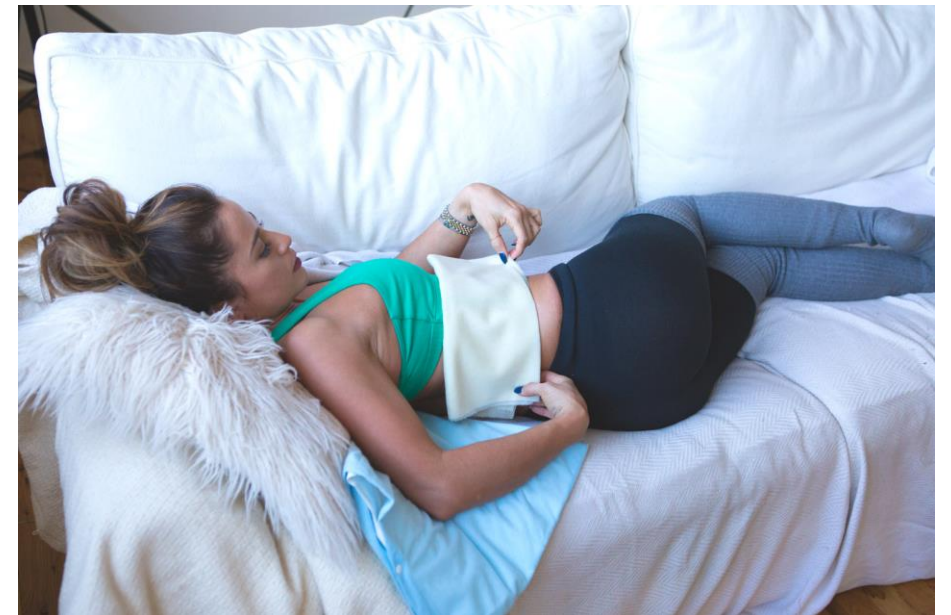
Materials

- Castor Oil
- Piece of cotton or flannel that can cover the area
- Hot water bottle
- Plastic wrap or buy a kit
- There are castor oil packs available in the health food stores.
- Kits are less messy and easy to find.



Instructions

- Drizzle the castor oil on the material
- Place the material on the area that is an issue
- Place a piece of plastic wrap over the material (it can stain)
- Place the hot water bottle on top of the plastic
- Relax and leave it for 20-30 minutes
- Do this repeatedly until a benefit is seen
– the material can be used over and over.



Using a castor oil pack can be done at the beginning of a protocol.

It can be gentle which is best at the start.

1 tsp rubbed on the skin is a simple way to start – place the flannel on top

Work up the amount to cover more of the area that's being worked on.

If the client is not too sensitive – more can be done sooner.



Cold Therapy or Cryotherapy

A therapeutic technique that involves exposing the body to extremely cold temperatures for a short period.

It encompasses various methods such as whole-body cryotherapy, cold-water immersion, ice packs, and cryo-chambers.

Often used to reduce inflammation, alleviate muscle soreness, and promote recovery after intense exercise or injury.



Cryotherapy has been used for several decades, with its origins dating back to the early 1970s.

It was primarily utilized in medical settings for treating conditions such as rheumatoid arthritis and inflammation.

Its applications expanded to include sports medicine and recovery after intense physical activity.



High-intensity exercise can strain skeletal muscles, leading to reduced performance, soreness, and inflammation.

In recent years, cryotherapy has gained popularity in various fields, including athletics, wellness

There are specialized facilities offering cryotherapy sessions to the general public.



Involves exposing the entire body to extremely cold temperatures, typically ranging from -100°C to -140°C , for a short duration, usually around 2-3 minutes.

This is typically done in a specialized chamber or cabin specifically designed for this purpose.

