

Restorative Yoga

A few days

after teaching a 2-day workshop for occupational therapists on restorative yoga, we received the following e-mail:

I have to tell you I went back to work today and saw my home care patient I mentioned in class. She is on palliative care, diagnosis of breast cancer with metastasis to the lungs. I did supportive recline pose with her and breath facilitation. When we were done she cried. She said it was the best she had felt in so long. She then mentioned having great trouble lying comfortably in bed. This was something she had not shared before, so it opened the door to work with her and her husband on comfortable sleeping positions as well. What a great opportunity you have given me to provide such wonderful care for my patients... I am realistic, as I know all the patients may not have the same results, but it was well worth it for the one I received today.

Occupational therapy practitioners may ask whether restorative yoga can be used as an occupational therapy intervention. After all, couldn't a client receive the same benefits with a certified yoga instructor? The key difference is that the occupational therapist uses a specific restorative yoga posture to address factors impeding a client's ability to participate in specific occupations. Occupational therapists are able to describe the "features of what one does" to perform an activity (performance skills), identify performance patterns affecting daily life activities, and analyze the activity demands and client factors required for successful performance.¹ This article will demonstrate how restorative yoga can be used within the scope of occupational therapy practice as a preparatory method or purposeful activity "to facilitate the ability of clients to engage in their everyday life occupations" (p. 653).²

WHAT IS RESTORATIVE YOGA?

B. K. S. Iyengar is credited with the development of restorative yoga. He experimented with the use of props to modify traditional yoga poses and help people recover from illness and injury. "Yoga helps integrate the mental and physical plane, and it offers a sense of inner and outer balance, or alignment. True alignment means that the inner mind reaches every cell and fiber of the body."³ Restorative yoga is used to achieve this balance.

In restorative yoga, props such as bolsters, blankets, pillows, towels, and belts are used to support the body in comfortable postures that provide a low-load, prolonged stretch. In this supportive environment the antigravity muscles—mostly extensors—do not have to lift any body weight. The overall muscle tonus can be reduced as the nervous system quiets and the relaxation response is elicited.⁴ This positioning sets the stage for improved learning and healing as the client is better able to perceive and respond to interventions introduced by the therapist.

Restorative yoga is an extremely gentle intervention. However, it should not be used if a client has disc disease, nerve impingement in the neck, spondylolisthesis, or spondylosis, or is recovering from cardiac, thoracic, or spinal surgery until cleared by the physician. If the client expresses any discomfort from being in the pose it should be stopped immediately. Child's Pose is contraindicated during the last two trimesters of pregnancy.

The Mind–Body–Breath Pattern of Disorder

Central to this work is the mind–body connection. The relationship between health and a sense of well-being is directly related to a client's ability to participate in therapy and to re-engage in meaningful day-to-day activities.

How we think about a situation often influences our experience of it. Being worried or anxious about going to therapy because of a past painful or stressful experience can cause increased muscle tension and an inefficient breath pattern, such as chest breathing. This breathing pattern can perpetuate or heighten arousal and muscle tension as the sympathetic nervous system becomes more engaged. With increased muscle tension, the client may experience more pain and further limit movement, which in turn can increase the level of anxiety, thereby inhibiting the ability to focus on critical information and learn new skills. This "pattern of disorder" can keep feeding on itself, causing more distress and dysfunction.

Restorative yoga can be used to disrupt this pattern of disorder. The supportive environment created by the props helps reduce muscle guarding, tension, and pain as gravity provides a gentle stretch. With less pain, the door is open to introduce gentle movement within the posture. As the primary and secondary muscles of respiration release, the diaphragm begins to move more efficiently. The client can then be guided to focus on the movement of his or her breath, which helps anchor the mind in the present and minimize

An Integrative Approach To Promote Occupational Performance

RICHARD SABEL

BILL GALLAGHER

SUMMARY

Restorative yoga can be used to prepare clients to participate in occupation-focused interventions.

distracting thoughts and anxiety. This relaxed, calmer state can facilitate learning because the client is better able to receive pertinent information provided by the therapist.

