

# FLEX CEUs



## Integrating Yoga and Physical Therapy



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# Introduction

Yoga is a holistic practice that originated in ancient India and has evolved to take its place in modern society. It encompasses physical movements, breath control, meditation, ethical principles, and philosophical teachings. Yoga practice has the goal of achieving harmony and balance between the body, mind, and spirit. It involves cultivating self-awareness, mindfulness, and a connection to one's inner self, going beyond just physical postures. This course will detail the history of yoga, styles, integration into physical therapy, the benefits of combining yoga and physical therapy, patient populations who benefit from a combined approach, and billing logistics and guidelines for yoga within physical therapy. Physical therapists and physical therapist assistants should understand how to practically integrate yoga and physical therapy after finishing this course.

## Section 1: What is Yoga?

Yoga involves cultivating self-awareness, mindfulness, and a connection to one's inner self. It promotes the idea of finding unity within oneself and with the larger universe. There are various styles and schools of yoga, each of which emphasizes different aspects of the practice. Some styles focus on the physical aspect, aiming to increase flexibility, strength, and overall health. Others emphasize meditation and spirituality, aiming to achieve inner peace, self-realization, and a deeper understanding of existence. This section will explain the history of yoga, styles of yoga, and its relationship to physical therapy practice.

### History of Yoga <sup>1</sup>

The history of yoga spans thousands of years, originating in ancient India. Its roots can be traced back to the Indus Valley Civilization around 2700 BCE, where

archaeological evidence suggests the existence of early yoga practices and symbols. The philosophical foundation of yoga was articulated in the ancient texts known as the Vedas, with the earliest mentions found in the Rigveda, dating back to around 1500 BCE. However, it was in the classical period of Indian philosophy that yoga's principles were explored and expounded upon. Patanjali's "Yoga Sutras," compiled around 200 BCE, provided a comprehensive framework for the practice, outlining the eight limbs of yoga that encompass physical, mental, and spiritual aspects.

Spanning from 500 BC to 800 AD, the classical period stands as a peak of yoga's evolution. This era is a chapter in yoga's history that represents a time of expansive growth. During this time, Vyasa's commentary on the Yoga Sutras was composed, along with the emergence of two influential spiritual beings, Mahavira and Buddha. Notably, Buddha's eight-fold path can be seen as a precursor to the yoga practice. Further exploration can be found within the Bhagavad Gita (a scripture of ancient Indian philosophy) where it intricately discusses the nuances of Gyan Yoga, Bhakti Yoga, and Karma Yoga. These profound teachings go beyond time's limitations, maintaining their deep relevance within a modern context.

Throughout its evolution, yoga took on various forms and schools of thought, each emphasizing different aspects of the practice. Hatha yoga, which emerged in the 9th century, emphasized physical postures and breath control, and set the stage for the physical yoga practices seen today. In the late 19th and early 20th centuries, yoga gained attention in the West as Indian teachers began to share their knowledge abroad. This led to the popularization of yoga as a system for physical and mental well-being.

In the modern era, yoga has transcended cultural boundaries and become a global phenomenon. Its adaptability and versatility have led to the emergence of numerous yoga styles catering to different needs and preferences, from vigorous

physical practices to meditative and contemplative approaches. Today, yoga continues to evolve and thrive as a holistic practice that offers not only physical benefits but also a path to self-discovery, mindfulness, and a deeper connection to the inner self.

## **Styles of Yoga <sup>2</sup>**

Yoga has evolved over the centuries to encompass a wide array of styles, each emphasizing different aspects of the practice. These styles cater to various preferences, goals, and levels of physical and mental fitness. This section outlines the basics around twelve different styles of yoga.

### ***Hatha Yoga***

Hatha yoga is one of the foundational styles that focuses on physical postures (asanas) and breath control (pranayama). It's a comprehensive approach that aims to create balance between the body and mind. Hatha classes typically include a combination of static poses, breath work, and relaxation techniques, making it accessible to practitioners of all levels.

### ***Vinyasa Yoga***

Also known as flow yoga, vinyasa yoga synchronizes breath with movement as practitioners transition through a series of poses. It's dynamic and fluid, encouraging a continuous flow that builds strength, flexibility, and endurance. Vinyasa classes can vary in intensity, making them suitable for both beginners and experienced practitioners.