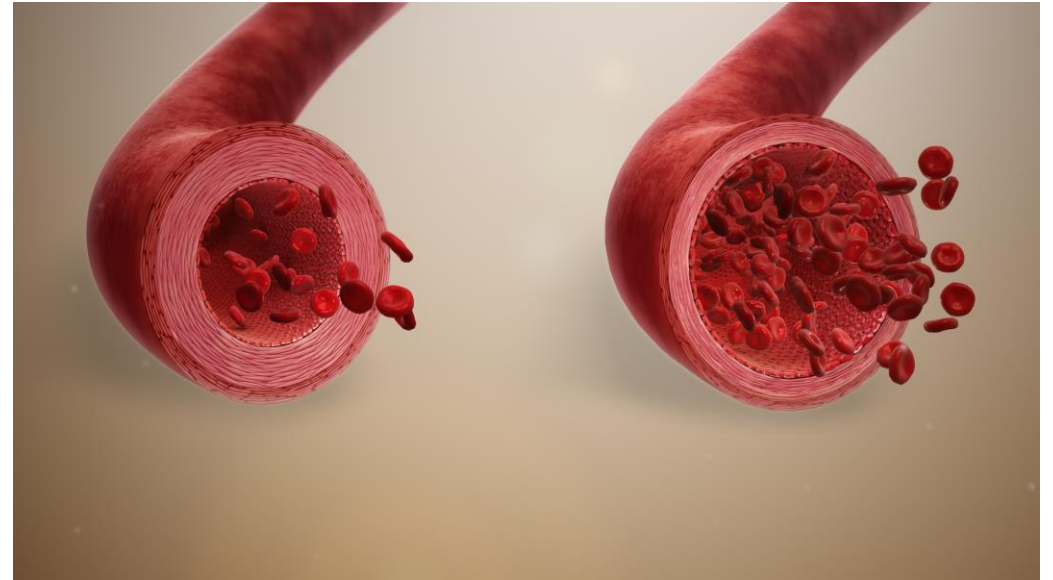
During a WBC session, individuals wear minimal clothing, gloves, socks, and protective earmuffs to minimize exposure to the cold.



This triggers various physiological responses in the body, including vasoconstriction (narrowing of blood vessels) and a decrease in skin temperature.

As the body responds to the cold, blood is redirected to the core, where it is enriched with oxygen and nutrients.

Once the individual exits the cryotherapy chamber, blood vessels dilate, and the enriched blood is circulated back to peripheral tissues



This, potentially, reduces inflammation, and muscle soreness, and promotes recovery.

Cold-water immersion and other cryotherapy methods are commonly used post-exercise to hasten recovery, but the exact mechanisms are unclear.

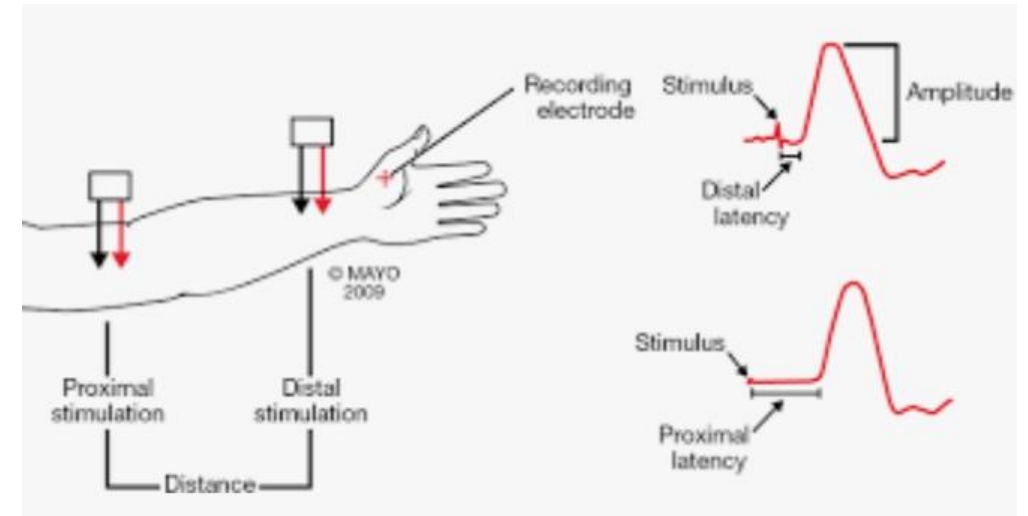
Cold therapy reduces tissue temperature, impacting blood flow, cell swelling, metabolism, and nerve conduction velocity.



Nerve conduction velocity (NCV) refers to the speed at which electrical impulses travel along a nerve fiber.

