

LAB 5.1 • ASSESS YOUR FLEXIBILITY

Name: _____ Date: _____

Instructor: _____ Section: _____


Materials: Exercise mat, yardstick or sit-and-reach box, a partner

Purpose: To assess your current level of lower-back, hip, and hamstring flexibility and your current level of joint mobility or range of motion.

SECTION I: THE SIT-AND-REACH TEST

This test measures the general flexibility of your lower back, hips, and hamstrings. The results are specific to those regions of your body and do not reflect your flexibility in other body areas. Choose the **box** or the **yardstick** test based upon equipment availability and/or your instructor's preference. You **need not** perform both assessments.

- 1. Warm-up.** Complete 3 to 10 minutes of light cardiorespiratory activity to warm-up your body and then perform light range-of-motion exercises and stretches for the joints and muscles that you will be using.
- 2. Prepare for the appropriate test.**

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BOX Sit-and-Reach Test – Place the sit-and-reach box against a wall to prevent it from moving during the test. Sit without shoes behind the box, place your feet flat against the box at the 26-cm mark (the “zero” or foot mark for this test), and put your hands on top of the box.



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YARDSTICK Sit-and-Reach Test – Sit straight legged on a mat with your shoes removed and your feet about 10 to 12 inches apart. Have your partner place a yardstick on the mat between your feet with the 15-inch mark at the edge of your heels. You can use a pre-placed and taped yardstick, tape the yardstick in place at the heels, or just have your partner hold the yardstick. Place your hands on top of the end of the yardstick.



- 3. Properly perform the test.** Keep one hand on top of the other. It is important that fingertips remain together and that your hands remain in contact with the yardstick or box ruler at all times. Reach forward as far as you can by slowly bending forward, reaching with your arms, and sliding your fingertips out along the yardstick or box. Keep your legs straight, drop your head between your arms, and breathe out as you perform the test. Hold your ending position for at least two seconds. Your partner will watch to ensure that you have proper hand position and straight legs during the test.
- 4. Find your reach distance.** Your *reach distance* is the most distant point reached with both fingertips. If you cannot keep your hands from separating, the most distant point reached by the fingertips of the *hand that is farthest back* should be considered the reach distance. Record the reach distance in inches, as measured by the yardstick, or centimeters, as measured by the box. Perform the test twice. Have your partner point to your reach distance for each trial. Record your best reach distance of the two trials in the RESULTS section on the next page.

FLEXIBILITY RESULTS

Box Sit-and-Reach Test: Reach Distance (cm): _____ Rating: _____

OR

Yardstick Sit-and-Reach Test: Reach Distance (in): _____ Rating: _____

- 5. Find your flexibility rating by using the charts provided below.** Your rating tells you how you compare to others who have completed this test in the past. Record your rating in the RESULTS section above.

BOX Sit-and-Reach Test (centimeters)					
Men	Excellent	Very Good	Good	Fair	Needs Improvement
15–19 yrs	≥39	34–38	29–33	24–28	≤23
20–29 yrs	≥40	34–39	30–33	25–29	≤24
30–39 yrs	≥38	33–37	28–32	23–27	≤22
40–49 yrs	≥35	29–34	24–28	18–23	≤17
50–59 yrs	≥35	28–34	24–27	16–23	≤15
60–69 yrs	≥33	25–32	20–24	15–19	≤14
Women	Excellent	Very Good	Good	Fair	Needs Improvement
15–19 yrs	≥43	38–42	34–37	29–33	≤28
20–29 yrs	≥41	37–40	33–36	28–32	≤27
30–39 yrs	≥41	36–40	32–35	27–31	≤26
40–49 yrs	≥38	34–37	30–33	25–29	≤24
50–59 yrs	≥39	33–38	30–32	25–29	≤24
60–69 yrs	≥35	31–34	27–30	23–26	≤22

Source: From Canadian Physical Activity, Fitness & Lifestyle Approach: CSEP-Health & Fitness Program's Health-Related Appraisal & Counseling Strategy. 3rd edition © 2003. Reprinted with permission from the Canadian Society for Exercise Physiology.