## ***Ashtanga Yoga***

Ashtanga yoga follows a structured sequence of poses that are practiced in the same order every time. It's physically demanding, involving a series of flowing movements and rigorous postures. This style emphasizes strength, flexibility, and discipline. Ashtanga is typically recommended for those with some prior yoga experience.

## ***Iyengar Yoga***

Iyengar yoga places a strong emphasis on precise alignment and uses props like blocks, straps, and bolsters to help practitioners achieve correct postures. The focus on alignment makes it suitable for people recovering from injuries and those looking to develop a strong foundation in yoga.

## ***Bikram Yoga***

Also known as "hot yoga," Bikram yoga involves practicing a set sequence of 26 poses in a heated room. The heat is believed to enhance flexibility and detoxification. Bikram classes are consistent and structured, which can be beneficial for those who thrive in a routine.

## ***Yin Yoga***

Yin yoga is a slow-paced style that involves holding passive poses for extended periods, often focusing on seated and supine poses. It targets the connective tissues and encourages deep relaxation. Yin yoga is a meditative practice and complements more active styles.

## ***Restorative Yoga***

Restorative yoga focuses on relaxation and rejuvenation. It uses props to support the body in gentle poses, allowing for deep relaxation and stress release. This style is particularly beneficial for reducing stress, anxiety, and promoting overall well-being.

## ***Kundalini Yoga***

Kundalini yoga combines dynamic movements, breathwork, meditation, and chanting to awaken spiritual energy. It aims to balance the chakras and promote spiritual growth. Kundalini classes can be both physically and mentally invigorating.

## ***Power Yoga***

Inspired by Ashtanga and Vinyasa, power yoga is a vigorous style that emphasizes strength and athleticism. It often includes challenging poses and sequences designed to build endurance and enhance physical fitness.

## ***Sivananda Yoga***

Sivananda Yoga is a holistic and traditional style of yoga that was developed by Swami Sivananda (1887-1963) and later popularized by his disciple Swami Vishnudevananda. It is rooted in the teachings of classical hatha yoga and incorporates physical postures, breath control, relaxation, diet, positive thinking, and meditation as a means to achieve overall well-being and spiritual growth.

## ***Prenatal Yoga***

Prenatal yoga is a specialized form of yoga designed to support expectant mothers throughout their pregnancy journey. It focuses on gentle and safe practices that promote physical well-being, emotional balance, and preparation for childbirth. Prenatal yoga is tailored to the changing needs of pregnant women, offering modifications and postures that accommodate the growing belly and the unique challenges of pregnancy.

## ***Aerial Yoga***

Aerial yoga, also known as anti-gravity yoga, is a unique and innovative style of yoga that incorporates the use of a suspended hammock or fabric swing. This hammock is hung from the ceiling and supports various yoga poses and movements, allowing practitioners to experience yoga in a suspended, aerial environment. Aerial yoga combines traditional yoga poses, Pilates, and acrobatics to create a dynamic and challenging practice.

## ***Acro Yoga***

Acro yoga is a dynamic and interactive style of yoga that combines acrobatics, yoga, and therapeutic practices. It involves two or more individuals working together to create a collaborative and playful practice that often includes elements of balance, strength, flexibility, communication, and trust-building.

Each style of yoga focuses on specific purposes including physical postures, mindfulness, spirituality, and inner peace. The background of understanding these styles can prepare physical therapists and assistants to implement yoga into their physical therapy practice.

## The Introduction of Yoga in Physical Therapy <sup>3</sup>

In the late 20th century, as the popularity of yoga increased in the Western world, healthcare professionals began to explore its potential therapeutic applications. Physical therapists started recognizing that the principles of yoga, such as gentle movement, breath awareness, and mindfulness, could complement traditional physical therapy techniques to enhance rehabilitation outcomes.

The integration of yoga into physical therapy was also spurred by research demonstrating its effectiveness in improving flexibility, strength, balance, and reducing pain. Additionally, yoga's focus on stress reduction and its positive impact on mental well-being aligned with the comprehensive approach that modern physical therapy strives to provide.