Cold temperatures can potentially slow down nerve conduction, which might have implications for sensory perception, motor function, and overall neural signaling

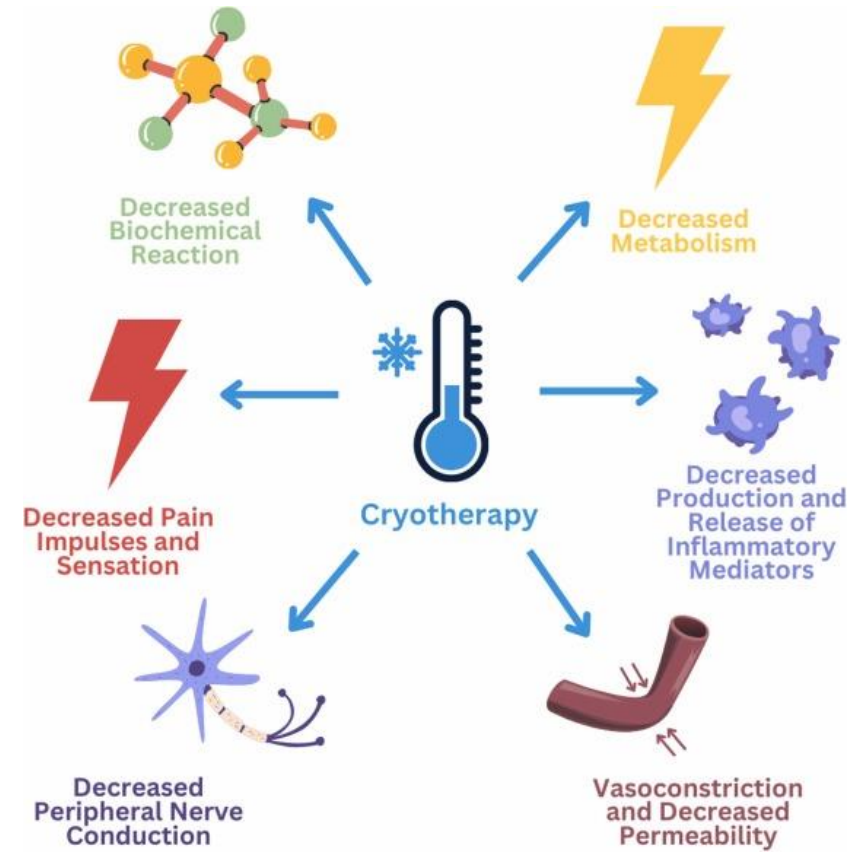
Effectiveness is dependent on various factors: temperature, myelination, axon diameter, age, health conditions, and environmental factors.



The reduction of tissue temperature can occur locally, and affect core temperature, cardiovascular, and endocrine systems systemically.

There's a gap between studies on the physiological changes caused by cold and those on its functional effects for recovery.

Not sure how it works



Whole-body cryotherapy has gained popularity, endorsed by celebrities for its perceived benefits in relieving aches, pains, and wrinkles.

The FDA cautions against using whole-body cryotherapy devices for medical purposes

They have not approved it for treating conditions like Alzheimer's, depression, or fibromyalgia.



Unlike traditional cryotherapy for dermatological purposes, whole-body cryotherapy involves brief exposure to extremely low temperatures, often below -200 degrees Fahrenheit.

The FDA warns of insufficient scientific evidence supporting these claims.

Potential dangers can include frostbite, burns, eye injuries, and even asphyxiation, especially with the use of liquid nitrogen for cooling.

A fatal incident involving lack of oxygen in a cryotherapy chamber underscores these risks.

A meta-analysis study analyzing 59 studies involving 1,367 patients assessed the effectiveness of various cold and heat therapies for pain relief in delayed onset muscle soreness.

Within 24 hours post-exercise, hot packs were most effective, followed by contrast water therapy; within 48 hours, hot packs were superior, and cryotherapy was optimal over 48 hours post-exercise.

Due to limited study quality, further research is necessary to conclusively determine the efficacy of cold and heat therapies for delayed onset muscle soreness.



