**Watsu® In Aquatic Rehabilitation**

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**Learning Objectives**

At the conclusion of this chapter, the reader will be able to:

- Describe the historical origins of Watsu.
- Describe the physiologic benefits of Watsu.
- Describe patient populations for whom Watsu might be appropriate.
- Describe potential outcomes of using Watsu clinically.
- Describe potential risks when utilizing Watsu.

**Historical Perspective**

For nearly 100 years aquatic therapy has progressed with the continual development and refinement of equipment and techniques to benefit patients in countless ways. The progress has been like a tree expanding and growing branch after branch with remarkable benefits for patients. Then in the early 1980s an entirely new tree, known as aquatic bodywork, emerged and flourished, with Watsu as the main trunk. In the field of aquatic rehabilitation, Watsu presented exciting new ways for therapists to treat patients in the water. Watsu and the evolving forms of related aquatic bodywork have propelled aquatic therapy into an entirely new direction - one that has added immensely to the benefits of aquatic rehabilitation for a wide variety of patient populations.

In the early 1980s Harold Dull, with his background in creative arts, poetry and English teaching, had been studying Shiatsu for five years with Zen Shiatsu master Masunaga. At the time, Dull was teaching at the School of Shiatsu and Massage at Harbin Hot Springs in California. He began creatively experimenting and adapting Zen Shiatsu's meridian stretches for people while he was floating them in
the warm water pools at Harbin. He also incorporated Zen Shiatsu's emphasis on connecting with the breathing pattern of each receiver and establishing a meditative presence during sessions.

Dull discovered that this adapted Shiatsu in warm water induced deep relaxation and affected people profoundly at physical and emotional levels. Soon Dull's work evolved into its own unique form of aquatic bodywork, which was named Watsu for its combination of water and Shiatsu.

Dull's background was not in a medically oriented field, and his original volunteers for practicing and developing Watsu were primarily the massage practitioners and yoginis who lived and worked at Harbin Hot Springs. However, by the late 1980s and early 1990s, physical therapists and other traditional healthcare providers began to utilize Watsu and adapt it for their patients with a wide range of orthopedic and neurologic conditions. Initially there was some resistance to Watsu by those trained in western medicine due to Watsu's roots in Shiatsu and the close physical contact between the Watsu practitioner and the receiver.

Since those early years, thousands of healthcare providers have been introduced to Watsu at aquatic therapy and Watsu seminars around the world. Watsu has gained a foothold in the medical community with increasing numbers of therapists incorporating it into their aquatic treatment sessions and witnessing the extraordinary benefits for their patients. Today Watsu is utilized around the globe as a recognized and valuable tool in aquatic rehabilitation.

THE USES AND MODIFICATIONS OF WATSU IN REHABILITATION

In rehabilitation, we know the importance of looking at each patient as an individual. We strive to consider the needs of the entire person, including physical, cognitive, and psychosocial aspects. At the same time, we are under tighter and tighter pressure to improve each patient’s functional status as quickly as possible. Watsu is a passive form of aquatic therapy, and yet when used as a part of a patient’s rehabilitation program, it can help address many different needs. It
can help improve both the functional status and the quality of life for many of our patients.

**Physiologic Effects**

First, let us consider the physiologic effects of Watsu. During a session, the client’s heart and respiration rates decrease, the depth of respiration increases, and muscle tone decrease. Clients report a deep and profound state of relaxation. Scaer \(^1\) saw these effects in his patients time after time. Scaer is a neurologist who utilizes Watsu in treatment programs for his patients with chronic pain and posttraumatic stress disorder. He suggests that Watsu has a balancing effect on the autonomic nervous system (ANS), causing a quieting of the sympathetic nervous system and an enhancement of the parasympathetic nervous system.