BENEFITS OF RESTORATIVE YOGA

Research indicates that yoga may be an effective intervention for clients with chronic obstructive pulmonary disease,⁵ heart disease,⁶ asthma,⁷ osteoarthritis,⁸ epilepsy,⁹ burns,¹⁰ stroke,¹¹ multiple sclerosis,¹² chronic pain syndromes,¹³ low back pain,¹⁴ repetitive stress injuries,¹⁵ and edema.¹⁶ The following are some of the specific clinical benefits of

restorative yoga for clients receiving occupational therapy services.

Elongates muscles: A prolonged, low-load stretch has the advantage of facilitating the restructuring of muscle tissue. Restorative postures allow clients to remain still for extended periods so muscles lengthen and broaden gently, without eliciting a stretch reflex.

Facilitates manual therapy: As the client “lets go” and relaxes into the props, the therapist can provide any appropriate manual therapy (i.e., joint mobilization, myofascial release, passive range of motion). In essence, the props provide

the therapist with a second set of hands. The synergistic combination of a supported yoga posture with manual therapy is a powerful way to address soft tissue restrictions, improve flexibility, increase range of motion, and improve motor function.

Promotes the relaxation response: Stress often limits participation in therapy and can sometimes be the most significant impediment to a client’s progress. Prolonged stress has many adverse consequences. Blood pressure, heart rate, respiration rate, blood coagulation, and muscle tension increase during stress. The ability of the body to build muscle strength, digest food, heal wounds, respond to pathogens, and learn new motor patterns is significantly hampered.¹⁷ These physiological effects put long-term optimistic projects (including every aspect of rehabilitation) on the “back burner.” If the fight-or-flight (sympathetic) nervous system is frequently engaged, all organ systems of the body are affected in a way that slows progress toward functional goals. Research suggests that stress is involved in 50% to 80% percent of all

illness.¹⁸ Restorative yoga postures provide an effective means to help clients “switch off” the flight or flight mode and “switch on” the rest-and-digest (parasympathetic) mode, thereby increasing their potential to benefit from therapy.

Facilitates efficient breathing patterns: The average person breathes inefficiently.¹⁸ Common patterns that contribute to inefficient breathing include chest breathing, reverse breathing, collapsed breathing, and hyperventilation. Each of these patterns has adverse effects and may contribute to aberrant muscle tonus; constricted circulation in the abdomen leading to gastrointestinal discomfort; an increased stress response; suboptimal carbon dioxide

levels, which constricts arteries and reduces blood flow to the brain; and less efficient movement, which may make it difficult to learn new movement patterns.¹⁹

Restorative yoga postures promote more efficient breathing. Postures can be selected to gently stretch and release the abdominal, intercostal, and paraspinal muscles, and reduce tension throughout the body, thereby allowing the diaphragm to move with greater ease. After tension is reduced, the client can be taught to coordinate the muscles to breathe diaphragmatically. Improved breathing patterns can have an almost immediate effect on pain and contribute to improved stamina, endurance, and occupational performance. Breath-focused interventions can also have a particularly impressive impact on helping clients with back pain, as the coordination of muscles associated with breathing (transversus abdominus, pelvic floor, and diaphragm) are key to lumbar stabilization.²⁰ Note that restorative yoga addresses inefficient breathing by releasing tension; it does not address the breathing principles often associated with yoga, and which might be contraindicated for clients with pulmonary and related conditions.

Helps manage pain: When pain limits a client's ability to participate in therapy, a restorative yoga posture can be an effective intervention. After being in a posture for 10 to 15 minutes, clients usually report less pain and are often willing to continue the therapy session. If a client refuses to get out of bed but agrees to be set up in a restorative posture, a skilled intervention that can set the stage for improved function can be documented in the medical record.

Helps improve movement: Often times when we teach clients new skills such as incorporating the affected upper extremity into functional movement, bed mobility, or postural control, they use inefficient, compensatory movement patterns that can become habitual and limit long-term progress. Clients often exert too much effort, which impedes their ability to learn more efficient ways of moving. "Sensory learning depends on perceiving differences in stimuli" (p. 6).²¹ Restorative postures may reduce muscle tone and foster improved body awareness, thereby

helping the client to better sense and feel subtle differences when nonhabitual patterns of movement are introduced.