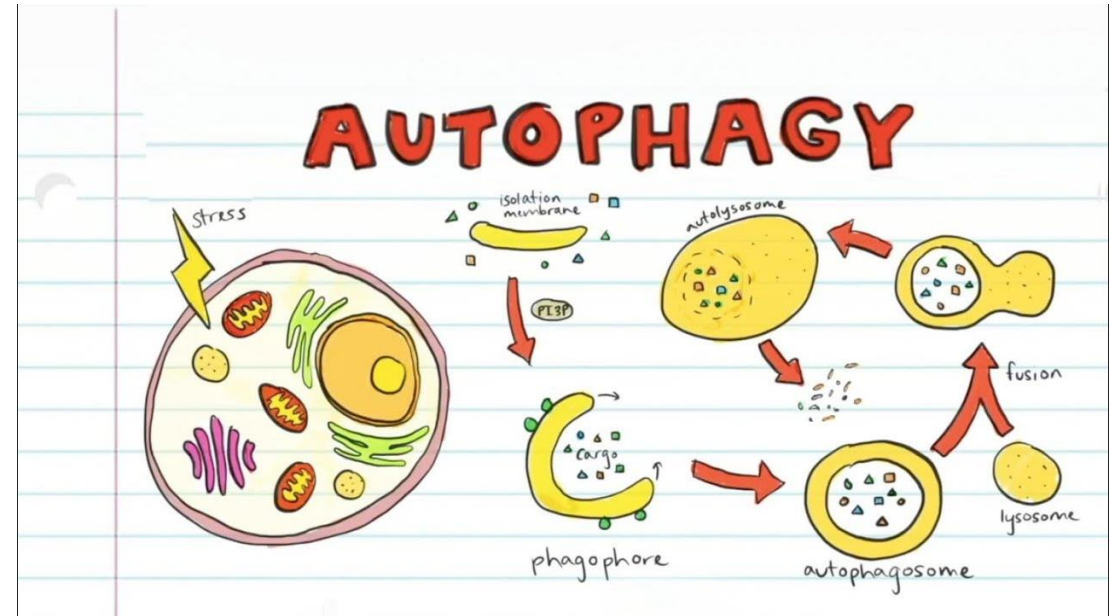
Cold Therapy & Autophagy

Autophagy means “self-eating.”

Think of it as a detox process your body undergoes to clean out damaged cells and regenerate new ones.

A healthy body performs autophagy automatically.

Problems occur when autophagy is turned off or malfunctions.

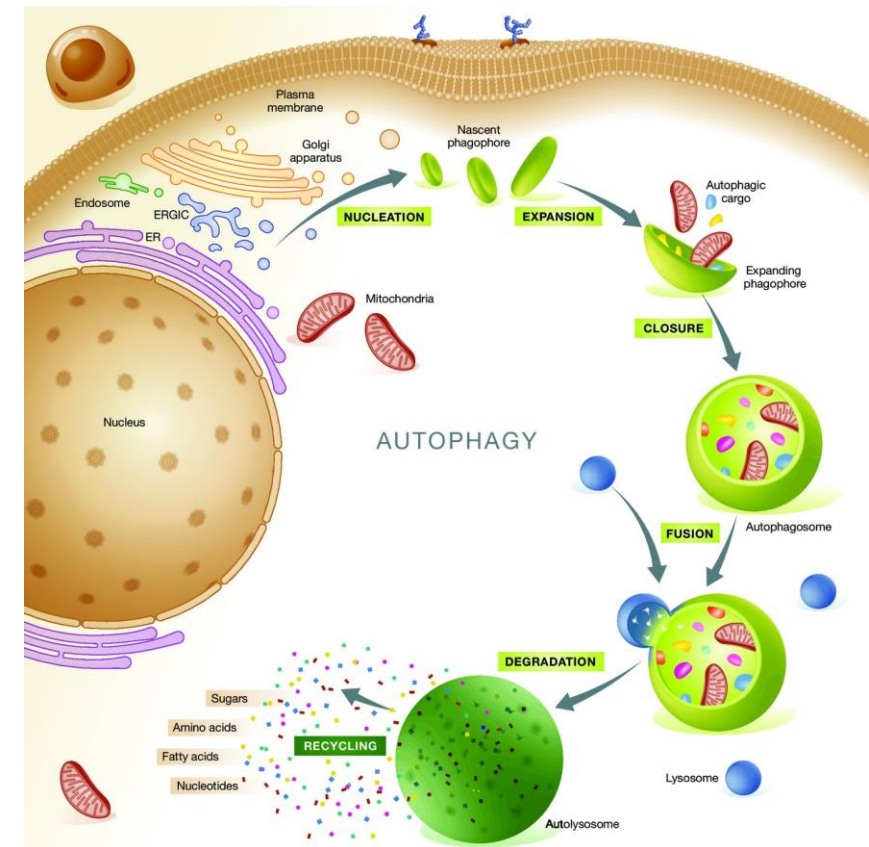


And how its malfunction is linked to degenerative health issues.

