

## ***Somatic Patterning***

### **Supplemental Instructor Materials**

#### **Chapter 2: Movement Problems, Holding Patterns, and Pain**

*Note: Numbered points in the chapter's reading list, objectives, and summary are correlated and focus on topics that I think will be most relevant for massage students.*

*In brackets after suggested readings and objectives you will find an occasional reference from a subsequent chapter that expands on material introduced in this chapter. Please contact your education director for answers to the chapter questions.*

#### **Chapter 2 Reading List**

1. Holding Patterns, p. 40
2. Functional Anatomy, Form and Function, pp. 40-41
3. Normal Spinal Alignment, pp. 41-42
4. Myofascial Restrictions, pp. 42-43
5. Stabilizer and Mobilizer Muscles, pp. 45- 47, [*Stability Rehabilitation*, pp. 316-317]
6. Muscular Responses to Chronic Pain, pp. 47-48
7. The Roots of Holding Patterns, pp. 51-52
8. Instability and Rigidity, Abusive and Positional Postures, pp. 52-54
9. Developmental Movement Gaps, Premature Demands, Touch and Early Handling, pp. 54-56
10. Weak Push and Reach Patterns, p. 56
11. Holding Patterns and Pain, Physical and Emotional Pain, pp. 56-57
12. The Pain Cycle, pp. 57, Mechanics of the Pain Cycle, pp. 58-59
13. Pain-Avoidance Behaviors, pp. 57-58
14. Assessing Pain, pp. 64-66
15. Secondary Gain from Pain Patterns, pp. 67-68\*
16. The Unlayering Process and Opening Pain, pp. 68-70

#### **SP Chapter 2 Objectives**

1. Discuss how holding patterns effect posture and movement.
2. Describe the relationship between form and function in the human body.
3. Define the neutral position of the spine.
4. Describe fascia, the myofascial system, and myofascial restrictions.
5. Contrast the stabilizer and mobilizer functions of muscles.
6. Describe muscular responses to chronic pain.
7. Discuss adaptive holding patterns and how they develop.
8. Describe how a stability dysfunction can lead to a repetitive stress injury.
9. Discuss how early touch and movement experiences can cause holding patterns.
10. Describe how push patterns relate to lines of force and counterbalance reach patterns.
11. Define nociceptors and describe the development of centrally mediated pain.
12. Describe the pain cycle and explain how it deepens.
13. List and briefly describe four pain-avoidance behavior types.

14. List five tissue sources of body pain and briefly describe the symptoms of each one.
15. Explain what a secondary gain from pain is and how this gain could affect behavior.
16. Describe the unlayering process and opening pain that occurs during pain resolution.

### **Chapter 2 Summary**

1. A holding pattern is a pattern of holding some part or parts of the body with unconscious muscular contractions. Muscles held in chronic contractions pull the body off center and are unavailable for movement, so holding patterns often underlie faulty postures and restricted motion.
2. The form (structure) of the body determines how the body functions (moves) and vice-versa. The way that function affects form is that faulty movement patterns lead to wear and tear on body structures, especially the joints and muscles, which in turn leads to faulty postures and movement patterns.
3. Neutral spine is the upright position of the spine in which the spinal joints are extended, the spinal curves are maximally lengthened, and the body masses (head, thorax, and pelvis) align along a plumb line (which is also the line of gravity).
4. Fascia is a connective tissue that wraps every part of the body and binds it to another part, providing structural support. The myofascial system is the skeletal muscle system and all its associated fascias. Myofascial restrictions are areas where the myofascia has thickened and become glued to adjacent structures, restricting movement between the parts.
5. Muscles work as stabilizers when their isometric contractions provide postural support in the stationary body and joint stability in the moving body. Joint stability prevents excessive joint motion. Muscles work as mobilizers when their concentric contractions generate joint motion. *[For expanded material on this topic, see Chapter 9: Postural Stabilization.]*
6. In conditions of chronic pain, the stabilizer muscles become inhibited, causing joint instability, and the mobilizer muscles become chronically contracted in guarding responses.
7. The body responds to pain from an injury, which can be real or perceived, by contracting the injured area to prevent movement there until it heals. This process is called splinting. Movement travels around rather than through held or splinted areas, leading to an asymmetrical, adaptive pattern of movement.
8. A stability dysfunction is the inability to control joint play during movement. Repeatedly moving a joint beyond its normal range can overstretch and damage the joint structures, leading to a repetitive stress injury, which commonly occurs with poor posture.
9. Developmental movement gaps can lead to muscular imbalances, which can be observed in compensatory habits such as bracing the body with muscular holding, propping the body on locked elbows or knees, and hinging by collapsing the spine. Touch also shapes