These seemingly simple effects lead to far-reaching benefits, especially for the musculoskeletal and neuromuscular systems. For patients with edema, Watsu aids in the resolution of swelling via the compressive forces of hydrostatic pressure and the deep relaxation that enhances the functioning of the lymphatic system.\(^3\) For patients with orthopedic impairments, there is a decrease in muscle spasm, which provides pain relief. The warmth of the water, coupled with Watsu’s gentle stretches into all ranges for the spine and extremities, amplifies these benefits and leads to improvements in soft tissue mobility and range of motion. Patients with neurologic impairments experience improvements in soft tissue mobility and a decrease in muscle tone, which leads to a decrease in hypertonicity. Watsu’s rhythmical, gentle rocking motions combined with repeated trunk rotation and trunk elongation further help to decrease muscle tone and improve range of motion.\(^4\)

Although there has been little research done directly with Watsu, it is reasonable to extrapolate from work done in other established areas of therapy. Virtually all areas of neurorehabilitation, including neurodevelopmental treatment and Brunnstrom, recognize the value of trunk rotation in decreasing excessive muscle tone in the trunk, shoulders, hips, and also the extremities. Proprioceptive neuromuscular facilitation also incorporates rotation into all activities
as the key element in facilitating normal patterns of movement.\textsuperscript{5} Watsu utilizes both static rotational stretches for the trunk and rhythmical, repeated trunk rotation in many of its commonly used movements. These include the most basic Watsu movements of rotating accordion and near and far leg rotation (Fig. 5-1). Farber\textsuperscript{6} and others working in the field of sensory integration have noted the benefits of neutral warmth, as provided by the temperature of most Watsu and therapy pools, in decreasing muscle tone. Work done in sensory integration also supports the muscle tone–reducing benefits of the slow, rhythmical repeated movements used throughout a Watsu session.\textsuperscript{7} These movements gently stimulate the vestibular system, causing a dampening effect on muscle tone. However, overstimulation of the vestibular system may have the opposite effect, and care must be taken during a Watsu session to monitor the system.\textsuperscript{5}

In discussing the physiologic benefits of Watsu, it is important to remember that for expediency, clinical impairments are often referred to as either orthopedic or neurologic. However, the body functions as an endlessly interconnected whole. An injury to or impairment of either the musculoskeletal system or the neuromuscular system will have an influence on the other system. If a joint loses mobility for whatever reason, the functional consequences will be similar. With a decrease in joint mobility, the peripheral nerve begins to lose its ability to change in the length of the nerve bed. This loss of elasticity causes problems in connective tissue function, which then affects the function of the motor system’s control over the musculoskeletal component.\textsuperscript{8} A patient who has had a stroke and has hemiparesis with hypertonicity may initially have limited mobility caused by damage to the central nervous system. This immobility will lead to a loss of elasticity of the peripheral nerves and to myofascial restrictions. These limitations will then further affect motor control.\textsuperscript{9} Watsu influences both the neuromuscular and musculoskeletal systems, allowing patients to experience movement with less pain and greater freedom of mobility.

Watsu’s influence on the autonomic nervous system (ANS) may reach even farther in helping our patients. As more is learned about the adverse effects of ANS imbalance, many propose that ANS imbalance is the basis for disease processes and impairments.\textsuperscript{1}
These impairments range from fibromyalgia to reflex sympathetic dystrophy to posttraumatic stress disorder and many other conditions. Patients experiencing ANS imbalance may be trapped in their fight/flight/freeze response, which creates a physiologic imbalance similar to that of pushing on the accelerator and the brake simultaneously. Watsu has been used to help patients move beyond the fight/flight/freeze response and onto a possibly healthier life by helping to rebalance the ANS.

**Psychological Effects**

In addition to Watsu’s physiologic effects, many patients and clinicians report psychological benefits in resolving past traumas as well as stress related to daily life. Watsu often affects receivers deeply and profoundly, sometimes to the point of laughter or tears. The graceful movements through warm water; the calming tactile, auditory and vestibular input; and, perhaps most importantly, the nurturing touch and unconditional acceptance of the practitioner all combine to create an extraordinary environment for healing. Many patients report feeling safe for the first time since the time of their trauma. It is this safe environment that provides the foundation for the healing process. By touching both the physical and the psychological aspects of patients, Watsu has enormous potential to move patients forward on their path to improved function and improved quality of life.

