

***Somatic Patterning***  
**Supplemental Instructor Materials**  
**Chapter 13: Physiological Patterning**

*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.*

*Please contact your education director for answers to the chapter questions.*

**Chapter 13 Suggested Readings**

1. Stress, pp. 321-322
2. The General Adaptation Model, pp. 321-322
3. Autonomic Flexibility, Autogenics, pp. 322-324
4. Biofeedback Therapy, pp. 324-326
5. Brain Wave Feedback, pp. 326-328
6. Progressive Muscle Relaxation and Electromyography, pp. 328-329
7. The Relaxation Response, pp. 330-331
8. Biofeedback and Imagery, pp. 331-332
9. How the Mind Lives in the Body, Stress and the Brain, Neuropeptides: The Chemical Communicators, pp. 332-333
10. Psychoneuroimmunology (PNI), Healing and PNI, pp. 333-334

**Chapter 13 Objectives**

1. Define the biological definition of stress and describe fight, flight, or freeze responses.
2. Describe eustress, diseases of adaptation, and general adaptation syndrome.
3. Define autonomic flexibility and how it is developed with autogenic training.
4. Describe biofeedback and its role in treating health problems complicated by stress.
5. Discuss four brain wave patterns and their therapeutic applications.
6. Describe progressive muscle relaxation and its therapeutic applications.
7. Describe the relaxation response and how to elicit it.
8. Discuss the use of imagery in biofeedback and relaxation exercises.
9. Describe how stress affects the brain and how emotions affect physical health, and the field of medicine called psychoneuroimmunology (PNI).

**Chapter 13 Summary**

1. In a biological definition, stress is the body's non-specific response to the demands placed upon it. When frightened or threatened, the body reacts with a defensive fight-or-flight response, which increases sympathetic tone and is preceded by a momentary freeze response.
2. Eustress is any stressor to which a person builds resistance through healthy adaptive responses. Prolonged stress causes cumulative degeneration, leading to diseases of adaptation such as obesity, ulcers, diabetes, nervous disorders, and heart disease. The general adaptation syndrome describes the three stages of a stress response: an initial alarm reaction, a replenishing resistance stage, and a fatal exhaustion stage that can lead to serious illness and death.
3. Autonomic flexibility is the ability to shift from a stress reaction into a relaxed state. Autogenics is a technique of mild self-hypnosis designed to elicit relaxation in which a person repeats a series of auto-suggestive phrases describing physical sensations of weight and warmth spreading through specific areas of the body.
4. With biofeedback therapy, a person learns how to regulate stress and tension using mental control influenced by physiological feedback, usually from simple machines such as an electromyograph (EMG), which provides information about muscular activity.
5. The brain emits oscillating voltage or wave patterns. Beta waves occur at 14-30 cycles per second during a concentrated mental task; alpha waves occur at 8-13 cycles per second during a relaxed yet awake state; theta waves occur at 4-7 cycles per second during the twilight state between sleeping and waking; and delta waves occur at .5-3.5 cycles per second during sleep stages. The alpha/theta threshold is a healing state that people learn how to elicit during biofeedback training with an electroencephalogram (EEG) machine.
6. Progressive muscle relaxation is a therapeutic technique in which a person systematically contracts and relaxes muscles in each part of the body to release muscle tension and bracing associated with anxiety. It was developed by psychiatrist Edmund Jacobson to treat bedridden patients for anxiety associated with illness.
7. The relaxation response is a term coined by Herbert Benson to describe the physical state that experienced meditators enter in which the mind quiets, heart rate and respiration slow down, the capillaries dilate, and the body relaxes. Benson identified several steps to elicit this response: repeating a word over and over, passively disregarding thoughts or mental chatter, and staying focused on the word or object of repetition.
8. Biofeedback therapy provides objective feedback about physiological processes, bypassing the need for mental interpretation or the use of imagery. A person can evoke the relaxation response with imagery by visualizing a previously relaxing experience.

