

Cancer and Stress: A Healing Yoga Practice to Calm Anxiety

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Anxiety is one of the most prevalent side-effects along the entire spectrum of the cancer journey. Nearly all patients will experience anxiety at one point or another including after receiving a diagnosis, anticipating and receiving treatment, affording treatment, anticipating recurrence, ending treatment and becoming a long-term survivor. For many the fear of recurrence is very real and something that does not diminish with time. While the rate of recurrence varies depending on the type of cancer from early treated breast cancer as low as 5% to glioblastomas and ovarian cancers approaching an 85% recurrence rate or higher, up to 70% of patients develop a disabling fear of recurrence that severely impedes quality of life.

Stress, Anxiety and Cancer

Cancer patients may experience generalized anxiety or other diagnoses such as phobias, panic attacks, OCD, health anxiety disorders and PTSD. Symptoms of these may vary but include increased heart rate, shortness of breath, muscle tightness, heightened pain, insomnia, sweating, nausea, restlessness and irritability. Also, how patients feel about their stress and anxiety impacts how much the stress affects their physical and mental health. One study out of Harvard reported that those who had high levels of stress and believed stress negatively impacted their health had 43% increased premature death rates over those who did not believe their high levels of stress was harmful.

The Stress Response & Immunity

The stress response or commonly called “fight or flight” response turns off the parasympathetic nervous system and reduce bodily functions not necessary for immediate self-preservation. This includes the lymphatic system, which in turn slows the immune response. As far back as 1965 psychiatrist George Solomon published some of the first findings in the field of psychoimmunology

studying the link between stress levels and immune responses.

When stress is perceived as harmful and chronic it can inhibit immune function. However, when stress is perceived as an opportunity to rise to a challenge, it does not. When we experience as stressful event, whether it is the diagnosis of a life-threatening disease, or something as commonplace as getting cut off in traffic, the body responds automatically by secreting stress hormones. One of these is cortisol which raises blood sugar and metabolizes white blood cells to provide energy for the “fight or flight” response. Unfortunately, when stress becomes chronic, cortisol levels remain high even during rest and this can decrease immunity by inhibiting T-cell production and our T-cells are what protect the body from invading viruses, allergens and from mutated cancer cells.

When a challenge is perceived adrenaline is also produced. Adrenaline increases blood pressure and

Yoga Practice Tips

- Do a little yoga each day to give yourself the time and space to heal. Make yoga a permanent part of your life after cancer.
- Stay mindful of the body and breath throughout the practice. Only move in a comfortable range of motion. If you become uncomfortable, dizzy, nauseated or breathless, stop immediately and rest for a few moments.
- For this practice a yoga mat, blanket and two or more bolsters or pillows will be helpful.

heartrate to create a rush of energy so we can respond to the challenge. But over time, sustained production of adrenaline causes a higher than normal baseline to be set by the body which taxes the organs, increases insulin production, and keeps blood pressure high.

The Stress Response & Immunity

Fortunately, our bodies have a built-in mechanism for stress resilience, the hormone oxytocin. Also secreted as part of the stress response, oxytocin protects the cardiovascular system from the effects of stress, it works as an anti-inflammatory and keeps muscles more relaxed. Emotionally, oxytocin encourages us to seek support from others and helps us to notice when others are struggling, and when we do, more oxytocin is released.

Particularly for women, the “tend and befriend” response is tied to higher levels of oxytocin and causes us to ‘tend’ to those around us who are in need, and ‘befriend’ by seeking out social support. Better stress outcomes can be expected when patients have emotional and social support in place including support groups, therapy, education and wellness communities including yoga class communities, especially yoga classes for people managing cancer. Perhaps this speaks to why more women tend to seek out social support systems when undergoing diagnosis and treatment for cancer.

How Yoga Helps Anxiety

The good news is that yoga and other mindfulness practices modulate the stress response by lowering heartrate, blood pressure and respiration rates, and increasing heart rate variability which is an indicator of how well the body responds to and recovers from stressful events. More and more studies are being conducted showing the positive impacts of consistent yoga practice on mental and emotional well-being in cancer patients. Specifically, yoga has been shown to improve mood states, symptom reduction, stress reduction and improved quality of life. Besides improving these measurable health markers, yoga can lead to a sense of empowerment and mastery over the body and mind which can be an important factor in reducing stress and anxiety.

What follows is a simple sequence of yoga practices including setting intention, a mudra for anxiety, a simple sound practice to help calm the mind, a supported

version of Balasana (Child’s Pose) to help you draw awareness inward and a calming pranayama practice. Done together these practices can help you to cope with the anxiety caused by diagnosis, treatment or survivorship and allow you to feel more like yourself.

