

Dear Robin,

Would sessions specifically targeting vagal nerve stimulation be useful as an adjunct to cancer chemotherapy as well as the known benefits of yin yoga and yoga nidra?

—Tony

Dear Tony,

The vagus nerve is the primary nerve of the parasympathetic nervous system (PSNS), the aspect of our nervous system that is responsible for both calming us down and for putting the brakes on our fight-or-flight response (governed by the sympathetic nervous system [SNS]). According to the polyvagal theory proposed by Porges,¹ the stress response can be viewed as the withdrawal of vagal tone to the heart in response to a challenge. Thus, our vulnerability to stress can be assessed by our vagal tone. In other words, the degree to which we can handle the curve balls life throws us without freaking out, acting out, or shutting down is a direct measure of our vagal tone and consequently the health of the vagus nerve.

Cancer and its treatment is certainly a huge life stressor and could challenge even the most calm and grounded of individuals. The good news is that many of our practices in yoga, such as restoratives, yin, and nidra, target activation of the PSNS. However, there are other simple ways of accessing it as well. For instance, focus on extending the exhalation. Exhalation is governed by the PSNS and automatically lowers heart rate. Adding a gentle contraction-release of the abdominal muscles in coordination with the breath increases the vagal tone and will amplify the PSNS effect. Mantra combined with the exhalation can further boost the PSNS. Slowing asana way down so that the slow-twitch rather than fast-twitch muscle fibers are activated is another direct route to PSNS stimulation.

The vagus nerve also mediates the complex social and attachment behaviors that support bonding. It's good to know that the relationship skills we develop as yoga therapists in and of themselves reinforce social engagement, thus positively increasing vagal nerve tone. These include increased eye contact; empathetic facial expression; strong listening skills; soft, encouraging voice tone; and smiling and laughter.

Great question—and one that highlights the incredible potential for yoga therapy to address a multitude of stress-induced conditions that plague many of our clients. Thank you for asking.

Reference

1. Porges, S.W. (2011). *The Polyvagal Theory: Neurophysiological Foundations of Emotions, Attachment, Communication, and Self Regulation*. New York: W.W. Norton Company, Inc.

Dear Robin,

A veteran injured in Afghanistan was recently referred to me. She dislocated her hip, and since returning to the United States has had surgery and intense physical therapy, including the use of machines that, she says, forced her body into painful positions. Before her injury, she used to practice Bikram Yoga. Now, she wants individual coaching to help get her back into shape, and she wants yoga because of its holistic nature and because she wants to use her own body to heal herself. What are some physical cautions that I should be aware of in terms of her hip's tendency to continue "popping out?"

—Kelly

Dear Kelly,

Destabilization of the hip is particularly disconcerting because of the potential impact on everything above and below, including the sacrum, lumbar, and knees. Caution is well advised when doing any kind of deep hip rotation, flexion, or extension of the joint. If your client has not had specific recommendations from her doctor, I'd fol-



low this mode of practice:

Start on the back, non-weightbearing. Work asymmetrically, beginning with her un-injured side to assess her normal range of motion. This will help you both to be more aware of the imposed limitations from the injury when you switch to the other side. Once you get a picture of where she's particularly weak, use adaptations of asanas (still non-weightbearing) that focus her attention on recruiting the necessary muscles to support the joint. Work slowly as in a dynamic cobbler pose, fanning the knees apart and together to develop strength and awareness. I have a rule for my chronic dislocators that they only stretch to three-quarters of their maximum range. Working in a smaller range creates a more controllable movement and avoids any tendency to hang in the ligaments.

It will be very important to bring the core muscles on board as you're working with her, pelvic floor and transverse abdominis especially. Watch her breath, face, etc. In working with someone who has had to cultivate a very high threshold for pain, you may need to coach her to notice her body's discomfort before she's even aware of it. I'd suggest working from the back, side, and belly, exploring the range of movements that are possible in the hip that emphasize the strength of the adductors, abductors, hip flexors, glutes, and rotator muscles.

From there I'd suggest standing work, staying in that three-quarters range or even less. Standing automatically ensures that the muscles around the hips will be recruited and poses like *virabhadrasana I and II* (warrior I and II) can be adapted to bring even more focus on muscle strength with less emphasis on lateral rotation or hip extension. I'd stay clear of poses like *utthita trikonasana* (triangle), especially in the style that emphasizes big hip glide in the socket. That kind of force could lead to dislocation. I would also avoid seated hip openers, or poses like pigeon that offer no protection for the hip and are all about stretch.

Coach her to move very slowly with great control, working dynamically as opposed to statically. This will work on the deeper stabilizers of the hip and help her develop strength and endurance compassionately over time. **YTT**



Robin Rothenberg is an internationally recognized yoga therapist, teaching in hospitals and clinics in the Seattle area. She offers an RYT-500 teacher training and comprehensive yoga therapist training for experienced teachers. Robin is the author of *The Essential Low Back Program: Relieve Pain & Restore Health*, and *Soothing the Spirit: Yoga Nidra to Reduce Anxiety* (CD).