muscular tone and nervous system development in an infant: touch deprivation or abusive touch can lead to low tone and an overly developed startle reflex.

10. Push patterns send compression into the body, particularly into the joints, along pathways that organize lines of force through closed-chain movements. In contrast, reach patterns extend the limbs out into space and organize lines of tension or elongation in the body, particularly in the soft tissues, through open-chain movements. *[For expanded material on this topic, see Chapter 9: Postural Stabilization.]*
11. Nociceptors are the sensory nerves that register pain. Centrally mediated pain develops when musculoskeletal pain has been occurring for so long it causes changes in the brain's chemistry and ability to process pain. As a result, the pain threshold can become lower, which can cause sleep disorders and lead to chronic pain syndromes.
12. The pain cycle occurs when muscular guarding and bracing against pain sensations reduces the efficiency of movement, which causes nerve entrapment and increased pain. This then leads to more muscular guarding and the deepening of the pain cycle.
13. Pain-avoidance behavior types include a hypervigilant type (where a person has an external focus and ignores the body); a scattered type (where a person becomes unfocused and chaotic); an obsessive type (where a person becomes rigid and compulsive); and a burned-out type (where a person gives up and becomes depressed).
14. Pain from muscles causes deep but general aching, especially during active movement; pain from non-contractile tissues such as ligaments is sharp, localized around joints, and occurs during passive movement; pain from spinal facet joints is sharp and localized; pain from nerve irritation can be sharp, searing, burning, or itching; and pain from organs can be sharp yet diffuse, and radiate over a large area.
15. Secondary gain from pain creates peripheral benefits, such as getting attention or being unable to work and having more time to heal. People can develop behaviors, such as becoming sedentary, which prolong a painful condition yet provide the benefits of the secondary gain.
16. When releasing holding patterns and healing from injuries, chronically held muscles begin to relax in a gradual, unlayering process. A person can experience temporary discomfort and what is called opening pain from the return of circulation, sensation, and movement to stiff, tight muscles.

\* Note: Correction for box on p. 68 titled "Dealing with Overwhelming Pain" Last line was cut off in the printing process: "[actu-]ally began to enjoy the benefits of his budding somatic awareness."

**SP Chapter 2 Questions**

*Note: Make sure to pay attention to the italics in some of the questions because they ask you to identify the statement that **does not** refer to the topic of the question, or to identify the **not true** answer.*

1. In the neutral position, the spine is
  - a. extended.
  - b. flexed.
  - c. rotated.
  - d. hyperextended.
  
2. Which of the following statements *does not* describe myofascial restrictions?
  - a. Myofascial restrictions thicken connective tissues and glue muscles to each other.
  - b. Myofascial restrictions restrict movement between groups of muscles.
  - c. Myofascial restrictions are permanent and cannot be changed.
  - d. Myofascial restrictions can compress and irritate peripheral nerves.
  
3. The function of a muscle working as a mobilizer is to
  - a. provide postural support.
  - b. generate joint motion.
  - c. prevent excessive joint motion.
  - d. stabilize during motion.
  
4. Which of the following statements *does not* describe how injuries lead to holding patterns and movement dysfunctions?
  - a. Muscles that function as mobilizers develop protective contractions around injuries to splint that area and prevent injury from movement while the tissue heals.
  - b. The splinting contractions of mobilizers restrict movement and create muscular asymmetries, which are evident in movement patterns such as limping.
  - c. Adaptive movement patterns that develop after an injury, such as limping or hiking the shoulder, become habitual and tend to remain long after the injury has healed.
  - d. As the injury heals, the muscles automatically return to their previous manner of functioning and normal movement is restored.
  