Helps manage edema: Artzberger described how yoga trunk exercises, combined with diaphragmatic breathing and proprioceptive neuromuscular facilitation, can contribute to changes in thoracic pressure.¹⁶ Lymph from the entire body (except the right upper quarter) drains into the thoracic duct and then into the venous system via the left internal jugular vein. The thoracic duct originates as the cisterna chyli in the abdominal cavity. In other words, the alternating compression and suction of diaphragmatic respiration facilitates a pressure change that causes "a suction effect that moves more distal lymph in the trunk and extremities proximal" (p. 2).¹⁶ Restorative yoga postures create the conditions to facilitate this process.

RESTORATIVE POSES

The following are some common restorative poses. The occupational therapist selects a posture to address specific performance skills, performance patterns, or client factors that are limiting occupational performance.

Supported Recline

In this posture the client's body is positioned on props that run the length of the spine, behind the neck, and under the knees (see Figure 1). This pose counteracts the "slumped" sitting and standing posture often observed in many of our clients. Soft tissue restrictions in the pelvis, trunk, arms, and neck due to slumped posture can impede functional movements such as forward reach, transfers, sit-to-stand, and breathing.

If your client has tight hip adductors that impede wheelchair positioning or has "scissoring" lower extremities that limit functional mobility, reposition the



Figure 1. Supported Recline



Figure 2. Side Lying Pose

legs in a "frog" position with the soles of the feet flush and pillows under the knees for support.

Supported Child's Pose

This can be an effective posture for addressing soft tissue restriction or tension in the lower back, pelvis, hips, and knees, which can impede functional activities such as lower-body dressing and getting into bed (see Figure 4 on p. 19).

Side Lying

This is an effective posture for stretching the intercostal and quadratus lumborum (see Figure 2). These muscles are often constricted due to poor posture and improper wheelchair positioning. Side lying pose will open the chest and create more flexibility of the rib cage and spine. Tight intercostal muscles limit movement of the rib cage, thereby restricting respiration capacity and upper-arm function. Side lying pose can also facilitate lateral weight shift and hip hiking for activities such as scooting and toileting.

Legs Up the Wall

This posture elongates the hamstrings while supporting the spine and facilitating venous and lymphatic return from the legs (See Figure 3 on p. 19). It can address hamstring restrictions, which pull the pelvis into a posterior pelvic tilt, thereby inhibiting proper wheelchair positioning and causing lower-back pain. Hamstring tightness also impedes lower-body dressing in a long sit position.



Figure 3. Legs Up the Wall



Figure 4. Supported Child's Pose

Using the Poses for Occupation

Restorative yoga postures lay the foundation for improved function, but the integration of this learning is enhanced when the client is challenged by activities where the antigravity muscles have to support and move the body. Changing body positions relative to gravity, context, and variations in the complexity of movements is an integral component of fostering generalization to occupational performance. For example, a client sits in a posterior pelvic and a slightly kyphotic posture due to soft tissue restrictions. This posture limits the client's ability to perform transfers and reach forward for objects. After being in the supported recline posture for approximately 20 minutes, activities that promote an anterior pelvic tilt and thoracic extension should be used to facilitate movements with the "new" available range. Such activities might include reaching for a telephone or grooming items, retrieving canned foods and seasonings from a cupboard, transferring on and off a toilet, and dressing the upper body as the client demonstrates improved postural control.

Restorative yoga fits within the domain of occupational therapy because it enables the therapist to address individual performance skills, performance patterns, and client factors to promote participation in occupations. For example, improvements in muscle tone and length, and increased awareness of how to move more efficiently, may help improve motor skills (i.e., posture, mobility, coordination, energy). An

increased ability to "quiet the mind" or to be more mindful may improve one's ability to maintain focused attention throughout a task and contribute to improvements in some of the process skills (i.e., attends, chooses, searches/locates, navigates, notices/responds). When movements are used within the yoga postures, nonhabitual patterns are often introduced to counteract dominating habits that interfere with performance.