It is connected to the inflammation pathways.

Can play a vital role in immunity.

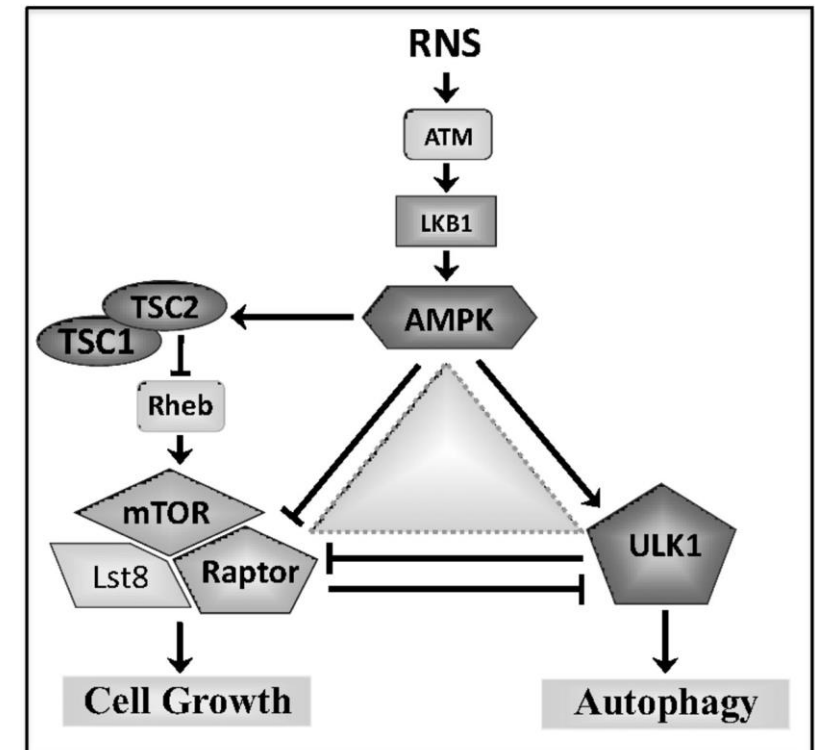
The good news is diet and lifestyle can help restore and/or maintain autophagy.



Autophagy is based on two protein kinases: AMP-activated protein kinase or AMPK and the mammalian target of rapamycin or mTOR.

In order to induce autophagy, the AMPK switch has to stay on and mTOR has to be turned off.

Strategies should focus on proper regulation of these two kinases.



Coffee, green tea, cacao. Olive oil and curcumin (turmeric) (or chocolate), and exercise may increase AMPK-dependent autophagy.

Too many calories, too many amino acids, or too much insulin can switch on mTOR.

Sauna therapy upregulates heat shock proteins. (Heat shock proteins inhibit inflammatory pathways and protect cells from injury and disease.)

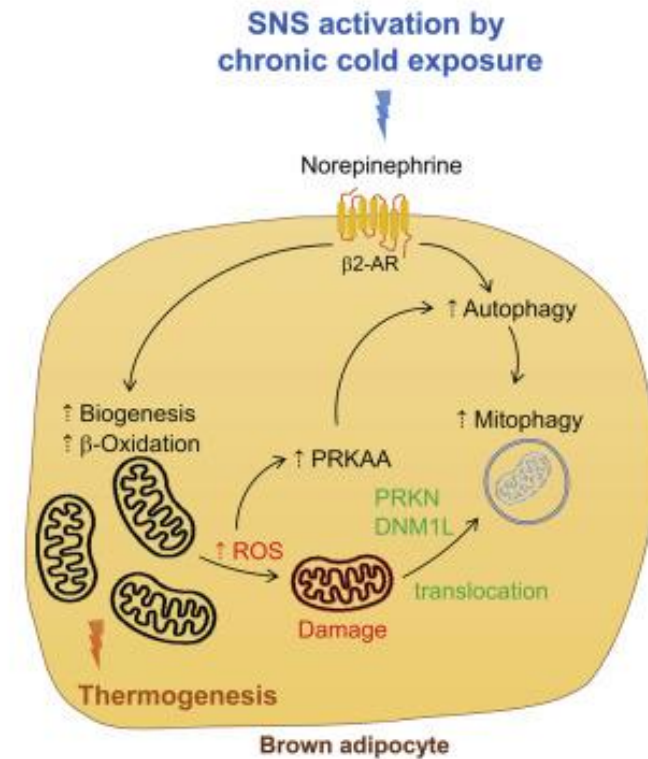


Autophagy is crucial for cellular protection, especially during external stimuli like cold exposure.