Because what is relaxing to one person may disturb another, practitioners are advised to ask their clients what will help them relax before offering guided visualizations.

9. Stress alters brain chemistry by producing stress hormones that activate the hypothalamus and emotional centers of the brain. When stress hormones are repeatedly produced, they work on the body like opiate drugs; they dock on cellular receptor sites in the brain and throughout the body and slowly wear them out, reducing a person's overall resistance and immunity to the effects of negative stressors.
10. Psychoneuroimmunology (PNI) is a field of medicine that recognizes the interrelationships between stress, emotions, and brain chemistry. In a PNI approach, a patient with stress-related illness is treated holistically by a team of medical and complementary therapists who address multiple levels of health.

**Chapter 13 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.*

1. Which of the following statements *does not* describe biological stress?
  - a. Stress is the body's non-specific response to demands placed upon it.
  - b. When frightened or threatened, stress reaction triggers a fight-or-flight response.
  - c. A fight-or-flight response is preceded by a momentary freeze response.
  - d. A stress response increases parasympathetic nervous system tone.
  
2. The three stages of the general adaptation syndrome are
  - a. an alarm reaction, a resistance stage, and a relaxation stage.
  - b. a reflex response, a resistance stage, and exhaustion stage.
  - c. an alarm reaction, a resistance stage, and exhaustion stage.
  - d. an alarm reaction, a reflective stage, and exhaustion stage.
  
3. To help a massage client improve autonomic flexibility, a practitioner can
  - a. use slow, relaxing Swedish strokes that put the client to sleep.
  - b. teach the client relaxation skills to practice during the massage.
  - c. give the client a deep yet relaxing treatment to release muscle tension.
  - d. provide a vigorous, energizing sports massage that increases circulation.
  
4. Which of the following scenarios describes how a person can use biofeedback coming from a body sensation to induce a relaxation response?
  - a. A person can touch the chest to feel and focus on slowing down the heart beat.
  - b. A person can place the hand over the abdominal muscle to feel them contract.
  - c. A person can coordinate deep breathing exercises with weight lifting.
  - d. A person can visualize the sight of a beautiful sunset over a calm lake.
  
5. The theta brain waves
  - a. occur during concentrated mental tasks such as solving a complex math problem.
  - b. occur when a person is in a relaxed, awake state such as lying on the beach.
  - c. occur when a person sinks into the twilight state between waking and sleep.
  - d. occur when a person is in deep sleep and is having lucid dreams.
  
6. Which of the following statements *does not* describe progressive relaxation?
  - a. It is a muscle strengthening technique that improves overall muscle tone.
  - b. It is a therapeutic technique involving systematic muscle contraction and relaxation.
  - c. It helps a person increase body awareness and release muscle tension.
  - d. It was developed to help bedridden patients release muscle tension due to anxiety.
  
7. Identify which statement *does not* describe one of the steps a person uses to elicit the relaxation response during a meditation practice.
  - a. Repeating a word over and over.
  - b. Passively disregarding thoughts or mental chatter.
  - c. Refocusing on the word or object of repetition.

- d. Reflecting on a stressful situation.
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- 8. Stress reduces a person's systemic resistance to its negative effects by
    - a. wearing out the cellular receptor sites for stress hormones.
    - b. overworking the joints with excessive fight or flight reactions.
    - c. dampening a person's ability to remember how to relax.
    - d. decreasing a person's awareness of muscular tension.

## Chapter 13 Suggested Learning Activities

*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 that may be based on other segments of the book. “Skills Exercises” are not found in the current edition but will be included in the 2<sup>nd</sup> edition of SP.*

### **Patterning Exercise #125: Breathing for Relaxation** (p. 331)

*Adapted for client education with verbal prompts to use during a massage. See also “Patterning Exercise #124: Progressive Relaxation” in Chapter 4 supplemental materials.*

#### *Objectives:*

- To slow respiration to induce a relaxation response.
- To learn an exercise to use in client education during a massage.