Setting Your Sankalpa with Anjali Mudra



Figure 1: Anjali Mudra

Intention setting, or creating a sankalpa, is an important first step toward using yoga as a healing practice. It serves as a reminder of your goals during this time.

1. Begin sitting in a comfortable seated position with your palms together at your heart. This is Anjali Mudra (prayer gesture) and helps to draw your awareness inward.
2. Take a few deeper breaths and recall your current challenges. Recognize that challenges are opportunities for growth and healing.
3. Begin to imagine the best possible outcome for your current situation, setting aside any feelings of doubt that arise.
4. Allow your sankalpa to arise formed into a simple statement phrased in the present tense beginning with “I am ...”, or “My ...”. If you find it difficult to create an intention at this time, use the statement “I am calm and worry-free.” State your sankalpa silently three times and trust that it will manifest with patience and repetition.

Adhi Mudra for Anxiety

Adhi translates to “first” because this mudra is the first mudra we do in the womb. It is a self-soothing gesture

and comforts us during anxious times. Adhi mudra draws the excess mental activity down into the body where it can be processed and grounded. I also call this one of the “sneaky” mudras because you could easily hold your hands in this position during a difficult conversation and no one will know that you are doing something to ease your anxiety.

1. Hold your thumbs in the center of your palms and wrap your other fingers lightly around each thumb.
2. Rest the knuckles of the hands downward on your lap.
3. Soften your shoulders and release your forearms.
4. Hold this gesture for a few minutes and notice how it feels, then release the hands.



Figure 2: Adhi Mudra

Vowel Spiral

Using your voice to create a shift in your mental state is a powerful tool to combat anxiety. This practice uses simple vowel sounds that cause vibration in specific parts of the torso and head. As awareness is drawn into these areas, the mind can be freed from circular thinking that might cause anxiety. As you chant, focus on what the sound feels like in the body, how the vowels sound, and how smooth the tone is. You may notice breaks and warbling in the tone if your mind wanders or if your exhalation is not smooth. Work to smooth out the tone and make sure that you stop sounding before you run completely out of breath, so you are left feeling relaxed, not breathless and rushed.

Chanting simple sounds is one of the fastest, most effective ways to center the mind and emotions. When you are anxious you can imagine that your cells are vibrating in dissonance at an atomic level. When you chant, you bring your atoms into resonance and

harmony and you can truly feel the difference almost immediately. Give it a try!



Figure 3: Vowel Spiral

1. Begin sitting in a comfortable position on the floor on a folded blanket, or in a chair.
2. Take a few moments to breathe naturally and allow your inhalations to flow down into your lower abdomen.
3. Bring one hand to your lower sternum, inhale naturally, then as you exhale chant an “Ahhh” sound (like ‘father’), noticing vibration in your mid-chest.
4. Move your hand to your upper sternum, inhale naturally, then as you exhale chant an “Aaa” sound (like ‘way’), noticing vibration at your heart center.
5. Move your hand to your belly, inhale naturally, then as you exhale chant an “Ooo” sound through very round lips (like ‘donut’), noticing vibration at your navel center.
6. Move your hand to your forehead, inhale naturally, then as you exhale chant an “Eee” sound (like ‘free’), noticing vibration in your skull.
7. Move your hand to your hip point, inhale naturally, then as you exhale chant an “Uuu” sound (like ‘noodle’), noticing vibration in your pelvis, legs and feet.

8. Move your hand to the crown of your head, inhale naturally, then as you exhale chant an “Mmm” sound, noticing vibration at your crown.

Repeat the entire sequence two more times beginning and ending with the “Ahh” sound at the heart center. Observe how the vibration spirals from the heart outward toward the crown and pelvic floor.

Balasana (Supported Child’s Pose)

Coming into a fetal position can feel like a balm for frayed nerves. It enables you to turn your awareness towards the internal landscape of sensation, breath and thought and away from the things outside of yourself that may be causing anxiety and stress. However, this pose can be difficult if the knees or hips are not comfortable in deep flexion. If you have access to bolsters or pillows, you can support your hips, thighs and torso so that Balasana (Supported Child’s Pose) can be maintained for several minutes in comfort and relaxation.



Figure 4: Supported Child's Pose

1. Place a folded blanket on your mat so you have something soft to kneel on.
2. Straddle one bolster as if you were sitting on a horse.
3. Place the second bolster perpendicular to the first in front of your knees.
4. Lengthen your torso forward so that your chest and belly are resting on the bolsters.
5. Turn your head to one side and rest your forearms on the floor or support your forehead on the backs of your stacked hands.