The majority of early integration of yoga in physical therapy practice was through certified yoga teachers who were also physical therapists. The benefits of integrating yoga into physical therapy practice, as summarized by physical therapists who practice both with patients, are as follows. Yoga and physical therapy combination allows physical therapists to treat their patients more holistically, it addresses psychosocial considerations through mindfulness practice, and it may give patients a foundation or interest in developing a yoga practice for general health and wellness after physical therapy sessions are over. Physical therapists should have some sort of background in yoga themselves or be certified yoga therapists to fully implement yoga practice into physical therapy care, beyond exercises that mimic yoga poses. It is imperative that clinicians use appropriate terminology, bill appropriately, document progress, and evaluate outcomes of using yoga in physical therapy practice to understand whether it is working for their patients.

Today, yoga is often seen as a valuable adjunct to traditional physical therapy, offering patients a more holistic and personalized approach to their recovery.

While the history of yoga's introduction to physical therapy is relatively short, its impact has been profound, contributing to a more well-rounded and patient-centered approach to rehabilitation and healing.

## **Difference Between Yoga Therapist and Physical Therapist <sup>4</sup>**

Although yoga therapists and physical therapists may overlap in scopes of practice, training and certification are quite different. Of course, clinicians may be certified as both, which allows them to practice within both specialties. This section will detail the distinction between yoga therapists and physical therapists to help clinicians understand the background of both professions.

### ***Yoga Therapist***

#### **Education and Training**

Yoga therapists typically undergo specialized training in yoga therapy programs, which may range from 200 to 1000 hours of instruction. These programs cover anatomy, physiology, pathology, and various therapeutic yoga techniques. Training emphasizes adapting yoga practices to address specific physical, emotional, and mental health concerns.

#### **Scope of Practice**

Yoga therapists focus on using yoga practices to support holistic healing and wellness. They work with individuals dealing with a range of conditions, both physical and psychological, including stress, anxiety, chronic pain, and more. Yoga therapists design individualized yoga programs that consider a person's medical history, lifestyle, and goals.

## **Certification**

Yoga therapy is a relatively unregulated field, and there isn't a standardized certification process. However, various organizations offer certifications that signify completion of specific training programs and adherence to ethical guidelines. Yoga therapists may choose to pursue certification from organizations like the International Association of Yoga Therapists (IAYT). This certification is known as a Certified Yoga Therapist, or a C-IAYT.

## ***Physical Therapist and Physical Therapist Assistant***

### **Education and Training**

Physical therapists (PTs) require formal education from accredited physical therapy programs, at the doctoral level (Doctor of Physical Therapy or DPT). Physical Therapist Assistants (PTAs) require an Associate Degree in a Physical Therapist Assistant program. These programs include comprehensive coursework in anatomy, biomechanics, physiology, and clinical practice. Clinical rotations provide hands-on experience in various healthcare settings.

### **Scope of Practice**

PTs diagnose and treat physical impairments, injuries, and conditions that affect mobility and functionality. PTs and PTAs use evidence-based techniques, therapeutic exercises, manual therapy, and modalities to restore movement, reduce pain, and improve overall physical health. PTs work in hospitals, clinics, rehabilitation centers, and more.

### **Certification and Licensing**

After completing their DPT program, physical therapists need to pass a national licensing examination to practice. PTAs must pass a licensing examination after

completion of their PTA program as well. Additionally, some PTs pursue board-certified specialist certifications in areas like orthopedics, neurology, or pediatrics to further specialize their skills.

In summary, yoga therapists specialize in using yoga practices for holistic healing, focusing on personalized programs to address physical, emotional, and mental well-being. They may hold certifications from recognized organizations. Physical therapists, on the other hand, complete doctoral-level education and are licensed healthcare professionals who diagnose and treat physical conditions with evidence-based techniques. Their training includes clinical practice and specializations obtained through certifications. While the training paths and focuses differ, both professions contribute to improving individuals' overall health and quality of life.

## **Section 1 Key Words**

Ashtanga Yoga - A physically demanding yoga style that follows a structured sequence of poses that are practiced in the same order every time

Kundalini Yoga - A style of yoga that combines dynamic movements, breathwork, meditation, and chanting to awaken spiritual energy

Certified Yoga Therapist - A professional who has completed specialized training and education in the field of yoga therapy

## **Section 1 Summary**

Through understanding the history and styles of yoga, physical therapists and physical therapist assistants will be prepared to integrate yoga into physical therapy practice. The integration of physical therapy and yoga is also important to understand as a foundation to utilizing yoga practice in plans of care. In addition,

physical therapists and assistants have a much different training level than yoga therapists, and both professions must understand the difference and collaborate.