5. Which of the following statements is *not true* about a stability dysfunction?
  - a. A stability dysfunction occurs when stabilizers fail to prevent excessive joint play.
  - b. A stability dysfunction can escalate into a repetitive motion injury.
  - c. A stability dysfunction frequently occurs in people with really good posture.
  - d. A stability dysfunction causes muscles that function as mobilizers to overwork.
  
6. A nociceptor is a sensory nerve that
  - a. registers sensations of pain.
  - b. triggers motor responses to pain.
  - c. registers sensations of motion.
  - d. triggers motor responses to splinting.

7. Which of the following statements describes centrally mediated pain?
  - a. Centrally mediated pain occurs when muscular aches and pains cause tightness and fatigue.
  - b. Centrally mediated pain occurs when chronic pain causes changes in the muscle chemistry, which increases the pain threshold.
  - c. Centrally mediated pain occurs when chronic pain causes changes in the brain chemistry, which reduces the pain threshold.
  - d. Centrally mediated pain occurs when chronic pain causes changes in the joint chemistry, which increases pain during motion.
  
8. When dealing with a client with the chronic pain behavior of being scattered and chaotic, the best course of treatment is to
  - a. provide relaxing massage but avoid working on body awareness, which could increase the behavior.
  - b. suggest that the client receive psychological treatment with a highly skilled therapist.
  - c. help the client to focus inwardly to develop body awareness and learn how to relax as a self-care behavior for healing chronic pain.
  - d. help the client to relax and learn to focus his or her attention on one aspect of the condition.
  
9. Which of the following scenarios describes a chronic pain client's behavior that is motivated by secondary gain?
  - a. The client practices relaxation exercises to relax muscular tension from chronic pain.
  - b. The client knows he needs light exercise but avoids it to remain in treatment.
  - c. The client walks every day, even when chronic pain makes walking uncomfortable.
  - d. The client practices slow, subtle movements that alleviate the chronic pain.
  
10. The *most* important reason that movement is necessary when healing from an injury is
  - a. that it feels good and boosts spirits.
  - b. that it looks good to other people.
  - c. that it restores circulation and muscular tone.
  - d. that it promotes deep breathing.

## Chapter 2 Suggested Learning Activities

The exercises in this chapter will provide students with ways to get in touch with and resolve their own holding patterns, which they can later use with clients. As you probably already know, while emotional release is natural during bodywork and can be helpful to students, students can sometimes become needy and try to use class time for personal therapy. Here are some suggestions to help you deal with this dynamic:

1. Acknowledge that when studying how to work with holding patterns, it invariably stirs up personal body-based issues.
2. Suggest ways that students can work with holding patterns outside of class (such as practicing the exercises in Chapter 2, practicing with other students, getting professional bodywork, seeing a school counselor for emotional support, eating well, resting, and getting enough exercise).
3. Draw a clear boundary around personal processing in class by informing students that they can share personal information about their holding patterns during class time if it is for educational purposes and is contributing to everyone's learning process.
4. Clarify the difference between spontaneous emotional release and personal processing, which is usually a verbal exchange that looks more like psychotherapy and is beyond the scope of class activity.

It is helpful to let students know that as their bodies release holding patterns, it is normal for emotions to arise, and you will welcome the release if it occurs and be supportive as you would be with a client. These experiences can be healing for the student. They provide the rest of the class with an opportunity to observe how to deal with emotional release during a massage session. They also set a foundation for teaching students how to be supportive when clients have emotional issues come up while remaining focused on the overall intention and scope of the massage treatment.

*Note: Any exercise titled "Patterning Exercise" can be found in the current edition. Page numbers for these exercises (inserted in parentheses) are included to help instructors utilize activities during lessons based on other segments of the book.*

### **Patterning Exercise #7: Finding a Neutral Position of Mechanical Advantage** (p. 42)

*Adapted from step 2: Finding neutral in the pelvis (or the "Seated Pelvic Rock")*

#### *Objectives:*

- To establish a seated base of support, a foundation for good posture.
- To give students a simple postural exercise that they can teach their clients.