6. A third bolster may be helpful to place on top of the first two if you are not comfortable folding your torso forward into Balasana (Supported Child’s Pose). You want to place your torso so that your hips are at or below the level of your head. Additional bolsters can be straddled until you are comfortable.
7. If this version of Balasana (Supported Child’s Pose) is not comfortable, or you don’t have access to props, feel free to recline on your back with your knees drawn into your chest. It is the same posture in a different relationship to gravity.
8. Rest here for several minutes and practice breathing in and out in a slow and relaxed way.

Return to a seated position as soon as you begin to receive messages from your hips or knees that you need to come up; never stay past the point of comfort.

Rechaka Kumbhaka Pranayama (Exhale Retention)

Conscious breathing is a simple yet effective way to shift your mindset when you are worrying or feeling anxious. It is an amazingly powerful tool that is always there for you when you have a few moments to focus on your breath. Bringing awareness to a slow, relaxed exhalation will activate the parasympathetic nervous system helping to reduce the effects of anxiety by reducing stress hormones, heart rate and blood pressure. The practice of lengthening the exhalation can increase the stress-reducing effects even more.



Figure 5: Exhale Retention

1. Recline comfortably with support under your head and knees if needed. Your blanket or pillow will come in handy here, or simply leave the knees bent.

2. Close your eyes and feel your breath moving smoothly in and out of your nostrils.
3. Place your hands on your lower belly and as you inhale, notice if there is a natural lifting of the abdomen, and a gentle softening of the belly on the exhale.
4. Take a normal length inhale, then slowly begin to lengthen your exhale by one or two beats. You do not need to count your breath but try to make the exhale slightly longer than your inhale.
5. This should only be done at a comfortable speed and pace, never to the point of breathlessness or frustration.
6. After five or so breaths with a longer exhalation, notice if there is a natural pause at the end of the exhale where the breath rests.
7. Inhale, long slow exhale, and then pause where the breath is neither moving in nor out.
8. Allow that rest to last for a few beats, then continue breathing.

Repeat this pattern for several minutes, then return to your normal everyday breath pattern.

Savasana (Relaxation Pose)

It is important to give yourself a few minutes at the end of your practice to rest in stillness and silence so that the gifts of the practice can be fully integrated into your body and mind.

1. Recline with your legs extended and feet relaxed to sides.
2. Rest your arms to the sides and turn your palms to face the ceiling.
3. You may use support under your knees for low back pain or add a folded blanket under your head. Relax here for at least 5 minutes.



Figure 6: Relaxation Pose

When you are ready to sit back up, take your time rolling over to your favorite side, resting there for a few moments while you repeat your sankalpa from the beginning of the practice. Then use the strength of your arms to press yourself back up to a seated position. Namaste'

REFERENCES

1. Primeau, A., (2018) *Cancer Recurrence Statistics*, *Cancer Therapy Advisor* <https://www.cancertherapyadvisor.com/home/tools/fact-sheets/cancer-recurrence-statistics/>
2. National Cancer Institute (2019) *Adjustment of Cancer: Anxiety and Distress (PDQ®)-Patient Version* https://www.cancer.gov/about-cancer/coping/feelings/anxiety-distress-pdq#_336
3. Velikova G, Selby PJ, Snaith PR, et al. (1995) *The relationship of cancer pain to anxiety*. *Psychother Psychosom* 63 (3-4): 181-4.
4. Keller, A., Litzelman, K., Wisk, L. E., Maddox, T., Cheng, E. R., Creswell, P. D., & Witt, W. P. (2012). *Does the perception that stress affects health matter? The association with health and mortality*. *Health Psychology*, 31(5), 677–684. doi:10.1037/a0026743
5. Mukherjee, S. (2010) *The Emperor of All Maladies: A Biography of Cancer*. Scribner.
6. Dess, N.K., (2000). *Tend and Befriend: Women tend to nurture and men to withdraw when life gets hard*. *Psychology Today*, <https://www.psychologytoday.com/us/articles/200009/tend-and-befriend>
7. Harvard Medical School (2008, updated 2018) *Yoga for anxiety and depression: Research suggests that this practice modulates the stress response*. Harvard Health Publishing, <https://www.health.harvard.edu/mind-and-mood/yoga-for-anxiety-and-depression> *Journal of the American College of Surgeons*, "Breast Cancer Patients' Fear Exceeds Risk", March 2013: Vol 216(3): 380-386.