**Watsu in Acute Rehabilitation Treatment Programs**

During the acute rehabilitation phase, the emphasis of therapy programs is on restoring functional abilities as quickly as possible. Although Watsu might benefit nearly every patient, consideration must be given to the most efficient use of the patient’s rehabilitation dollars. If the patient can be treated effectively on land, that is where he or she should be treated. If the patient is unable to participate in rehabilitation activities on land because of pain, weight-bearing restrictions, weakness, or other reasons, then the aquatic environment may be selected, and a decision must be made about which techniques to use. Although the focus is on improving
functional skills, including walking, dressing, sports, and job-related activities, patients often are unable to practice these skills because of impairments such as those previously mentioned. Therapist must consider what the limiting factors are during each session. Watsu is often the best way to address impairments such as pain, muscle spasm, hypertonicity, and decreased range of motion at the beginning of the treatment session. When used in this way, the Watsu session is relatively short, generally 10 to 30 minutes, depending on the needs and the response of the patient. The remainder of the session then addresses functional skills and exercises (Fig. 5-2).

Consider two patient scenarios.

1. A patient is experiencing pain and muscle spasm at levels which make it extremely difficult for him to work on stretching and strengthening. Watsu would be an excellent choice for beginning the treatment session. Using Watsu would help decrease the patient’s pain and muscle spasms and increase both soft tissue and joint mobility, thereby allowing the patient to participate more fully in therapeutic exercises and functional activities.

2. A patient has hypertonicity which limits her movements and ability to practice functional activities. The patient also has limited range of motion because of soft tissue restrictions caused by the neurologic impairment. Using Watsu at the beginning of the session would help decrease the muscle tone and improve the soft tissue mobility, enabling the patient to perform functional activities with greater ease.

**Watsu in Postrehabilitation Treatment Programs**

After discharge from acute rehabilitation programs, many patients benefit from Watsu sessions to help manage their symptoms. Keeping symptoms under control allows patients to continue to advance or at least maintain their functional skills.

This allows many patients to continue working at their jobs or to continue living independently. Watsu sessions at this stage tend to be longer and comprise most or all of the treatment session.
Consider three patient scenarios.

1. A patient with Parkinson’s disease may choose to receive Watsu sessions to help him maintain mobility. The mobility gained in these sessions often has multiple beneficial effects, including improvements in walking, balance, posture, respiration, and daily life skills such as dressing and bathing.

2. A patient with fibromyalgia may seek Watsu to assist in modulating symptoms so she can remain more active in daily life. For this patient, Watsu may be beneficial in decreasing her pain and allowing her to relax and sleep more deeply at night. She can then participate more fully in life, including her family, job, hobbies, and a consistent exercise program.

3. A patient with late-stage metastatic cancer may find Watsu that decreases pain, improves relaxation and improves sleep.

**Essentials in Every Watsu Session**

The foundation for every Watsu session is unconditional acceptance. In rehabilitation there is generally a sense of needing to “do” something to or for someone to rehabilitate and therefore change the person. In Watsu, awareness is maintained of the specific needs of the individual while openly and completely accepting the person “as is.” This translates into the session being quiet listening with responsiveness to all aspects of the individual. It becomes a dance of sometimes leading and frequently following the patient’s movements. Therapists are also sensitive to subtle physiologic changes such as changes in muscle tension and respiration. Although the therapist is mindful of the patient’s needs, movements are not imposed to achieve specific goals. Instead, some movements may be invited or encouraged while therapists remain sensitive to and accepting of rejection of any of those movements. The session may evolve in completely unexpected ways. Although there may be few words exchanged during the session, the first words from patients at the end are often, “Thank you for listening.”

Therapists learn a wide variety of Watsu moves that form a Watsu vocabulary. However, because each patient is unique and each
session develops differently, there is an infinite variety in the sequence of the movements as well as in the movements themselves. Subtle variations in the movements occur with every patient, and sometimes entirely new movements develop spontaneously while therapists are following the needs of the individual. With each movement, part of the body is moved through the water. Turbulence causes drag on other parts of the body, which move and stretch freely in the aquatic environment. Although the movements are generally slow and rhythmical, they may be interspersed with bolder, stronger movements or stillness. Various types of soft tissue mobilization techniques are also easily incorporated into sessions (Figs. 5-3 and 5-4).