## **Section 2: Combining Yoga and Physical Therapy**

Combining yoga and physical therapy involves integrating the principles, practices, and methodologies of both disciplines to provide a holistic and comprehensive approach to healing, rehabilitation, and well-being. This fusion capitalizes on the strengths of each field to create an approach that addresses both the physical and mental aspects of health.

### **Benefits on Autonomic Nervous System (ANS) <sup>5</sup>**

The benefits of yoga are clear in the effects on the ANS. Yoga practice can influence everything from cardiovascular health to mental health. The autonomic nervous system consists of two branches, the sympathetic (fight-or-flight) and the parasympathetic (rest-and-digest) nervous systems. Yoga practices play a crucial role in restoring balance between these branches. While the sympathetic response prepares the body for action in times of stress, the parasympathetic response promotes relaxation and recovery. Yoga's emphasis on deep breathing, mindfulness, and meditation stimulates the parasympathetic nervous system, reducing blood stress hormone levels of cortisol, epinephrine, and norepinephrine, leading to reduced stress levels. Techniques like progressive muscle relaxation, body scanning, and guided imagery activate the relaxation response, counteracting the body's stress hormones and promoting a sense of calm. In addition, yoga has been linked to improved heart rate variability (HRV), which is a key indicator of the flexibility of the ANS. Higher HRV reflects a balanced autonomic nervous system, indicating a better ability to respond to stressors and adapt to changing circumstances. The regular practice of yoga

enhances HRV, contributing to improved cardiovascular health. Yoga's impact on the ANS can help regulate blood pressure. Deep breathing, relaxation techniques, and yoga postures that promote relaxation lead to vasodilation, which in turn can lower blood pressure and reduce the risk of cardiovascular issues. Yoga's emphasis on breath control (pranayama) has a direct influence on the autonomic nervous system. Slow, controlled breathing stimulates the vagus nerve, triggering a relaxation response. This enhances lung function, oxygen exchange, and respiratory efficiency. Yoga's impact on the ANS is also tied to neuroplasticity, or the brain's ability to reorganize and adapt. Mindfulness practices, meditation, and yoga postures have been associated with positive changes in brain structure and function, leading to improved mood, reduced anxiety, and better emotional regulation. Yoga practices that stimulate the parasympathetic response aid digestion by promoting increased blood flow to the digestive organs. This leads to improved nutrient absorption, reduced gastrointestinal discomfort, and better overall digestive function. Yoga's influence on the autonomic nervous system can help manage pain as well. By promoting relaxation and activating the parasympathetic response, yoga can lower pain perception and improve pain tolerance, making it a valuable tool for individuals dealing with chronic pain. Lastly, relaxation and mindfulness techniques can improve sleep quality.

In essence, yoga's impact on the autonomic nervous system demonstrates its potential as a powerful tool for managing stress, enhancing relaxation, and promoting overall well-being. Through consistent and mindful practice, individuals can harness the benefits of yoga to foster a balanced autonomic nervous system response.

## **Benefits on Flexibility <sup>6</sup>**

One of the major benefits of yoga is increased muscular flexibility. Yoga poses involve both active and passive stretching. Active stretching, as seen in dynamic sequences, engages the muscles being stretched while moving through a range of motion. Passive stretching allows muscle fibers to elongate gradually with prolonged poses. Yoga improves flexibility moderately compared to control groups who do not participate in yoga. Regular yoga practice can lead to neuromuscular adaptations that enhance flexibility. Muscle spindles, sensory receptors within muscles, become less sensitive to stretching over time, allowing muscles to stretch further before signaling a stretch reflex. Holding yoga poses triggers the Golgi tendon organs, which inhibit muscle contraction and promote relaxation. This stretch-relaxation response allows muscles to stretch deeper without triggering a protective contraction. In addition, regular yoga practice creates more pliable fascia, contributing to increased joint mobility and flexibility. Yoga's joint movements stimulate the production of synovial fluid, contributing to more fluid joint movement and greater flexibility. The practice of yoga also focuses on the mind-body connection, and practices that concentrate on alleviating tension in muscles can also improve flexibility.

## **Benefits on Psychology <sup>7</sup>**

Yoga's influence on psychology is profound, as it goes beyond the physical realm to deeply impact mental and emotional well-being. Through a combination of mindful movement, breath control, meditation, and philosophical teachings, yoga offers a holistic approach to enhancing psychological health.