#### *Exercise: (10 minutes)*

1. Sit on the edge of your chair with both feet flat on the floor. Make sure you're sitting on top of both sit bones (ischial tuberosities).
2. Place your hands on your hips. Imagine your pelvis as a bowl of water. Rock it forward and backward several times, alternately spilling water out the front and the

- back of your imaginary bowl. Feel how your body shifts over the pubic bone, then back toward the sacrum and coccyx. Place your hand over your lower back muscles to feel how the tone changes as you shift position.
3. Find the place in the middle where you are balanced right over your sit bones and your water line is level. Now feel your lower back. You should have a long lordotic curve in the lumbar spine, but the erector spinae muscles should be fairly relaxed.
  4. Sit sideways to your partner, then watch him or her do this exercise. If needed, give your partner feedback and light, tactile guidance to help her or him find center. Practice this exercise whenever you're sitting, whether at a desk, in a car, or in class. Use it to break the habit of sitting in chronic flexion, which is hard on the lumbar spine and will eventually lead to repetitive strain.

*Homework:*

Start observing how people sit and how much support they give themselves.

**Patterning Exercise #86: Transversus Abdominis (TA) and Perineum** (p. 235)

*Adapted from steps 2-3: Isolating transversus abdominis contraction*

*For more information about the role of the TA in postural support and breathing, refer to pp. 130-131 and p. 233.*

*Objectives:*

- To give students a simple exercise to establish core support for neutral spine.
- To stabilize and protect the lumbar spine and sacroiliac joints.

*Introduction:*

1. Identify the attachments sites for the TA.
2. Trace this muscle on yourself and on a partner, wrapping your hands from the the thoracolumbar fascia in the lower back, over iliac crest to the linea alba.

*Exercise: (10 minutes)*

1. While sitting in a chair, lightly contract your transverses abdominis (about 30 percent) and breathe in and out, then hold your exhalation and let your belly hang out to feel the transversus abdominis relax. Take several deep breaths with it relaxed so that you can differentiate between the sensations of relaxing and contracting the TA.
2. Put your hands on your lower abdomen to monitor muscle tone. Then, slowly pull the lower abdominal wall straight back (if it moves up or down you are using the oblique muscles, so inhibit movement in either of these directions). Hold this contraction for about 10 seconds while breathing deeply, expanding your diaphragm and lower ribs as you inhale. You may even want to hold your ribs to give yourself feedback about diaphragmatic movement as you breathe.

*Homework:*

Practice contracting the TA whenever you can, will driving, walking, doing massage, and even sitting in class. Doing so will improve your posture, protect you from injury, and eventually become automatic so you don't have to think about it.

**Patterning Exercise #13: Working with Holding Patterns** (p. 66)*Objectives:*

- To give students tools for releasing their own holding patterns.
- To give the students client education tools.

*Exercises:*

1. *Identify your holding patterns:* Begin patterning by sensing the shape or quality of tension in a holding pattern.
  - Which muscle are the chronically contracted?
  - What sensations does the holding pattern create?
  - Does the holding patterning involve pain or injury? If so, describe these elements. What purpose does the holding pattern serve?
  - How does the holding patten restrict motion? What asymmetries does it create in your posture and movement?
2. *Feel the overall pattern:* You cannot release something you can't feel. Sense the holding pattern as deeply as you can. Feel how it affects your whole body. This simple awareness can actually help to release the holding pattern. Use your intention and/or breathing to dissolve the pattern without actively trying to change it because your efforts to change it can actually make it worse. (*See also "Focusing" in Chapter 15, pp. 361-362.*)
3. *Take conscious control with exaggeration:* Use the sensation of contrast to release holding patterns by actively contracting your muscles and going further into the pattern. As you hold the contraction, sense the energy you have tied up in holding. Then release the holding as much as you can. Do this several times, tightening into it a little bit less each time, releasing it a little bit more each time. This process will deepen your awareness of the holding pattern plus teach you how to come out of it. (*See also the "Accordion Practice" in Chapter 15, p. 358.*)
4. *Release the holding while actively moving: (10-20 minutes)* Explore micromovements, making the tiniest, most imperceptible movements you can. This will help you to facilitate smaller, more intrinsic muscles and release chronic holding in the larger, more extrinsic muscles. Move slowly enough to give yourself the time and space to release chronic contractions as you move.