

Somatic Patterning
Supplemental Instructor Materials
Chapter 7: Developmental 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 7 Suggested Readings

1. The Neurological Actions, p. 172
2. Yield, pp. 172-175
3. Push, pp. 175-177
4. Reach, p. 176
5. Pull, pp. 176-178
6. Prevertebral Patterns, p. 178
7. Cellular Movement, pp. 178-179
8. Naval Radiation, pp. 180-181
9. Mouthing Patterns, pp. 181-183
10. Prespinal Movement along the Soft Spine, pp. 183-184
11. Vertebral patterns, p. 184
12. Spinal Patterns, Spinal Push, Spinal Reach, pp. 184-187
13. Homologous Patterns, Homologous Push, Homologous Reach Patterns, pp. 187-191
14. Homolateral Pushes, pp. 191-192
15. Contralateral Reaches, pp. 192-194
16. Developmental Patterning to Integrate Bodywork, pp. 197-198

Chapter 7 Objectives

1. Identify the four neurological actions and explain why they are neurological.
2. Describe the qualities of yield patterns.
3. Describe the qualities of push patterns.
4. Describe the qualities of reach patterns.
5. Describe the qualities of pull patterns.
6. Identify the four prevertebral patterns and explain why they are prevertebral.
7. Describe cellular movement.
8. Describe navel radiation.
9. Describe mouthing patterns.
10. Describe prespinal movement.
11. Identify the four vertebral patterns and explain why they are vertebral.
12. Describe the spinal patterns.
13. Describe the homologous patterns.
14. Describe the homolateral patterns.
15. Describe the contralateral patterns.
16. Discuss how to integrate developmental patterning into bodywork.

Chapter 7 Summary

1. The four neurological actions—yield, push, reach, and pull—are “neurological” because they support the development and growth of the brain and nervous system during the formative years, from birth to walking.
2. Yield is the ability to surrender and completely relax on both a physical and psychological level. Yield occurs when a person feels safe; it establishes the baseline of neuromuscular and autonomic nervous system tone in the body.
3. Push is the process of pressing the limbs or spine away from another person or thing. Push sends compressive force into the body, organizing lines of force along pathways of movement, creating boundaries between self and other.
4. Reach is the process of extending the limbs or spine out into the environment and toward other people. Reach creates tensional forces in the body, extending the limbs and spine, lengthening the tissues and opening the joints, organizing spatial awareness, and establishing a sense of connection with other people.
5. Pull is the culmination of a reach and grasp. It is the process of taking hold of something and drawing it toward the body. When the pull sequences through the body, one part of the body reaches and pulls the rest of the body through space.
6. The four prevertebral patterns—cellular movement, navel radiation, mouthing patterns, and prespinal movement—are so named because they recapitulate the organic movement patterns of prevertebral animals, such as the amoeba and starfish, which sequence through soft tissues rather than along skeletal pathways.
7. Cellular movement is the deep, intrinsic motion of fluids and substances across the cellular wall. Although it is not outwardly observable, cellular movement occurs through processes of cellular respiration and can sometimes be felt as subtle vibrational or energetic sensations in the body.
8. Mouthing movements are hardwired patterns; to ensure survival, an infant is born able to root and suck. Mouthing patterns sequence down the trunk into digestive organs.
9. Prespinal movements are the undulating and wavy sequences of motion that travel between the head and tail through the soft tissues of the spine. This quality of movement can be seen in the organic movements of an infant’s spine before musculoskeletal tone is established and in the undulating waves of a belly dancer’s spine.
10. Navel radiation is a pattern of motion in which all four limbs and the spine move with radial symmetry with the navel, flexing or extending in a simultaneous movement.
11. The four vertebral patterns—spinal, homologous, homolateral, and contralateral—recapitulate the movements of vertebral animals such as the fish, frog, lizard, and cat.

They establish neuromuscular pathways of motion through lines of force and tension in the bones and the joints.

12. The spinal patterns are important for the establishment of core support and length. The spinal push involves pushing with the head or the tail, sending compressive forces along the spine. The spinal reach involves reaching with the head or tail, sending tensional forces along the spine and lengthening it.
13. The homologous patterns are important for establishing upper and lower body symmetry and a connection of the limbs to the core. The homologous push or reach involves the symmetrical movement of both arms or both legs in either a pushing or a reaching action.
14. The homolateral (also called ipsilateral) pattern involves a push from one leg or arm that sequences along that side of the body into the arm or leg above or below it. The homolateral push is important for establishing differentiation between the right and left sides so that one side of the body can flex while the other side extends.
15. The contralateral pattern occurs when a reach from one hand or foot sequences through the trunk diagonally across the body into the opposite foot or hand. Contralateral movement occurs in the uniquely upright human gait, in which the arms and legs swing in opposition, causing trunk rotation.
16. A practitioner can integrate developmental patterning into bodywork by having the client reach while being stretched to decompress the joints and enhance the stretch, or by having the client push into the table or into the practitioner's hands to improve the neuromuscular connection and joint stability along the limbs and into the spine.