Yoga practices influence the brain's structure and function. Meditation, as a part of yoga practice, has been shown to increase gray matter density in brain regions associated with attention, emotional regulation, and self-awareness. The Default

Mode Network (DMN), responsible for mind-wandering and self-referential thoughts, becomes less active during meditation, indicating reduced rumination and improved focus. Yoga also stimulates the release of neurotransmitters like gamma-aminobutyric acid (GABA), which has calming effects on the nervous system and is associated with reduced anxiety and enhanced mood. Increased levels of serotonin, dopamine, and endorphins are observed in individuals who regularly practice yoga and meditation. This allows enhanced mood and happiness among people who practice yoga. Yoga's stress-reduction effects are tied to the modulation of the hypothalamic-pituitary-adrenal (HPA) Axis. Regular practice leads to decreased cortisol secretion, reducing the body's stress response and preventing chronic stress-related health issues. Gray matter in the brains of those who practice yoga regularly actually increases. This allows better memory, attention, cognitive flexibility, and emotional regulation.

By influencing neurophysiological, neurochemical, and neuroanatomical aspects of the brain, yoga has a profound impact on psychological well-being. The technical mechanisms described in this section highlight how yoga practices enhance emotional regulation, cognitive function, stress response, and overall mental health.

## **Benefits on Pain Management <sup>8</sup>**

The benefits of yoga for pain management are rooted in its multifaceted impact on pain perception, neural pathways, stress response, and emotional regulation. The combination of physical movement, mindfulness, and relaxation techniques creates a comprehensive approach to alleviating pain and improving overall quality of life.

Yoga has several effects on neurophysiological and neurochemical mechanisms. Yoga affects descending inhibition. It activates the brain's descending pain

modulation pathway. This involves the release of endogenous opioids that inhibit pain signals at the spinal cord level, reducing the transmission of pain sensations. Yoga affects the Gate Control Theory as well. Yoga engages large-diameter sensory fibers through gentle movements and stretches. This activation of non-painful sensory input closes the "pain gate," diminishing the perception of pain. Yoga practice stimulates the release of endorphins, which interact with mu-opioid receptors in the brain and spinal cord. Endorphins have analgesic effects, reducing pain sensation and enhancing mood. Yoga's relaxation techniques and mindful practices positively influence serotonin levels. Serotonin plays a role in pain modulation and mood regulation, contributing to pain relief. Yoga also affects cognitive neuroplasticity. Chronic pain can lead to cortical remapping that amplifies pain perception and yoga can help make adaptive changes in cortical areas, leading to reduced pain sensitivity.

Yoga also has an anti-inflammatory and stress modulating effect. Chronic pain often involves inflammation. Yoga's stress reduction techniques lower the production of pro-inflammatory cytokines and increase anti-inflammatory cytokines, alleviating pain-related inflammation. Yoga's relaxation techniques influence the hypothalamus-pituitary-adrenal (HPA) axis, reducing cortisol secretion. Lower cortisol levels lead to decreased pain sensitivity and improved stress coping. Yoga also helps achieve distraction and acceptance of pain. Yoga practices provide a focused point of attention, diverting the mind from pain. Concentration on breath, movement, or meditation creates a cognitive shift that diminishes pain perception. Acceptance of the present is also a key cognitive goal of yoga, which can help individuals cope with pain.

## Common Disorders that Yoga Benefits

Yoga can benefit just about anyone, at any age, and with any condition from injury to neurological disorder. This section will outline specific conditions, like orthopedics, chronic pain, mental health disorders, and neurological conditions that have known measurable benefits of yoga practice.

### *Orthopedic* <sup>9</sup>

Orthopedic ailments, from osteoarthritis to sports injuries, can benefit from the increase in flexibility, strength, and joint stability that yoga can offer. Ten-to-fifteen-minute sessions of both strength and flexibility building yoga daily can significantly improve knee, back, and shoulder orthopedic pain. This is true compared to a control group of traditional physical therapy, and with sports injuries or chronic orthopedic pain.

For low back pain, yoga poses that gently stretch and strengthen the back muscles, such as Cat-Cow, Child's Pose, and Bridge Pose, can help relieve muscle tension and improve spinal flexibility. In addition, poses that promote core strength, like Plank and Boat Pose, provide stability and support to the lower back.

