

Restorative Movement

And The Breath

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Restorative movement and the breath resources

Restorative Movement – is only appropriate for those who are feeling well enough to manage light to average activity without PEM.

Please do not attempt these if you are bedbound or very unwell.

Key learnings

Restorative movement and mindfulness

- The two other diaphragms (vocal and pelvic) are use and engaged whilst breathing in restorative movements to stabilise the body and protect from injury
- Breathing is greatly enhanced using the two other diaphragms located in the pelvis and throat
- Spinal movements help the shape change action when breathing, so we coordinate our breath with our movements
- Restorative movements help our breath, calm the nervous system, and gently stretch our bodies
- Effective Restorative movement uses mindfulness and can help with acceptance in the mind/body connection created

The other two diaphragms (vocal and pelvic diaphragms)

Pelvic Diaphragm

- Help engage abdominal muscles
- Part of core muscles
- Inhale – helps lift base of rib cage
- Exhale – stabilises main diaphragm upper attachments

The pelvic diaphragm can help engage and use the deep abdominal muscle layers.

When you engage these muscles, you also engage the muscles of the stomach via myofascial tissue (connective tissue).

When active during the outward breath this helps stabilize the main diaphragm upper attachments. When engage during the inward breath this helps lift the base of the rib cage allowing more room for air to flow into the lungs [1] (Kaminoff & Matthews, 2012).



The pelvic floor (pelvic diaphragm) is part of your core muscles.

[2]<https://verdevalleymfr.com/2016/09/22/safely-building-core-hypopressives-vs-traditional-abdominal-exercises/core-muscle-300x228/>

Practice

Notice how you can extend your exhalation when you engage your pelvic muscles. Practice pulling the navel in and up when you exhale. Find that point where you pull in your belly button in, and then lift the pelvic muscles up to that point.

Vocal diaphragm

- Gives more length to the breath
- Creates a back pressure in the stomach and chest cavity
- Slightly contracts the glottis – ujjayi breathing – creating a gentle snoring sound

The vocal diaphragm can be used to give more length to the breath but also to create a back pressure in the stomach and chest areas (which will be discussed later). Practicing locking the vocal diaphragm when breathing not only helps calm the nervous system it also aids in providing your body with postural support (Kaminoff & Matthews, 2012).

When practicing breathing you slightly contract the glottis (a space between the vocal cords) this slightly closes the glottis leaving a small opening. This allows you to hear your breath, like a gentle snoring sound only you can hear. In yoga terms this is called ujjayi breathing.

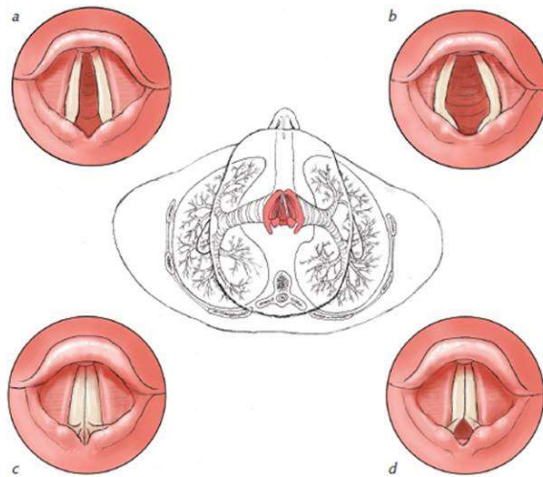


Figure 1.22 Position and location of vocal folds: (a) relaxed position, (b) maximally opened for forced respiration, (c) closed for speaking (phonation), (d) slightly opened for whispered speech (or ujjayi).

[3]<https://doctorlib.info/anatomy/yoga-anatomy/2.html>

Practice

Vocal diaphragm - Imagine quietly saying the word "are" as in father to yourself as you breathe. This is the practice of ujjayi breathing which engages the glottis (vocal diaphragm) in the throat.

Restorative movement

- All three diaphragms come together and coordinate with the breath and movement
- This creates an internal centre of gravity taking the pressure of the posterior muscles of the spine, especially the lower back, and avoids injury

In restorative movement all three diaphragms come together and coordinate with the breath and movement.

The engagement of the other two diaphragms helps protect the spine during long slow extension and flexion movement (which are forward and backwards movements coordinated with the breath). By creating a back pressure in the stomach and chest area. This gives more stability and protection from injury by creating an internal centre of gravity and redistributing the mechanical stress when moving into these positions.