Older adults often struggle with cold tolerance due to age-related declines in autophagy.

A study assessed the impact of different cold-water immersion intensities on autophagy and apoptosis in young and older males.

Peripheral blood mononuclear cells (PBMCs) are analyzed at baseline, during cold exposure, and after recovery.

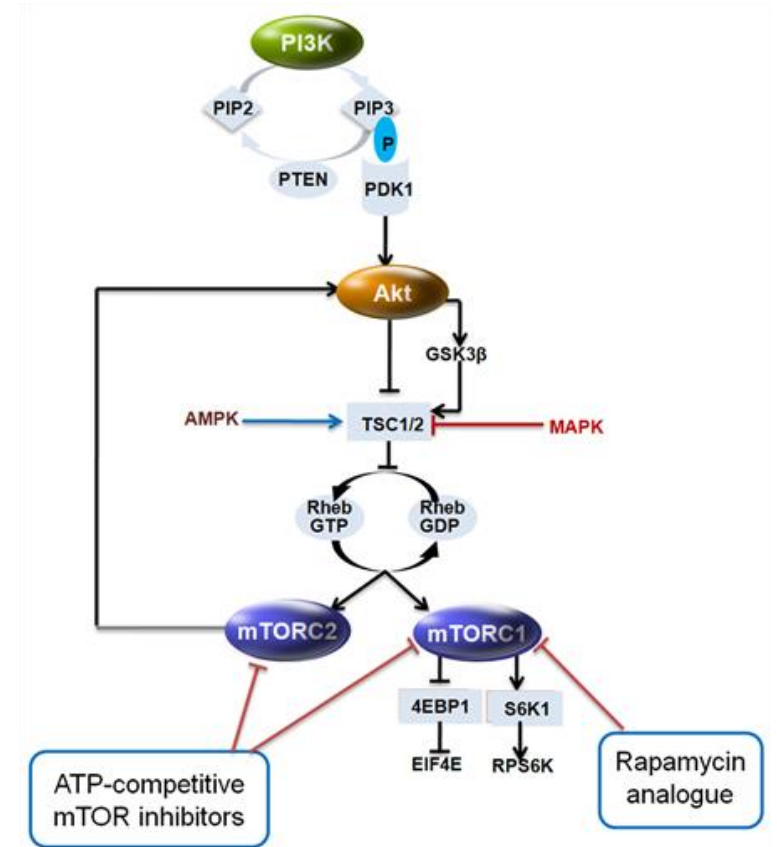


Moderate cold stress increases autophagy and heat shock protein activity in young males, while high cold stress elevates apoptosis.

Older males show minimal autophagy activation during cold exposure, along with increased apoptotic and inflammatory proteins.

In vitro experiments suggest that stimulating autophagy with rapamycin could potentially reverse age-related vulnerability to cold exposure.

Rapamycin is a compound that belongs to a class of medications called mTOR inhibitors.



Autophagy may play a role in brown adipose tissue (BAT) activation by thyroid hormone, with its significance in adaptive thermogenesis.

Through experiments on mice and brown fat, increased autophagy was observed alongside heightened β -oxidation, mitophagy, and mitochondrial activity during cold exposure.

Knockout mice lacking autophagy in BAT failed to sustain body temperature during prolonged cold exposure, indicating the vital role of autophagy in regulating adaptive thermogenesis, fatty acid metabolism, and mitochondrial function in BAT.

Cold therapy, or cryotherapy, may promote autophagy by acting as a mild stress that activates cellular defense mechanisms.

This therapy can inhibit the mTOR pathway, similar to the effects seen with caloric restriction and exercise.

By enhancing autophagy, cold therapy helps in the removal of damaged cellular components, supporting cellular health and function.

It also improves metabolic efficiency and energy recycling within the body.

Additionally, its anti-inflammatory effects can further facilitate effective autophagic processes.



Vagus Nerve

Cold therapy or cold packs applied to the chest are sometimes used as a method to stimulate the vagus nerve.