Before beginning Watsu with a patient, the therapist needs to explain the technique to the patient. Patients are instructed to notify their therapist immediately if a movement causes discomfort or motion sickness. Patients are encouraged to adjust their head and neck as needed for comfort, although therapists strive to maintain optimal cervical alignment with elongation throughout the session.

**Watsu Sessions for Patients with Neurologic Impairments**

Patients with upper motor neuron impairments often exhibit limitations in range of motion resulting from soft tissue restrictions.12,13 These restrictions, combined with hypertonicity, can impede functional recovery. Watsu is generally used at the beginning of a treatment session to improve soft tissue mobility and decrease hypertonicity so the patient can work on functional activities more successfully. Short periods of Watsu may also be alternated with short periods of functional activities if the patient’s activity tolerance is very low or the level of hypertonicity is very high.

Watsu dramatically changes the sensory input for the patient. The eyes are usually closed and the ears are under water most of the time. Combined with these quieting sensations are the calming tactile and gentle vestibular stimulation resulting from the movements through the water. In particular, the rhythmical, repeated rotational movements through the water gently stimulate the vestibular system and thus aid in quieting the patient’s tone.
Water temperature is crucial, with neutral warmth being the goal with most patients, so they do not become chilled or overheated. A water temperature of 94 to 95°F (34.4 to 35°C) is generally considered ideal. However, the patient’s condition or the external environment may necessitate a different temperature. For example, a patient with multiple sclerosis may respond better to a cooler temperature. In other situations, very dry or very cool air temperatures in the pool environment may dictate a slightly higher water temperature. Most therapy pools where Watsu is used have water temperatures between 92 and 95°F (33.3 to 35°C); however, patients have responded favorably in cooler or warmer water. Watsu done in water that is too cool generally does not decrease the patient’s tone as much as Watsu done in neutrally warm water. Patients must also be kept warm when they exit the pool and when they are in the changing area to maintain the benefits gained during the session.¹⁴

Most Watsu sessions begin with movements of the trunk; however, for patients with neurologic impairments, the trunk becomes the primary focus. The emphasis is on encouraging trunk rotation, flexion, and elongation through a variety of positions and movements. With a more able-bodied patient, the turbulent drag of the water is usually adequate for causing the trunk, and therefore the spine, to rotate, flex, and elongate. However, for patients with hypertonicity, turbulent drag alone may not be enough. Gently maintained manual pressure may be needed to sustain a slow stretch to give the body time to respond (Figs. 5-5 and 5-6). As the patient’s hypertonicity begins to diminish, movements may progress from proximal, shoulder, and hip joints, to distal extremity joints.¹⁴ This movement sequence is similar to that used in many other areas of neurorehabilitation, including neurodevelopmental treatment.¹³

**Watsu Sessions for Patients with Orthopedic Impairments**

For patients with orthopedic impairments, Watsu may be used at the beginning of the session if their pain, muscle spasms, or range of motion restrictions make it difficult for them to work on exercises and functional activities. The Watsu session begins with movements that decrease the patient’s symptoms. These movements will be different
for each patient and are determined in the initial evaluation on land. Some patients will need more emphasis on flexion, whereas others may need more on extension or rotation (Figs. 5-7 A, B, C). These movements form a starting point from which other movements are free to develop. Therapists maintain their awareness of movement precautions for each patient as well as range of motion medical restrictions that may suggest movements to be avoided. Awareness of the patient’s physiologic needs may also suggest movements to be encouraged. At the same time, therapists remain open, allowing the session to evolve in sometimes unexpected ways.