For example, when standing and moving into a forward bend, the mechanical stress usually comes from the spinal muscles (posterior muscles) to support the body. By engaging the other two diaphragm whilst breathing and moving, you engage your breathing muscles surrounding the cavities. This creates an internal centre of gravity to the shape (Kaminoff & Matthews, 2012)

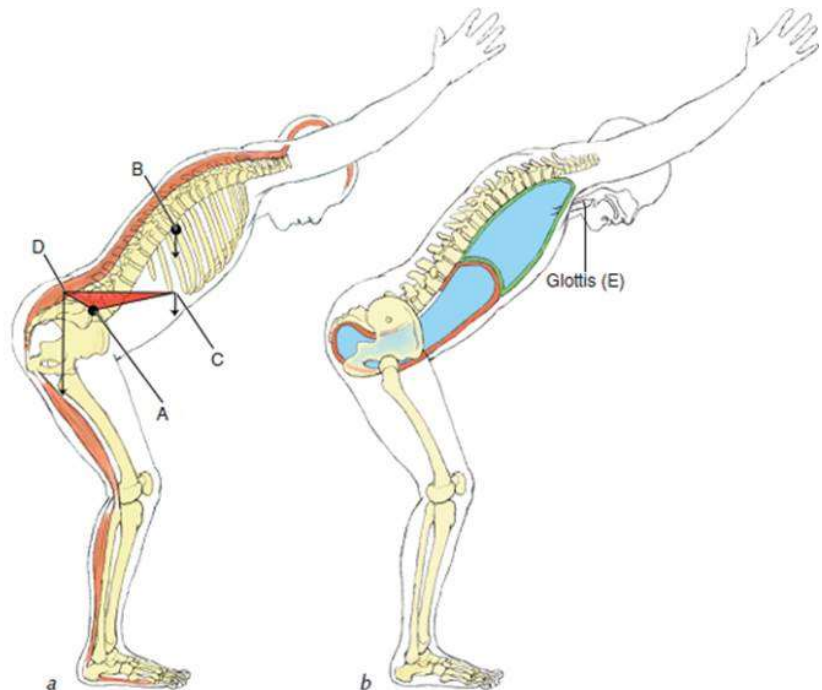


Figure 1.23 Supporting a movement (a) without the breath and (b) with the breath.
[4]<https://doctorlib.info/anatomy/yoga-anatomy/2.html>

If this centre of gravity is not created and stress is coming from the posterior muscles of the spine, especially the lower back, the body resents this and that is why we sometimes hold our breath when moving.

By engaging all the diaphragms when moving your spine in restorative movement, you create an internal centre of gravity, therefore taking the pressure of the posterior muscles of the spine, especially the lower back, and avoiding injury [5] (Kaminoff, & Matthews, 2012).

Why we co-ordinate our breathe with our movements

- Spinal movements are an essential part of the shape changing action when breathing
- Spinal shape change on flexion movements (forward bend) is an exhale breath
- Spinal shape change on extension movements (backbends or lengthening spine) is an inhale breath

Spinal movements are an essential part of the shape changing action with breathing because when we change the shape of our spine on a flexion movement (forward bend). The abdominal moves in, the chest contracts, and there is less space for the breath, therefore we exhale in this movement. On the other hand, when the spinal shape changes on extension movements (backbends or lengthening spine). We create more space in the chest cavity, have room to expand our belly and ribs, creating the right environment for an inhale breath.

When you increase/decrease one spinal curve (i.e., neck, thoracic, lumbar curves) you also decrease/increase another curve. Spinal curve movement is reciprocal. i.e., an increase in the thoracic curve automatically decreases the cervical and lumbar curves [5] (Kaminoff & Mathews, 2012).

Practice

Cat/cow movements can help explore this shape change of extension and flexion.

- the shape change of spinal flexion (cat) is an exhalation
- and spinal extension (cow) creates an inhalation shape change in the body