The vagus nerve stimulation (VNS) technique involves applying cold specifically over the sternum.

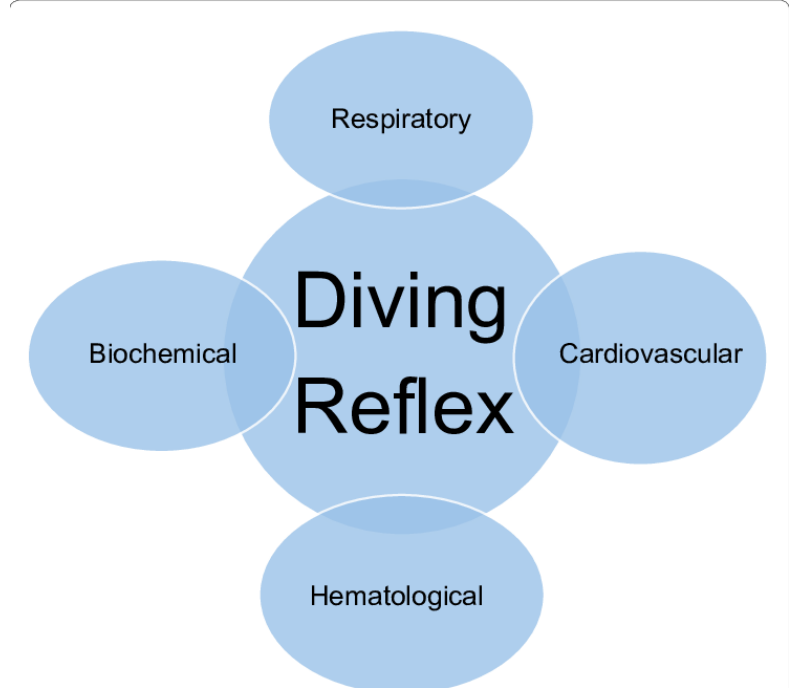
The aim is to activate the vagus nerve and potentially promote relaxation, stress reduction, and other health benefits.



This approach is often based on the concept of "diving reflex," where exposure to cold triggers a physiological response that slows heart rate and promotes calmness.

While research on the specific effects of cold therapy on vagus nerve stimulation is limited.

Some studies suggest that it may have potential benefits for conditions like anxiety, depression, and inflammation.



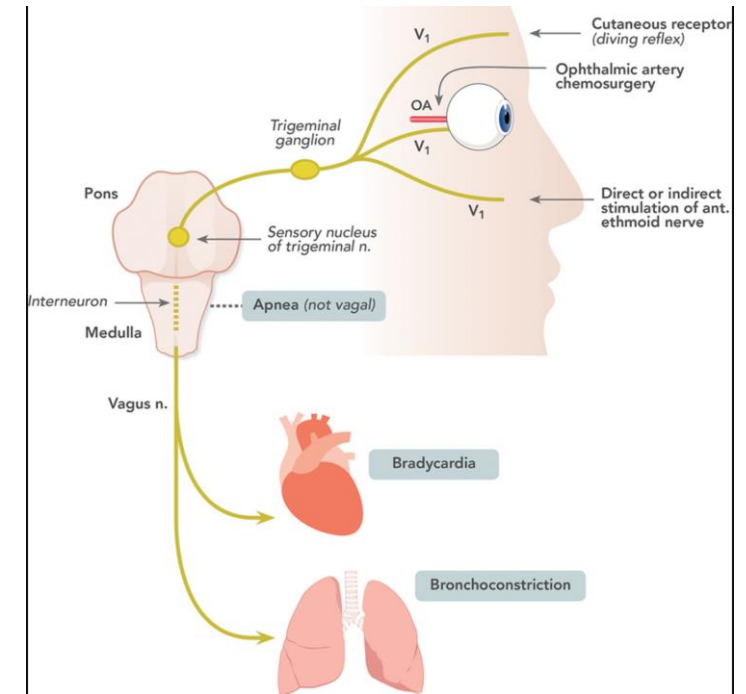
Diving reflex is an innate multi-system physiologic response present in all vertebrates that functions to preserve oxygen stores during times of water immersion.

Splashing cold water or immersing the face in cold water triggers a message from the trigeminal nerves in the face to the vagus nerve.

This sends messages to the brain and activates the diving reflex

It can slow the heart rate and preserve oxygen for the heart and brain.