As the patient begins to relax, pain and muscle spasms decrease and movement ranges can be increased to permit more stretching and elongation (Fig. 5-8). Floating supine in the water with the gentle support of the therapist and buoyancy, the patient’s body is free to move in a multitude of ways, including movements not possible on land. With the joints unloaded, joint compression forces, especially through the spine, are greatly reduced, allowing for greater range of motion and more pain-free movement (Fig. 5-9). Soft tissue mobilization techniques can also be incorporated into the session to augment Watsu’s benefits. Stretching is enhanced by increasing the speed, and therefore the turbulent drag, of some movements and by using a manual stretch for others.

**Precautions for Watsu**

With all aquatic therapy techniques, therapists must first consider the safety and inherent risks of having each patient in the water. All general precautions for aquatic therapy must be taken into consideration. Safety is always the top priority. Each therapist must also consider his or her professional background and knowledge base, and treat patients only within this framework. If a patient comes to a therapist with a condition about which he or she is unsure, it is critical for the therapist to seek further medical advice first.

In addition to general precautions for the aquatic environment, there are some precautions specific to Watsu. It is essential to remember that Watsu movements affect the entire body. While floating supine in the water, the body is free to move. Although this is an overwhelming
benefit, therapists must also be aware of how each motion is influencing other areas of the body. For example, many movements focus on the spine, but the extremities are also moving in the water at the same time. If a particular patient has range of motion precautions due to injury, disease, or surgery, the therapist must constantly be observing and analyzing each movement for safety (Fig. 5-10).

Patients with conditions in which movement could potentially cause harm must also receive special care and attention (Fig. 5-11 A, B). These might include patients with osteoporosis, an acute flare of rheumatoid arthritis, or ligamentous instability. With patients such as these, it is important to keep the movements slow and smooth to avoid any sudden loading of joints. If the condition at a particular joint is severe, Watsu must be significantly modified, or an external splint may be needed to protect the joint. It has been noted previously that Watsu causes an increase in vestibular stimulation. Although gentle stimulation has a dampening effect on muscle tone, over-stimulation may have the opposite effect and cause physiologic distress. Each patient has a different tolerance to vestibular stimulation, and therapists must use caution particularly with patients who are susceptible to over-stimulation. These may include people who report motion sickness in cars or on boats, and patients with traumatic brain injuries or some other type of injury to the central nervous system that causes them to be easily over-stimulated by various types of sensory stimuli.

Therapists must watch carefully for any physical signs of over-stimulation, especially with patients who are unable to communicate verbally. Signs of over-stimulation in patients may include reported dizziness or nausea, sudden facial pallor, facial sweating, increased rate of respiration, or nystagmus. However, symptoms may vary from person to person. In some patients, these symptoms, except for nystagmus, may signal other physiologic responses or emotional release. Therapists need to gain skill in differentiating the cause of the symptoms. For patients who are sensitive to vestibular stimulation, it may be necessary to focus on slow, linear movements and avoid rotational movements in which the head rolls from side to side.
Case Study: Watsu As Part Of The Treatment Program For A Patient With Lumbar Pain

A 56 year-old male corporate executive and recreational kayaker presented with a non-specific diagnosis of low back pain. His primary complaint was lower lumbar pain radiating down to his left foot in an L5 distribution. He reported a history of 5-6 episodes of lumbar pain during adulthood. This was the first episode severe enough to cause him to seek medical advice, which had included an orthopedic surgeon, a chiropractor, a massage therapist and a land-based physical therapist. Each one of these healthcare providers had been seen 1-3 times without a significant change in the patient's symptoms. The patient reported he felt 'annoyed' by being sent to see another physical therapist, and he felt aquatic physical therapy would be a 'waste of time.'

Among other findings during the initial evaluation, was exacerbation of symptoms with flexion past 20° and any extension past neutral. His pain level was 7.75 cm on a 0-10 cm visual analogue scale (VAS). Also of note was his inability to perform single limb stance on his right (non-painful) leg with nearly immediate loss of balance, or on his left (painful) leg secondary to pain and loss of balance.

Watsu was chosen as the treatment modality for the beginning of the patient's first 3 sessions in order to decrease his lumbar and lower extremity pain, decrease his lumbar paravertebral muscle spasm, and increase his range of motion. Watsu was utilized for 20 minutes at the start of the first session and for the first 10 minutes of sessions 2 and 3.