For neck pain, gentle neck stretches and movements like Neck Rolls and Shoulder Shrugs can help release tension in the neck and shoulder area. Mindful relaxation techniques and slow breathing can help relax the muscles and reduce stress-related neck pain.

For osteoarthritis, gentle poses like Warrior II, Triangle Pose, and Seated Forward Fold can help maintain joint mobility and alleviate stiffness. Chair yoga or restorative yoga can provide support while targeting affected joints, like knees and hips. Chair yoga is also safer for older adults at a risk of falling.

For knee pain, poses that strengthen the quadriceps, hamstrings, and hip muscles, like Warrior I and Bridge Pose, can provide stability to the knee joint. Gentle stretches for the hip flexors and hamstrings can also help alleviate stress on the knees.

For hip pain, hip-opening poses like Pigeon Pose and Butterfly Pose can help increase hip flexibility and reduce discomfort. Strengthening poses for the glutes and core muscles can provide support to the hip joints.

For foot and ankle issues, balance poses like Tree Pose and Warrior III can help strengthen the ankle and foot muscles. Gentle calf and Achilles stretches can alleviate tension in the lower legs.

### ***Chronic Pain*** <sup>10</sup>

Yoga has multiple avenues to help alleviate chronic pain. Between the physical and psychological benefits discussed in a prior section, yoga is one of the best and longest used methods to alleviate pain. Regular practice of Iyengar and Hatha forms of yoga yield low to moderate improvements in chronic pain after months of follow up. The challenge with studying yoga's effect on chronic pain is controlling variables such as pain location, type of yoga, frequency and duration of practice, and the daily life of individuals in trials.

### ***Neurological Conditions*** <sup>11</sup>

Yoga has benefits for those with several neurological conditions. In populations at risk for falls due to a past cerebrovascular accident (CVA), dementia, and Multiple Sclerosis, there is moderate evidence to reduce fall risk significantly. There is not enough evidence for yoga to reduce fall risk for those with Parkinson's Disease (PD) and Traumatic Brain Injury (TBI), however. Yoga postures and facilitating a

mind-body connection can help improve postural control, flexibility, strength, relaxation, and help to reduce anxiety and stress. Yoga also improves neuroplasticity, focus, and memory, which are tremendously helpful in rehabilitation after CVA and TBI.

Yoga therapy and physical therapy for patients with neurological conditions and those at high fall risk should be implemented gradually and with monitoring to ensure patient safety. Patients with balance and coordination deficits may need to start with chair yoga and guarding by the therapist. Over time, positions in quadruped, standing, and kneeling, can improve proprioception, coordination, and motor control in those with movement deficits.

In addition, patients with Parkinson's Disease can benefit from yoga for balance, coordination, and spinal mobility. Movements that emphasize spinal flexibility, like the cat-cow and trunk rotation, as part of a regular practice can help slow the progression of axial proximal stiffness that can occur as Parkinson's Disease progresses.

All neurologic rehabilitation should be individualized and progressed as neurologic deficits begin to improve. Physical therapists should implement yoga poses that specifically challenge musculoskeletal and neurologic deficits in their patients. For example, the cat-cow exercise can be a challenging one for those patients who have poor motor control of the upper extremity following a CVA. The cat-cow exercise encourages shoulder stability and neuromuscular control.

### ***Cooccurring Mental Health Disorders*** <sup>12</sup>

Yoga can be helpful to ease symptoms of several mental health disorders, like anxiety and depression, with its many benefits on the nervous system and one's perception. In a systematic review, compared to a control, regular yoga practice significantly improved symptoms of Major Depressive Disorder (including

depressive and anxiety symptoms). Patients also had a positive perception of participating in yoga, citing they felt safe and accomplished during and after sessions.

Yoga practice emphasizes mindfulness, self-compassion, social connection, and stress reduction, allowing participants to feel connected to themselves and others. Although many patients in physical therapy with cooccurring mental health disorders need professional mental healthcare, yoga can be a great long-term strategy to achieve balance between mental and physical health.