YARDSTICK Sit-and-Reach Test (inches)							
Men	Excellent	Good	Above Average	Average	Below Average	Poor	Very Poor
18–25 yrs	22–28	20–21	18–19	16–17	14–15	12–13	2–11
26–35 yrs	21–28	19	17	15–16	13–14	11–12	2–9
36–45 yrs	21–28	18–19	16–17	15	13	9–11	1–7
46–55 yrs	19–26	16–18	14–15	12–13	10–11	8–9	1–6
56–65 yrs	17–24	15–16	13	11	9	6–8	1–5
>65 yrs	17–24	14–16	12–13	10–11	8–9	6–7	0–4
Women	Excellent	Good	Above Average	Average	Below Average	Poor	Very Poor
18–25 yrs	24–29	22	20–21	19	17–18	16	7–14
26–35 yrs	23–28	21–22	20	18–19	16–17	14–15	5–13
36–45 yrs	22–28	20–21	18–19	17	15–16	13–14	4–12
46–55 yrs	21–27	19–20	17–18	16	14	12–13	3–10
56–65 yrs	20–26	18–19	16–17	15	13–14	10–12	2–9
>65 yrs	20–26	18–19	17	15–16	13–14	10–12	1–9

Source: Adapted with permission from YMCA Fitness Testing and Assessment Manual, 4th edition. Copyright © 2000 by YMCA of the USA, Chicago. All rights reserved.

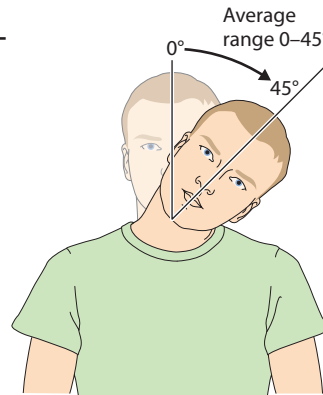
SECTION II: JOINT MOBILITY—RANGE-OF-MOTION TESTS



Range-of-motion tests assess your joints' ability to move through a normal range of motion. Follow the instructions for each of the tests shown below. Perform each test on both your right and left sides. Stop each movement when you feel resistance. To avoid injury, do not try to push past your normal range. Have a partner observe your movements, "eyeball" your estimated joint angle, and record your range-of-motion results on page 203.

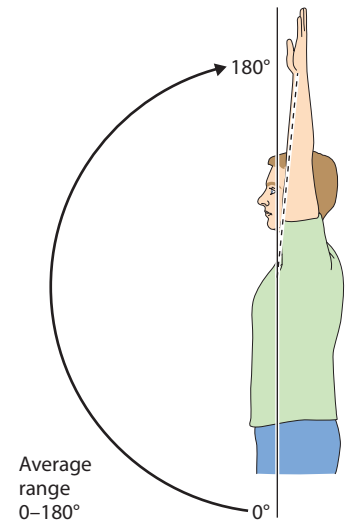
1. Neck Lateral Flexion—

Sit or stand with your head neutral and looking forward. Tilt your head to the side and drop your ear toward your shoulder.



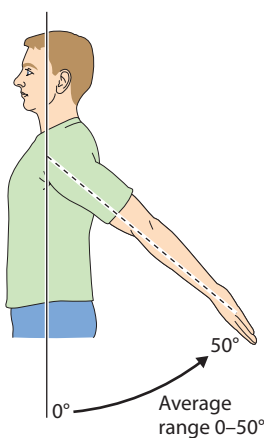
2. Shoulder Flexion—

Starting with your arms at your sides, reach a straight arm forward and up toward your head.



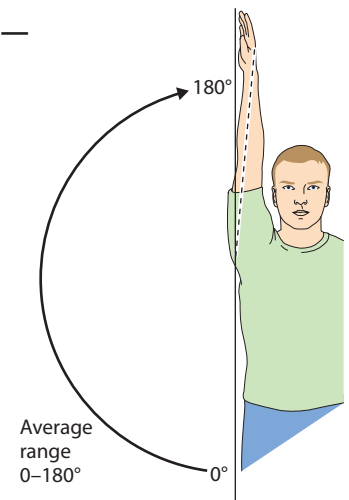
3. Shoulder Extension—

With your arms at your sides, reach a straight arm behind you and up.

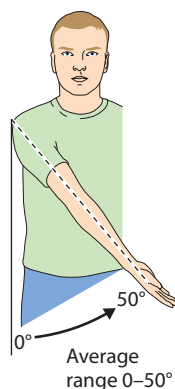


4. Shoulder Abduction—

Reach your straight arm out to the side and up to your head.