A half-length foam noodle was utilized under the patient's knees during the first session to avoid lumbar extension as well as flexion past 20°. After the first session, the noodle was not used, because the patient's lower extremity symptoms were almost completely resolved, allowing progression to full lumbar range of motion during Watsu.

Soft tissue and gentle joint mobilization techniques were incorporated into the Watsu portions of the patient's treatment program.
Exercises based on the principles of the Halliwick Concept and trunk stabilization were utilized for the remainder of sessions 1, 2 and 3 and for all of session 4, 5 and 6. Body mechanics and functional skill training were incorporated into the sessions. Additionally, the patient was given a home stretching and stabilization program, which was progressed at each session.

Results of Treatment Program

a. First Session

At the completion of the Watsu portion, the patient reported he was 'astonished' that his lower extremity symptoms were 'completely gone.' At the end of the session, his pain level had decreased from 7.75 to 3.25 on a VAS. Because of decreased pain and improved stability, he was able to stand on his right leg, and then on his left, for >20 seconds unassisted and with no increase in symptoms. His flexion had increased to 45°, and he was able to extend to almost full lumbar extension.

b. End of Treatment Program

The patient was pain-free, except for occasional, brief 'twinges' in his lumbar region. His posture, body mechanics and trunk stability were all considerably improved, and the patient had full, pain-free range of motion. He had returned to full work activities and recreational kayaking, and he was participating in an aquatic exercised program at the YMCA.

Chapter Summary

From its development for able-bodied clients, Watsu has grown into a useful tool in rehabilitation. Through its wide range of effects on patients, both physical and emotional, Watsu has far-reaching benefits. Although Watsu is a passive aquatic therapy technique, it has the potential to help many patients with both neurologic and orthopedic impairments, especially when used in conjunction with
treatments focusing on functional activities and exercises.

**Review Questions:**

1. Watsu developed from:
   a. Harold Dull experimenting with Zen Shiatsu stretches in warm water
   b. Shiatsu point work performed in warm water by Masunaga
   c. Aquatic relaxation techniques
   d. Aquatic rehabilitation stretching techniques

2. Watsu was initially utilized for:
   a. People with neurological impairments
   b. People with back pain
   c. **Stress reduction and personal growth**
   d. Muscle strengthening

3. Physiologic responses to Watsu include all of the following except:
   a. Decreased heart rate and rate of respiration
   b. **Increased strength and mobility**
   c. Increased range of motion and decreased muscle spasms
   d. Increased relaxation and decreased hypertonicity

4. Watsu is utilized at the beginning of a treatment session if the primary limiting factors for the patient include:
   a. Weakness and fatigue
   b. **Pain and decreased range of motion**
   c. Poor trunk stability and low endurance
   d. Weakness and poor proximal joint stability

5. Watsu is utilized in postrehabilitation programs for the following reason(s):
   a. Maintaining mobility
   b. Managing pain levels for chronic conditions
   c. Relaxation and stress management
   d. **All of the above**

6. Common components of all Watsu sessions include all of the following except:
a. Rhythmical, repeated movements 
b. Healthy alignment for the client's joints, especially in the cervical and lumbar regions  
c. Sensitivity and responsiveness to all aspects of the individual  
d. A preplanned set of movements

7. What are two important benefits of Watsu in rehabilitation?  
a. Decreased muscle spasm and increased endurance  
b. Decreased pain and increased strength  
c. **Decreased pain and increased range of motion**  
d. Deep relaxation and increased muscle tone

8. When working with patients with neurologic impairments, it is beneficial to:  
a. Use strong fast movements to decrease spasticity  
b. **Begin with trunk rotation and then progress proximal to distal with the extremities**  
c. Move slowly and focus on the most affected extremity  
d. Use Watsu primarily at the end of the treatment session

9. When working with patients with orthopedic impairments, it is beneficial to:  
a. Have a precise plan for all of the movements you will use during the Watsu session  
b. Always avoid extension movements of the spine  
c. Focus on movements that will increase the patient's strength  
d. **Begin with the movements that decrease the patient's symptoms**

10. Possible precautions for Watsu include all of the following **except**:  
a. Sensitivity to vestibular stimulation  
b. Conditions that are contraindicated for immersion in water  
c. **Pain and muscle spasm**  
d. Ligamentous instability
REFERENCES


6. Farber S: Sensorimotor Evaluation and Treatment Procedures, 2nd ed. Indianapolis: Indiana University-Purdue University at Indianapolis Medical Center, 1974.