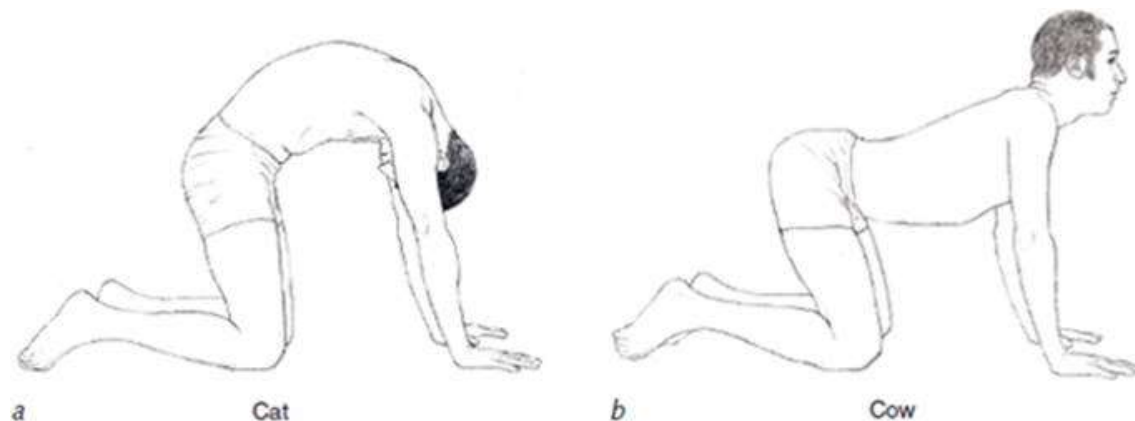


Figure 2.30 The cat–cow exercise emphasizes both the (a) primary and (b) secondary curves.

[6] <https://doctorlib.info/anatomy/yoga-anatomy/3.html>

Spinal Curves refer to Extension and Flexion

- Extension and flexion are not necessary the movement of body in space
- Spinal curves are the flexion and extension
- Be aware of your spinal curve in your movements

Spinal flexion and extension are not necessary forward and back bends. The relationship of these spinal curves refers to extension and flexion and not the movement of body in space.

This just reminds us to have more awareness of the body when we are flexing and extending our spine. Just because you are in a forward bend you might not be flexing your spine to create that shape for the exhalation breath.

Example

Imagine a stiff office worker whose spine is still in flexion when they try to perform a back bend

Imagine a flexible dancer whose spine is still in extension when performing a forward bend (spine over extended)



Figure 2.31 (a) Flexion moving backward in space, and (b) extension moving forward in space.

[7] <https://doctorlib.info/anatomy/yoga-anatomy/3.html>

Mindfulness

- Notice how you feel, what you feel, and where you feel it

Mindfulness is associated with breathing and restorative movement, as you need to

- be aware of your body and the bodies sensations such as pain, discomfort, tightness and learning to work and move with these sensations
- use the centre of gravity (using all three diaphragms)
- notice how the spine moves (that extension for flexion movement)
- notice how this effects your breathing (the shape change in the cavities)
- notice how does this movement make you feel? (Central nervous system, can you feel a shift into the parasympathetic mode of functioning, rest, digest and repair)

Practicing restorative movement with awareness of how your body moves with the breath creates healthy movement patterns necessary for pain-free movement

Therefore, mindfulness is so important when we are practicing restorative movement.

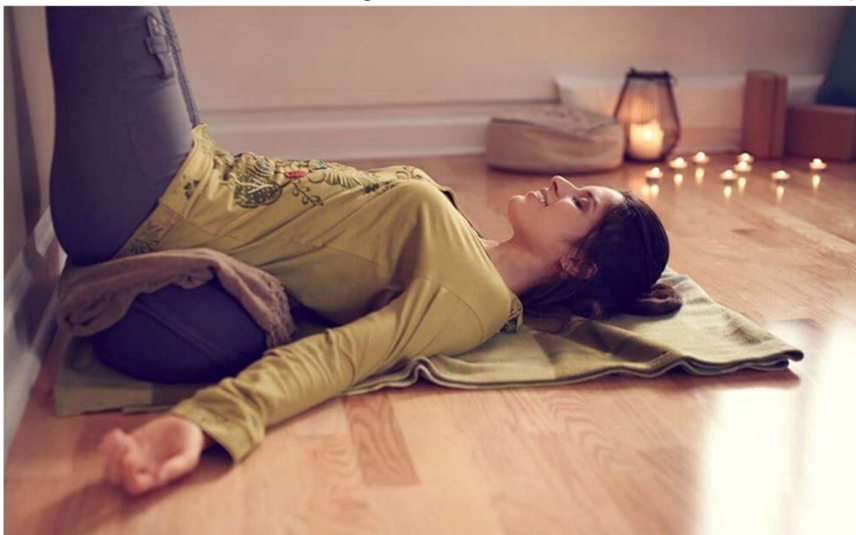
By practicing using these two diaphragms you are becoming more aware of your body, developing mindfulness and a connection of the mind and body, which may have been lost, therefore helping with acceptance as well as mindfulness.