CASE EXAMPLE

Note: Although this case highlights a client who has had a cerebrovascular accident (CVA), many components of this intervention can be extrapolated to clients with other conditions (e.g., rotator cuff injury, chronic pain, pulmonary disease).

Frank is 75 years old and recently had a right CVA. He is retired, and before the stroke he enjoyed "tinkering with his hands"; he built model airplanes, and he enjoyed woodwork and cooking. Frank was independent in all activities of daily living (ADL) and instrumental ADL. The stroke left him with weakness and limited movement throughout the left side of his body. Upon admission to the inpatient rehabilitation program he required moderate assistance for all of his ADL except donning his shoes and socks, for which he needed maximal assistance. Within a few days of admission, he started to exhibit improved volitional movement of his upper and lower extremities. In sitting he appeared unstable

and presented with a posterior pelvic tilt, kyphosis, rib cage rotation, and lateral flexion. This posture limited his ability to perform transfers or forward reach for objects; increased the effort required to use his arms; and restricted movement of his diaphragm, which contributed to his shallow, rapid breathing (respiratory rate of 24). Frank was cognitively intact, with no visual, perceptual, or sensory deficits. During the initial evaluation he stated he was anxious and experiencing significant pain (7 out of 10 on the pain scale) in his lower back and neck. Movement exacerbated the pain and he fatigued quickly. Frank has a medical history of hypertension, diabetes, and high cholesterol.

Soft Tissue Restriction Impeding Functional Movement

The occupational therapist selected supported recline posture to address many of the factors impeding Frank's occupational performance. The mobility of his pelvis, thorax, neck, and abdominals was improved by the gentle, low-load prolonged stretch of this posture. As Frank relaxed in this biomechanically advantageous position, a variety of handling techniques were used. With the props supporting his thorax in extension, the scapulae were eased closer to midline and gently mobilized by placing both hands between the scapula and the blanket. Passive range of motion of the involved arm was facilitated by the improved alignment. Myofascial release of the pectorals, abdominals, rib cage, neck, arm, and leg further addressed soft tissue

restrictions contributing to his postural asymmetry and instability.

After being in the supported recline posture for 20 minutes, Frank was brought into postures that challenged his antigravity muscles. Sitting on the edge of the mat or bed, the environment around him was modified to challenge this “new” range in a variety of movement patterns. To promote thoracic extension and an anterior pelvic tilt, both important components for forward reach and transfers, appropriate objects (e.g., a telephone, grooming and bathing items) were placed at midline and slightly off midline to the right and left and at different levels, and Frank was asked to reach for them. To facilitate differentiation of the pelvis, which is integral to efficient trunk rotation and ambulation, the objects were repositioned to promote rotation on both sides. Appropriate facilitation of the reach process (verbal or tactile) was used throughout the session.

Breath Facilitation

As Frank rested in the supported recline pose, his inefficient breathing patterns were addressed by having him gently guide his breath into the therapist’s hands, which were resting on his abdominals. The cue “breathe into my hands” was given. After Frank was able to direct his breath easily and consistently in this way, the therapist’s hands were repositioned to the lateral aspect of Frank’s lower ribs and then his lower back. The same verbal cue was given for each of these positions. After this intervention, Frank’s respiratory rate was 11. During therapeutic activities that followed, with verbal cues he maintained a respiratory rate of 14 to 16.

Upper-Extremity Function

Frank’s involved arm was placed at his side, palm down, and a towel was positioned under it. He was cued to slowly abduct his arm, sensing when the forearm wanted to rotate so the palm of his hand faced up. After his forearm rotated, he was asked to rest for a moment and then bring his arm back to his side. Throughout the movement he was cued: “Use only the muscles you need to. If you notice any unnecessary effort, like hiking your

FOR MORE INFORMATION

Complementary and Alternative Medicine (CAM)

By the American Occupational Therapy Association, 2005. *American Journal of Occupational Therapy*, 59, 653–655.