Photo Captions

Figure 5–1. This movement is called far leg rotation. It is one of the frequently used movements in Watsu. With the weight bearing joints unloaded, this gentle rotational stretch for the hips and spine benefits many patients (Courtesy Peggy Schoedinger).

Figure 5–2. This child with spinal muscular atrophy benefits from alternating short periods of active movements with short periods of passive movements. This program has helped him improve his strength, mobility, and functional skills without excessive fatigue. This child has been free of hospitalization for the past year. Previously, he was hospitalized several times each year for respiratory infections (Courtesy Peggy Schoedinger).

Figure 5–3. This position with the patient resting on the therapist’s legs is often used in rehabilitation. The patient and therapist are both comfortable and relaxed, and various types of soft tissue and joint mobilization techniques are easy to incorporate. Many areas of the spine and extremities are accessible in this position (Courtesy Peggy Schoedinger).

Figure 5–4. This is one of many different Watsu positions that allows the therapist to incorporate different forms of bodywork from both eastern and western medicine (Courtesy Peggy Schoedinger).

Figure 5–5. For patients with more severe spasticity, typical Watsu movements that utilize turbulent drag are generally not effective for stretching the body. Manual pressure is needed to sustain gentle, prolonged stretches. In this photo, the
patient’s right shoulder is being pressed while her knees are being pulled toward the therapist, allowing the therapist to maintain a trunk rotation stretch (Courtesy Peggy Schoedinger).

Figure 5–6. Patients with severe spasticity can be supported with their legs held between the legs of the therapist. This helps to stabilize the patient’s lower trunk and allows the therapist to use both hands to turn the upper portion of the trunk. This rotation of the trunk helps to decrease hypertonicity (Courtesy Peggy Schoedinger).

Figure 5–7. For patients with orthopedic impairments, Watsu sessions begin with movements that help alleviate symptoms. Therapists carefully select the initial movements based on the results of the evaluation on land. Initial movements will vary with each patient, but may include one of the options demonstrated in these photos. A, Hip extension and gentle extension of the spine. B, Gentle extension focused in the thoracic spine. C, Trunk, hip, and knee flexion (Courtesy Peggy Schoedinger).

Figure 5–8. During various Watsu moves, part of the body is moved while turbulent drag causes movement in other parts of the body. In this photo, one leg is being pulled backward into hip extension while turbulent drag causes the other leg to move into hip flexion. This allows the hip flexors of one leg to be gently stretched while the opposite hip is flexed. This helps to protect the lumbar spine by preventing hyperextension (Courtesy Peggy Schoedinger).

Figure 5–9. Watsu is helpful in improving thoracic mobility in patients such as this woman who has osteoporosis and has had coronary artery bypass surgery. The
improved mobility decreased her pain, improved her posture, and enabled her to participate in a strengthening and aerobic exercise program (Courtesy Peggy Schoedinger).

Figure 5–10. With the patient’s head resting on the therapist’s shoulder, the spine and extremities are free to move. Although this is an advantage for most patients, care must be taken if there are medical reasons to limit movement. This patient has back pain, but if she had additionally had a recent total hip replacement, this movement would be contraindicated because it causes adduction of the hip past midline (Courtesy Peggy Schoedinger).

Figure 5–11. Watsu encourages gentle stretching of most joints during a session. However, care may need to be taken to support and protect a painful joint such as the shoulder of the patient in photo A. As the joint improves, turbulence can be used to gently stretch the joint as shown in photo B (Courtesy Peggy Schoedinger).