#### *Exercise: (5-10 minutes)*

1. Sit or lie in a comfortable position, in a quiet, warm place. Breathe easily, allowing the exhalations to be longer than the inhalations.
2. Breathe in for two counts, out for four counts. Or, as you breathe, repeat the following phrase, “inhale, one, two, exhale, three, four, five, six.”
3. Visualize yourself breathing in relaxation, breathing out stress. When working missing text?
4. As you exhale, sense or imagine your body drifting and sinking down through the ground.

#### *Client education prompts:*

Here are several cues to share with your client during a massage to help them breathe in a more relaxed manner:

- “Breathe easy.”
- “As you exhale, imagine tension draining out of your body.”
- “As you exhale, sense your body sinking into the table.”

#### *Homework:*

When you feel stress during the day and can take a short break, tune into your breathing and practice a relaxing breathing exercise for about one minute.

### **Relaxation Meditation: Tracking Micromovements in the Head and Torso**

*See also “Patterning Exercise #29: The “Sand-Bag Brain and Body” in Chapter 4 supplemental materials.*

#### *Objectives:*

- To learn how to relax with subtle, intrinsic and fluid micromovements.
- To cultivate a roving awareness of inner body experiences.
- To develop an awareness of visceral motility.

*Exercise: (10 minutes)*

1. Sit in a comfortable upright position on your sit bones, with your spine aligned, head over your heart, and heart over pelvis.
2. Close eyes and sense the volume inside your body. Notice any subtle, inner impulses to move and follow with your awareness.
3. Follow these impulses with micromovements in your head and trunk.
4. Place hands over any organ that you want to relax and slowly move that area with micromovements.
5. Gently breathe into area that you are moving.

**Group discussion points to touch on after a relaxation exercise:**

*What did you feel during the relaxation exercise?*

1. Answers usually include “heavy, floating, sinking,” or “I could hear your voice in a distance but did not actually register anything you said,” or “I felt my muscles occasionally twitching.”
2. If a student reports difficulty with relaxing, ask if this is a usual problem. So this student doesn’t feel alone, you might even take a poll of the group to see how many students have trouble relaxing.
3. Since many students are sleep deprived, you can also poll the students about their sleep patterns. “How many of you have trouble sleeping at night?” “How many hours of sleep do you average?”
4. Suggest that students practice relaxation exercises before retiring to improve their sleep, which also improves their ability to help their clients relax during sessions.

*How do you feel now?*

1. If the students were able to deeply relax, they will usually say that they feel rejuvenated. This is the same experience we want to create for our massage clients: we want them to leave the session feeling rejuvenated.
2. Inform your students that if they or their future clients have a sleep deficit, or have trouble relaxing, which often occurs with a Type A personality, that when they do relax, they may feel groggy afterwards. I got lost in the previous sentence. Perhaps break into two sentences. This indicates poor autonomic flexibility, which will improve with relaxation practices.

*How does you know when you are in a relaxed state, in an Alpha or Theta state?*

1. You can hear the music or the sound of the massage therapist’s voice from a distance but you aren’t really listening and it sounds far away.
2. You sink into a state of reverie, between waking and sleeping, where the massage therapist’s touch is just enough stimuli to keep you slightly conscious.
3. You feel dreamy, floating or weighted and safe body sensations.

*During a massage, how can help your clients access Theta?*

1. By the tone of your voice.

2. By using slow, even, rhythmic, and repetitive massage strokes. Avoid erratic changes in rhythm or pressure. If you are going to make a dramatic change in what you are doing, inform your client first to prepare her: “Now I’m going to apply vigorous cross-fiber friction over this tight area to loosen it up.”
3. By slowing down your breathing and encouraging your client to do the same.
4. By encouraging your client to tune into sensations of his or her body becoming heavier and sinking into the table.
5. By encouraging your client to actively relax areas that you are touching.