## **Section 2 Key Words**

Gamma-Aminobutyric Acid (GABA) - A neurotransmitter in the central nervous system that plays a crucial role in regulating brain activity and promoting relaxation

Heart Rate Variability (HRV) - Measures the variability in the time gaps between heartbeats, giving insight into the balance between the sympathetic and parasympathetic nervous systems

Gate Control Theory - A pain theory in which a "pain gate" in the spinal cord either facilitates or inhibits pain signals from reaching the brain

## **Section 2 Summary**

Yoga can help many individuals in pain, coping with injuries, neurological disorders and others achieve improvements in strength, flexibility, cardiovascular health, stress management, and mental health. It has profound benefits as an integrative part of physical therapy and a stand-alone practice.

## Section 3: Billing and Guidelines

Physical therapy and yoga are two different approaches to healing. They should be treated independently for those who are not certified in both therapies. Billing and guidelines are important for physical therapists and assistants to be aware of as they integrate yoga into their PT practice.

### Billing Codes for Yoga Based Exercises <sup>13</sup>

Billing for yoga therapy is typically not reimbursable by insurance, but it is becoming more common for insurers to consider covering if it is deemed medically necessary, from yoga therapists. As for physical therapy, there are no CPT codes that are strictly “yoga”. Physical therapists and assistants should bill integrated yoga exercises and mindfulness techniques under the most fitting CPT code. Commonly used codes are outlined below.

**97110: Therapeutic exercise.** Therapists should use this code if the purpose of yoga exercises is to improve strength, flexibility, range of motion, endurance, and functional ability.

**97112: Neuromuscular re-education.** Therapists should bill this code if the focus of yoga postures is on improving movement, balance, coordination, kinesthetic sense, posture, and proprioception.

**97530: Therapeutic activity.** Therapists should use this code if the purpose of yoga integrated therapy is improving functional performance and range of motion. An example of this is integrating functional yoga exercises to reach for dishes in a cupboard.

**97150: Group therapeutic procedures.** Therapists should use this if they teach a group class where all participants benefit from yoga integrated physical therapy.

An example of this is chair yoga for older adults with balance deficits and fall risk. Many insurances have limits on group therapy, which is something therapists should be mindful of.

## **Guidelines for Integration of Yoga into Physical Therapy <sup>3</sup>**

Over time, specialized training programs and certifications emerged that equipped physical therapists with the knowledge and skills to safely and effectively integrate yoga techniques into their treatment plans. This integration might involve using yoga postures, breathing exercises, and relaxation techniques tailored to the needs and limitations of each patient.

Physical therapists and assistants may pursue certifications as a yoga therapist. This means they would have the background in both disciplines. Of course, billing should be for which specialty they are using in treatment. The highest level of certification is through the International Association of Yoga Therapists (IAYT). Programs vary in length but can take anywhere from a few months to a year.

Physical therapists and assistants can also attend workshops, continuing education, therapeutic yoga training, and other programs to implement yoga into their PT practice. They may only declare they are a “yoga therapist” if they have the IAYT certification.

In an ideal world, many patients would benefit from the expertise of an experienced yoga therapist and a physical therapy plan of care simultaneously. However, due to many barriers, such as time and finances, many patients are not able to pursue both. Integrating yoga into physical therapy is a way to reap the benefits of both practices. Patients who can accommodate a yoga practice and physical therapy plan of care, and would benefit from yoga, should be referred to a qualified yoga therapist.

### ***Using the Term Yoga*** <sup>3</sup>

When surveyed, very few physical therapists or assistants use the term “yoga” in their documentation and aloud to patients. Instead, using terms like “mindfulness”, “deep breathing”, or “dynamic stretching” can be more useful in specifying the purpose of the yoga technique. Insurers are more likely to accept documentation that is specific and does not use “yoga” as a blanket term. In addition to that, the term “yoga” may have assumptions or bias associated with it. To a patient who is unfamiliar with yoga practice, it could seem like an unachievable task or a practice they are not interested in. On the other hand, for patients who have a good rapport with their therapist and interest in yoga, using the term may be a helpful way to integrate it into physical therapy.

### **Common Yoga-Based Physical Therapy Exercises** <sup>10,14</sup>

Physical therapists and assistants may already use several yoga-based exercises in their physical therapy plans of care. Examples are the Cat-Cow stretch, Child’s Pose, Downward Dog, the Bridge pose, Seated Spinal Twists, and the Cobra pose.

#### ***Cat-Cow Stretch***

The purpose of Cat-Cow is spinal mobility, core activation, and increased flexibility through the arching (cow) and rounding (cat) positions. It may be helpful for those with spinal hypomobility, spinal pain, and core weakness.