Complementary Therapies and Wellness: Practice Essentials for Holistic Healthcare

By J. L. Carlson, 2003. Englewood Cliffs, NJ: Prentice Hall. (\$48.80 for members, \$69.25 for nonmembers. To order, call 877-404-AOTA or shop online at www.aota.org. Order #1381-MI)

The East West Rehab Institute

The authors teach courses in restorative yoga for rehabilitation professionals. Information on these courses is posted at www.eastwestrehab.com

Relax and Renew: Restful Yoga for Stressful Times

By J. Laseter, 1995. Berkeley, CA: Rodmell.

shoulders or tensing your belly, pause for a moment and start again with less effort.” This process continued until he started to move his arm in a smoother, more coordinated manner. If the range is available, the client can continue to move his or her arm upward. If necessary, the towel can be used for manual assistance.

This exercise was followed by having Frank work in a seated position and reaching for objects placed on a tabletop. As more volitional movement became available, he was challenged to reach for objects without the support of the table.

Pain

After remaining in the supported recline posture for 20 minutes, Frank reported that his pain level had gone down to 1 or 2 out of 10 on the pain scale. He was able to engage more fully in the occupational therapy session and commented that he had less pain and discomfort throughout the day. The nurses were taught how to set up this posture in his hospital bed, and Frank would remark that he was in a state of “nirvana” for the 20 to 30 minutes that he rested on the props.

At discharge, Frank performed his ADL with contact guard, except he required minimal assistance for sock donning. He was preparing simple meals in the kitchen with contact guard

and built a wooden birdhouse with minimal assistance for hammering nails.

Although it is difficult to quantify restorative yoga’s contribution to Frank’s functional gains, he reported less pain and “increased energy” after each session that used a restorative pose. His posture and trunk control improved dramatically, leading to safer transfers and dynamic balance (sitting and standing) during functional activities. He exhibited no shoulder hiking or compensatory trunk movements when reaching for items with his left arm. Frank looked forward to his time in the postures, which remained a key motivating factor throughout his stay at the hospital.

REIMBURSEMENT

“Occupational therapists and occupational therapy assistants must abide by state regulations when billing for occupational therapy services that incorporate the use of complementary and alternative medicine (CAM). They must distinguish between when they are using CAMs within the scope of occupational therapy practice and when they are using CAMs as a primary approach beyond the scope of occupational therapy practice” (p. 654).²

Private insurance companies, Medicare, and Medicaid will reimburse for restorative yoga if it is used and classified as neuromuscular reeducation or therapeutic exercise. If restorative yoga is selected as an intervention to reduce muscle tension, improve respiratory efficiency, or improve postural control or more organized movement, you are providing neuromuscular reeducation. When the key benefit anticipated is increased range of motion, muscle length, or strength, you have provided therapeutic exercise.

CONCLUSION

Occupational therapy interventions are designed to “foster engagement in occupations and in activities to support participation in life” (p. 618).¹ There are many different paths an occupational therapist can take to support this premise. Yoga has existed for more than 2,000 years, and there is a growing body of research to support its efficacy in promoting health. Occupational therapy practitioners have a unique understand-

ing of occupation and the skills required to engage in meaningful occupations. The skillful weaving of restorative yoga with traditional occupational therapy practice provides therapists with a holistic, broad-based approach that can address the diverse needs of the clients we serve. Today, more than 35% of American consumers are already using CAM approaches.²² The inclusion of restorative yoga and other CAM within our practice provides us with an even larger reservoir of resources to support our clients' participation in life. ■