Your restorative practice

Create a yoga practice that is unique to your ability and body, using some of the practices following.

Understand your energy baseline (use pacing to know how much energy you have).

Practice only when you are feeling well enough to manage light to average activity without PEM. Choose the right restorative movement for where you are physically.



Caution for those with EDS or any hypermobility disorders

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Recommendations for those with POTS and EDS

- Low level exercise is important for POTS and FM
- First try recumbent exercise (low level exercise)
- Exercise that helps with venous return (eases blood pooling) core and leg exercises lying down
- Illness and menses can exacerbate symptoms
- Increase fluid and salt or electrolyte intake
- Postural training – slowly lying to sitting movements
- Wear compression socks or high waist undergarments

Restorative Practice Examples

Most of these practices are moving, breathing, movements

Sitting on blanket or bolster, a breathing and movement practice

- Inhale hands to chest
 - Exhale interlock fingers and reach forward, pull belly in and cave chest in, lower shoulders, and look down (engaging throat diaphragm)
 - Inhale reach arms up opening body, chest and belly
 - Exhale interlock hands behind your back, pull belly in and lean forward
 - Inhale reach up
 - Exhale hands to chest palms together
1. Sitting cat/cow – inhale feel chest expand, exhale contract chest, throat lock, look through thigh and lift pelvic floor
 2. Neck stretches with outstretched arms – fingertips on floor
 3. Sitting rotate body in circular movement. Inhale come forward, exhale move back (feel the curve of the spine when forward and back, do you have flexion and extension to help you breathe?)
 4. Sitting side stretch and twist moving to the breath - twist from belly EDS aware
 5. All fours - hands on blocks, hands in front of shoulders, slight bend in elbows to prevent hyperextending - EDS do not hyperextend lower back (back of neck straight, crown of head pointing forward, tailbone tucked under, pull belly in)

6. Cat/cow with leg extension – inhale lift leg up (sole of foot to ceiling) exhale, pull belly in, knee in and chin tucked in
7. Cobbler pose blocks under knees so thighs do not open too wide – left pelvic floor muscles, straight spine
8. Wide leg child pose, big toes together, knees apart, chest to floor (notice the breath move into the back) - EDS aware
9. Semi supine pigeon, to help open hip but not too wide - EDS aware
10. Supine arms stretch behind head point toes away then hug alternate knee it – move to breath.
11. Bridge flow and hold (lower back flat on floor to begin), exhale tuck tailbone under, pull pelvic muscles up, inhale expand chest, extend spine
12. Legs up the wall, ankle rotations – POTS, OI

Online resources

GENTLE YOGA FOR EHLERS DANLOS SYNDROME (EDS) + POTS

Sleepy Santosha Yoga

<https://www.youtube.com/watch?v=cJjXoxSqmMk>

Sarah Beth yoga (there are lots of gentle beginner and yin practices on her YouTube site)

15 min relaxing yoga stretches to unwind after work

<https://www.youtube.com/watch?v=ysOXmEjXT7Y>

Angela Stevens yoga

Yoga for ME/CFS – The Practice of Yoga – 'Action in Inaction'

<https://www.angela-stevens.co.uk/me.html>

Yoga the gentle way is a yoga CD you can order online

Yoga anatomy book by Kaminoff and Matthews - A really good book which clearly explains the dynamics of our breath, the three diaphragms, and spinal movements
CCIS also have lots of resources on restorative movement for ME/CFS

References

Dynamic Fitness and Rehabilitation. (2020). Benefits of Restorative Exercise. Retrieved from <https://dynamicmedicalfitness.com/blog/restorative-exercises#:~:text=Restorative%20exercise%20will%20increase%20muscle,the%20symptoms%20of%20your%20pain>

[1] Kaminoff, L., & Matthews, A. (2012). Yoga anatomy. (2nd ed.). Campaign (IL): Human Kinetics.

[2] Source: <https://verdevalleymfr.com/2016/09/22/safely-building-core-hypopressives-vs-traditional-abdominal-exercises/core-muscle-300x228/>

[3] <https://doctorlib.info/anatomy/yoga-anatomy/2.html>

[4] <https://doctorlib.info/anatomy/yoga-anatomy/2.html>

[5] (Kaminoff, & Matthews, 2012).

[6] <https://doctorlib.info/anatomy/yoga-anatomy/3.html>

[7] <https://doctorlib.info/anatomy/yoga-anatomy/3.html>

[8] <https://www.yogapedia.com/2/8436/asana/asana-tips/restorative-yoga-relax-and-recharge>