<https://www.popsugar.com/fitness/how-do-cat-cow-pose-26662589>

### ***Child's Pose***

Child's pose is a relaxation pose that allows a gentle hip stretch and thoracic spine mobility. It is helpful for patients with spinal pain, stiffness, and hip mobility issues.



<https://www.yogajournal.com/poses/child-s-pose/>

### ***Downward Dog***

Integrating downward dog into physical therapy practice is an excellent tool to build upper body strength and shoulder stability, to improve spinal mobility into extension, to stretch the hamstrings and calves, and to activate the core.



<https://www.ekhartoyoga.com/resources/yoga-poses/downward-facing-dog-pose>

## ***Bridge Pose***

The bridge pose is an excellent way to strengthen the deep core, glutes, and hamstrings, to improve balance and stability, to mobilize the lumbar spine, and to dynamically stretch the hip flexors.



<https://www.yogajournal.com/poses/bridge-pose/>

## ***Seated Spinal Twists***

Seated spinal twists work to improve spinal mobility, posture, and core strength. Many variations, such as from a chair or the floor, can be made for safety.



<https://www.yogajournal.com/poses/seated-spinal-twist-detox-yoga-2/>

## **Cobra Pose**

The Cobra pose improves spinal extension, upper back strengthening, posture, and core activation.



<https://www.yogajournal.com/poses/cobra-pose-2/>

These exercises provide some insight into integrated yoga practice into physical therapy. In addition to the physical poses, patients can be instructed in various mindfulness techniques and controlled inhalation and exhalation.

### **Section 3 Key Words**

Therapeutic Exercise - Refers to the CPT code in physical therapy practice that represents exercise to improve strength, range of motion, and functional capacity that yoga exercises can be billed as

International Association of Yoga Therapists (IAYT) - A professional organization dedicated to promoting and teaching yoga as a healing art and science

### **Section 3 Summary**

Physical therapy and yoga are independent patient care practices. Physical therapists may implement yoga exercises into therapy in terms of postures and mindfulness, as long as they do not use the term “yoga therapist” in their practice (unless they are certified). Billing practices and guidelines are important for physical therapists and assistants to be aware of as they integrate yoga into their PT practice.

## Case Study

Jane, a 45-year-old office worker, presented to a physical therapy evaluation with a history of chronic lower back pain that had persisted for over three years. Her pain was exacerbated by prolonged sitting at her desk and occasional lifting of heavy objects. She had tried various treatments, including pain medications and occasional chiropractic sessions, with limited relief. Jane's goal was to reduce her pain, improve her flexibility, and learn strategies for managing her condition independently. Upon assessment, Jane demonstrated reduced lumbar spine flexibility, muscle imbalances, decreased core strength, and poor tolerance and distress during certain movements.

### Reflection Questions

1. What yoga-based interventions may help Jane work through her back pain?
2. What might be a way to build rapport with Jane regarding yoga-based interventions in physical therapy?
3. If the physical therapist works on instructing Jane on pelvic tilts, bridges, and deep breathing to improve range of motion and strength, what would be an appropriate CPT code to bill.

### Responses

1. Gentle movement sequences like cat cow, pelvic tilts, and mindful breathing would be a good place to start given Jane's irritable back pain. In addition, core strengthening through yoga-based exercise poses, like the bridge, will go a long way to reduce back pain.

2. The physical therapist should ask questions regarding Jane's familiarity with yoga practice and explain that she would benefit from some of the dynamic stretching and strengthening that yoga-based movements have to offer. If Jane is uncomfortable trying exercises based on calling them "yoga", the physical therapist may proceed by teaching core stability, lumbar mobility, and mindfulness exercises without using the term "yoga".
3. Therapeutic exercise (97110) is the appropriate code to bill for improving movement quality, strength, and range of motion.

## Conclusion

Yoga practice is holistic and combines physical movements, breath control, meditation, ethical principles, and philosophical teachings. Yoga has a goal of achieving harmony and balance between the body, mind, and spirit. It has positive implications when integrated into physical therapy practice, by physical therapists and assistants with the knowledge and skills to do so. Almost any patient could benefit from yoga practice, and specifically those with orthopedic conditions, neurologic conditions, chronic pain, and mental health disorders. This course has overviewed the benefits and logistical implications of integrating yoga and physical therapy practice to prepare clinicians to enhance their physical therapy practice.

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