Chapter 7 Questions

1. The yield, push, reach, and pull are called “neurological” actions because
 - a. they are practiced to change and improve neuromuscular patterns.
 - b. they are interesting to study and stimulate a lot of mental activity.
 - c. they are crucial for nervous system and brain development during formative years.
 - d. they sequence along the same pathways as the peripheral nerves.

2. A massage client who has poorly developed yield patterns will
 - a. have difficulty relaxing and have high autonomic tone.
 - b. be able to relax the trunk but not the limbs.
 - c. be able to push through all four limbs at once.
 - d. be able to totally relax the entire body during a massage.

3. Push patterns
 - a. relax the body and establish a baseline of resting tone.
 - b. extend the limbs, establish spatial tension, and establish relationships.
 - c. compress the joints, establish lines of force, and establish boundaries.
 - d. pull the body through space or pull something toward the body.

4. Reach patterns
 - a. relax the body and establish a baseline of resting tone.
 - b. extend the limbs, establish spatial tension, and establish relationships.
 - c. compress the joints, establish lines of force, and establish boundaries.
 - d. pull the body through space or pull something toward the body.

5. A spinal push pattern from the head can be seen in
 - a. small child reaching with both feet as he slides down off his mother’s lap.
 - b. a toddler reaching with both arms in order to be picked up by a parent.
 - c. a teenager dipping her toe in a pool to check the temperature of the water.
 - d. a defensive linebacker ramming his head into a teammate during a tackle.

6. An upper homologous reach can be seen in
 - a. a toddler reaching with both arms in order to be picked up by a parent.
 - b. a small child reaching with both feet as he slides down off his mother’s lap.
 - c. a defensive linebacker ramming his head into a teammate during a tackle.
 - d. a teenager dipping her toe in a pool to check the temperature of the water.

7. A person with shoulder discomfort from hypermobility could improve the neuromuscular patterning in this area by practicing
 - a. mouthing movement that organize symmetry in the temporomandibular joints.
 - b. upper homologous pushes to improve lines of force through the arms and shoulders.
 - c. lower homologous pushes to organize lines of force through the feet, legs, and hips.
 - d. pelvic tilts that organize and improve lower spinal pushes and reaches.

8. A person with lower back pain from an exaggerated lumbar lordosis and instability could improve the neuromuscular patterning in this area by practicing
 - a. mouthing movement that organize symmetry in the temporomandibular joints.
 - b. upper homologous pushes to improve lines of force through the arms and shoulders.
 - c. contralateral twists that loosen the lower back muscles and lumbar joints.
 - d. lower homologous pushes to organize lines of force through the feet, legs, and hips.

Chapter 7 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 2nd edition of SP.

Patterning Exercise #5: Exploring Core Connections to All Vertebral Patterns (p. 31)

Objectives:

- To increase body awareness of developmental movement pathways.
- To improve radial symmetry in full-body movement patterns.

Exercise:

1. Lie comfortably on your back. Extend your arms and legs out into the shape of a large X (PE Fig. 5a). Imagine your navel connecting through your torso into the floor; feel or sense it as the core of all your limbs.
2. Sense your whole body like a six-pointed star, with the navel as the center. Imagine or sense energy traveling from your navel out your fingers, toes, head, and tail. Note which pathways you tend to be aware of and which pathways feel dull.
3. One at a time, gently reach through each limb and extend that limb from your navel. Imagine your muscles like fabric, and allow the reach to take the slack or wrinkles out of the fabric and extend your joints. Begin with your right hand, then left hand, right foot, left foot, head, and tail. In which limb do you feel the strongest connection to the core? Which is the weakest?
4. *Navel Radiation:* Simultaneously reach out through all six limbs. Then pull them in and roll to your side into a little ball (PE Fig. 5b-c). Reach again and roll onto your back. Pull the six limbs in again and roll to the other side. Repeat until the movement is smooth.
5. *Homologous Patterns:* Reach through both arms. Are they symmetrical? Reach through both legs. Are they symmetrical? Push both palms into each other. Sense the push travel from your hands into your arms, spine, and navel. Release. Then bend the knees and push both feet into the floor. Again, sense the push travel through both legs into the hips and spine (PE Fig. 7d). Then release.
6. *Homolateral Patterns:* With one leg bent and the other straight, push with the foot of the bent leg. Does it extend that side of your body? It may even roll you over. Now bend the other leg and push with that foot. Keep your palms and forearms flat on the floor as you push with your leg.
7. *Contralateral Patterns:* Start in the big-X position. Reach through one hand and let the reach pull through your navel across to your opposite leg (PE Fig. 5e). Do the same with each limb: reach through the other arm, then one foot and leg, then the other. </PE>