Trigeminal nerves can also be stimulated by gentle light therapy, slow rhythmic chewing, as well as cold water.



Cold Plunge Tub

Is also known as a cold plunge pool or simply a cold plunge.

It is a small pool or tub filled with very cold water, typically around 50 to 60 degrees Fahrenheit (10 to 15 degrees Celsius) or even colder.

It's often found in wellness centers, spas, or facilities with hydrotherapy amenities.

But can be purchased for the home – there's expensive and inexpensive options

\$175 - 8500



Cold Foot Therapy

Also known as contrast hydrotherapy or contrast bath therapy, involves alternating between hot and cold water treatments on the feet.

The process typically begins by soaking the feet in hot water for a few minutes, followed by transferring them to cold water for a brief period.

This cycle is repeated several times, with each immersion lasting around 2-3 minutes.



The contrast between hot and cold temperatures stimulates blood flow, causing blood vessels to dilate during the hot phase and constrict during the cold phase.

This alternating effect is believed to help reduce inflammation, alleviate pain, and promote healing in the feet and lower extremities.



Cold sock therapy is often used to manage conditions such as plantar fasciitis, Achilles tendonitis, and foot pain associated with overuse or injury.

It is also sometimes recommended for athletes as part of their recovery regimen.

While some individuals may find relief with this therapy, scientific evidence supporting its effectiveness is limited

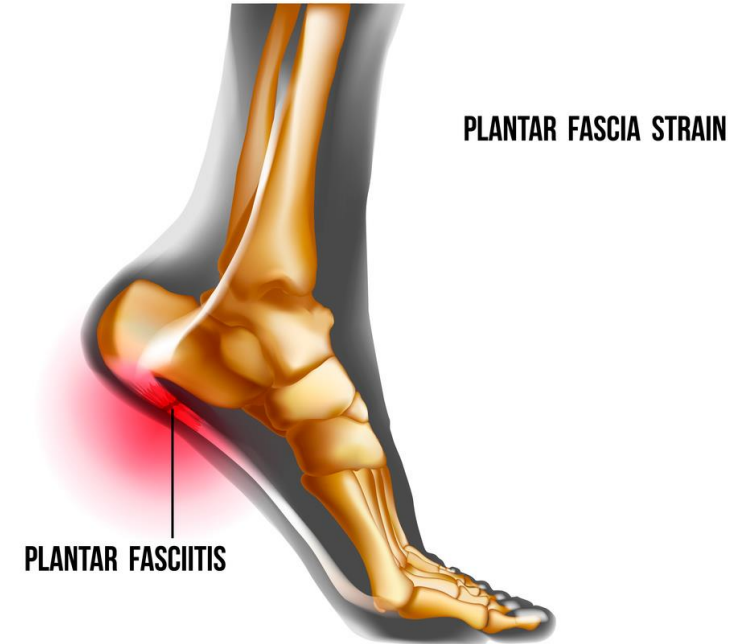
It may not be suitable for everyone, particularly those with circulatory disorders or sensitivity to temperature extremes.



This study investigated the effects of applying cold therapy before sleep or upon waking on plantar fasciitis symptoms.

30 people were divided into three groups: no intervention, cold applied before sleep, and cold applied upon waking.

The group receiving cold therapy before sleep showed the most significant symptom reduction and decreased plantar fascia thickness, while morning application was less effective.



Wet Socks

Wet sock therapy, also known as "warming socks" or "wet sock treatment," involves wearing cold, wet socks made of cotton or wool before going to bed, typically with dry wool socks over them.

The process begins by wetting a pair of thin cotton or wool socks in cold water and then wringing them out thoroughly.

The wet socks are then put on the feet, followed by dry wool socks over them.



This creates a warming effect as the body works to warm up the wet socks, which is thought to stimulate circulation and lymphatic flow.

Advocates of wet sock therapy claim that it can help alleviate symptoms of colds, flu, sore throat, sinus congestion, and other respiratory ailments by boosting the immune system and promoting detoxification.

Scientific evidence supporting these claims is limited, and the mechanism by which wet sock therapy may work is not well understood.



The good news is there are options

Drugs and surgery have issues

To be able to consider different ways to improve physical function is good

Whether it is castor oil packs or cold therapy – it's a non-food, not supplement option

If not comfortable recommending, then just provide info and recommend they discuss it with an MD, chiropractor or ND