References

- American Occupational Therapy Association. (2002). Occupational therapy practice framework: Domain and process. *American Journal of Occupational Therapy, 56*, 609–639.
- American Occupational Therapy Association. (2005). Complementary and alternative medicine (CAM) position paper. *American Journal of Occupational Therapy, 59*, 653–655.
- Iyengar, B. (2001). *Yoga: The path to holistic health*. London: Dorling Kindersley.
- Laster, J. (1995). Relax and renew: *Restful yoga for stressful times*. Berkeley, CA: Rodmell.
- Behera, D. (1998). Yoga therapy in chronic bronchitis. *Journal of the Association of Physicians in India, 46*(2), 207–208.
- Ornish, D., Scherwitz, L. W., Billings, J. H., Brown, S. E., Gould, K. L., Merritt, T. A., et al. (1998). Intensive lifestyle changes for reversal of coronary heart disease. *JAMA, 280*, 2001–2007.
- Manocha, R., Marks, G. B., Kenchington, P., Peters, D., & Salome, C. M. (2002). Sahaja yoga in the management of moderate to severe asthma: A randomised controlled trial. *Thorax, 57*(2), 110–115.
- Kolasinski, S. L., Garfinkel, M., Tsai, A. G., Matz, W., Van Dyke, A., & Schumacher, H. R. (2005). Iyengar yoga for treating symptoms of osteoarthritis of the knees: A pilot study. *Journal of Alternative and Complementary Medicine, 11*, 689–693.
- Rajesh, B., Jayachandran, D., Mohandas, G., & Radhakrishnan, K. (2006). A pilot study of a yoga meditation protocol for patients with medically refractory epilepsy. *Journal of Alternative and Complementary Medicine, 12*, 367–371.
- Dauber, A., Osgood, P. F., Breslau, A. J., Vernon, H. L., & Carr, D. B. (2002). Chronic persistent pain after severe burns: A survey of 358 burn survivors. *Pain Medicine, 3*(1), 6–17.
- Bastille, J. V., & Gill-Body, K. M. (2004). A yoga-based exercise program for people with chronic poststroke hemiparesis. *Physical Therapy, 84*(1), 33–48.
- Oken, B. S., Kishiyama, S., Zajdel, D., Bourdette, D., Carlsen, J., Haas, M., et al. (2004). Randomized controlled trial of yoga and exercise in multiple sclerosis. *Neurology, 62*, 2058–2064.
- Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry, 4*(1), 33–47.
- Galantino, M. L., Bzdewka, T. M., Eissler-Russo, J. L., Holbrook, M. L., Mogck, E. P., Geigle, P., et al. (2004). The impact of modified Hatha Yoga on chronic low back pain: A pilot study. *Alternative Therapies in Health and Medicine, 10*(2), 56–59.
- Garfinkel, M. S., Singhal, A., Katz, W. A., Allan, D. A., Reshetar, R., & Schumacher, H. R., Jr. (1998). Yoga-based intervention for carpal tunnel syndrome: A randomized trial. *JAMA, 280*, 1601–1603.
- Artzberger, S. (2005, June). A critical analysis of edema control techniques. *Physical Disabilities Special Interest Section Quarterly, 28*(2), 1–3.
- Sapolsky, R. (2004). *Why zebras don't get ulcers: An updated guide to stress, stress-related diseases, and coping* (3rd ed.). New York: Henry Holt.
- Lewis, D. (1998). *Natural breathing: Teachings and exercises for health and self transformation*. Boulder, CO: Sounds True.
- Farhi, D. (1996). *The breathing book: Good health and vitality through essential breath work*. New York: Henry Holt.
- Richardson, C., Jull, G., Hodges, P., & Hides, J. (1999). *Therapeutic exercise for spinal stabilization in low back pain*. Edinburgh, Scotland: Churchill Livingstone.
- Rywerant, Y. (2000). *Acquiring the Feldenkrais profession*. Tel Aviv, Israel: El-Or Ltd.
- Brachtesende, A. (2005). Using complementary and alternative medicine in occupational therapy. *OT Practice, 10*(11), 9–13.

Richard Sabel, MA, OTR, MPH, GCFP, is an assistant clinical professor in the Occupational Therapy Program at SUNY Downstate Medical Center in Brooklyn, New York and is the education director of the East West Rehab Institute in New York City.

Bill Gallagher, PT, CMT, CYT, is a master clinician in integrative rehabilitation at Mount Sinai Medical Center, an instructor in clinical physical therapy at Columbia University, and director of the East West Rehab Institute in New York City.