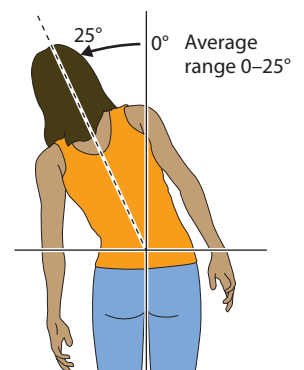


5. Shoulder Adduction—Reach your straight arm down and across your body in front.

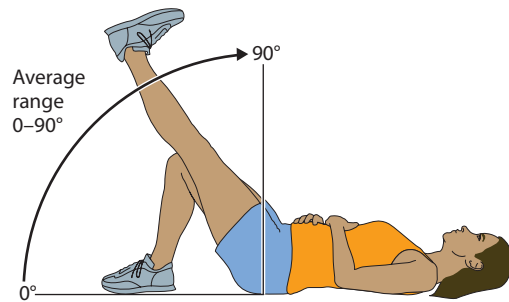


6. Trunk Lateral Flexion—

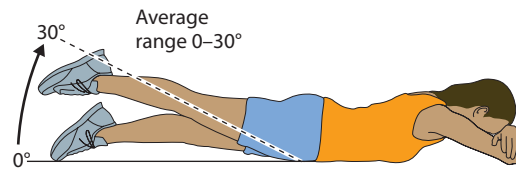
Standing upright with slightly bent knees and your arms at your sides, bend your torso sideways and reach your arm down your leg for support.



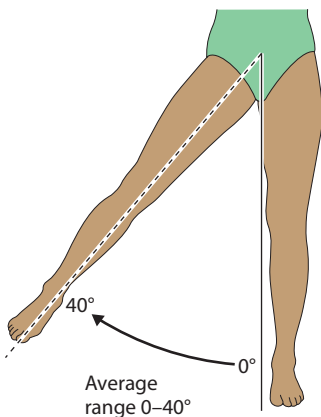
- 7. Hip Flexion**—Lying on your back, lift a straight leg up into the air while keeping the other leg bent with the foot flat on the ground.



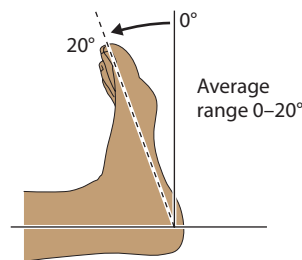
- 8. Hip Extension**—Lying on your stomach with your head on the mat, reach your straight leg up behind you, keeping the other leg flat on the ground.



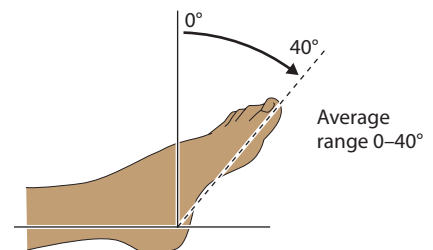
- 9. Hip Abduction**—Standing upright with slightly bent knees, reach your straight leg out to the side.



- 10. Ankle Dorsiflexion**—Sitting without shoes and your legs extended in front of you, flex your foot back toward your knee.



- 11. Ankle Plantar Flexion**—Sitting without shoes and your legs extended in front of you, point your foot toward the floor.



		_____ Yes _____ No	_____ Yes _____ No
1. Neck	Lateral Flexion 0–45	_____ Yes _____ No	_____ Yes _____ No
3. Shoulder	Extension 0–50	_____ Yes _____ No	_____ Yes _____ No
4. Shoulder	Abduction 0–180	_____ Yes _____ No	_____ Yes _____ No
5. Shoulder	Adduction 0–50	_____ Yes _____ No	_____ Yes _____ No
6. Trunk	Lateral Flexion 0–25	_____ Yes _____ No	_____ Yes _____ No
7. Hip	Flexion 0–90	_____ Yes _____ No	_____ Yes _____ No
8. Hip	Extension 0–30	_____ Yes _____ No	_____ Yes _____ No
9. Hip	Abduction 0–40	_____ Yes _____ No	_____ Yes _____ No
10. Ankle	Dorsiflexion 0–20	_____ Yes _____ No	_____ Yes _____ No
11. Ankle	Plantar Flexion 0–40	_____ Yes _____ No	_____ Yes _____ No

Sources: Adapted from American College of Sports Medicine, *ACSM's Health-Related Physical Fitness Assessment Manual*, 3rd ed. (Baltimore, MD: Lippincott Williams & Wilkins, 2009); American College of Sports Medicine, *ACSM's Resource Manual for Guidelines for Exercise Testing and Prescription*, 6th ed. (Baltimore, MD: Lippincott Williams & Wilkins, 2009).

To submit the completed lab, save the form to your computer and email it to your instructor or upload it to their digital dropbox as directed.