Patterning Exercise #58: Differentiating Push and Reach (p. 177)*Objectives:*

- To establish lines of force with push patterns.
- To establish lines of tension with reach patterns.

Exercises:

1. While sitting on the floor, lean forward and push one hand into the floor as you reach with the other (PE Fig. 58a). Sense how reach elongates one arm while the push compresses the other arm.
2. Lie on your back on the floor in a comfortable position. Bend one leg, placing the foot flat on the floor. Straighten the other leg by reaching through the toes on that foot (PE Fig. 58b). Let the extension of the reach travel into the pelvis, lengthening your hip and back on that side. As you reach through your toes, keep your leg weighted and the back of your knee relaxed. Then push through the heel of the extended leg (PE Fig. 58c). Alternate reaching and pushing with your foot, and feel the difference between the two actions. Switch legs and repeat.
3. Now contrast a reach in the extended foot and leg with a push in the bent leg. Continue to reach through the toes of one foot while you push down through the sole of the other. Sense the contrast in tone between the two actions. How does it affect your hips? Switch legs and repeat.
4. Next, push both feet up toward the ceiling (PE Fig. 58d). Then contrast this with reaching through both feet (PE Fig. 58e). Sense how reach elongates the joints in your legs.
5. Finish by coming back to a spinal action. Do this by bending both legs and placing both feet flat on the floor, then simultaneously push down through both feet (PE Fig. 58f). Sense how the push in a closed chain (with the feet connected to the floor) compresses your joints all the way up through your spine. Compare this with a push of your feet through an open chain (PE Fig. 58d).
6. Explore reaching with one foot while pushing with the other as you walk.

Patterning Exercise #66: Homologous Push through the Limbs (p. 177)

Caution: If your shoulders are tight, the homologous position will stretch them and you might be sore afterwards; therefore, remain in it only as long as you can remain somewhat comfortable. To protect your lower back, lightly contract your lower abdominal muscles and tuck your toes under. If you have a disk problem, skip this exercise.

Objectives:

- to establish lines of force through the arm into the spine
- to improve symmetry in the body, especially the shoulders and hips.
- to break patterns of hiking or rounding the shoulders.

Exercises: (steps 1-6)

1. Lie on a padded floor on your belly. Turn your head to one side, or rest your forehead on a small pillow or rolled up towel.
2. Put both your arms out to the sides. Bend your elbows so that your forearms are at right angles to the upper arms (PE Fig. 66a). Make sure your palms are flat and all five fingers

are touching the floor. Widen and sink across the front of your chest. Reach your elbows out to the sides to widen across your shoulders. Keep your neck long by reaching out the top of your head. Yield into this position by focusing on widening and sinking through your chest, forearms, and hands.

3. *Upper homologous push:* Slowly press your entire hands and forearms into the floor. Sense the force of the push traveling up your arms, into your back, and down your spine. Make sure not to pull your arms up or in, but continue to push them out and down. Gently push, then release. Do this several times.
4. Repeat the push and progress into lifting your head and chest off the floor (PE Fig. 66b-c). Look at the floor to engage optical support for your head. Then rest.
5. Now explore a rhythmic push with the hands and forearms in a motion that rocks the whole body. Then yield in this position a minute before going on.
6. Stay in the same position with one variation: scoot close enough to a wall that you can put your feet flat against the wall with your knees bent (PE Fig. 66d). Keep your knees and thighs relaxed and weighted. Feel the contact your pelvis makes with the floor; widen across the front of your pelvis so that you feel your pubic bone and hip sockets widen and sink into the floor.

Feedback: Can you push your arm symmetrically? Get up slowly and stand, then walk around. Do you feel any changes in your posture or movement? Do your shoulders and chest seem wider and more open?