

Physical Evaluation of Lipedema

A Functional Mobility Assessment for Women Living with Lipedema

Adapted from validated clinical and fitness assessment protocols

About This Resource

This evaluation was compiled to give women living with lipedema, a structured, evidence-based tool to objectively document how this condition affects daily physical function. Every test included here is drawn from peer-reviewed, publicly available fitness and rehabilitation science. The scoring benchmarks are established population norms.

How to Use This Evaluation

This evaluation is designed to be administered by a qualified provider: a physical therapist, certified personal trainer, athletic trainer, or other licensed clinician with fitness assessment experience.

Recommended Evaluator Qualifications

- Physical Therapist (PT) or Physical Therapist Assistant (PTA)
- Certified Personal Trainer (CPT) with clinical or rehabilitation experience
- Athletic Trainer (ATC)
- Registered Kinesiologist or Exercise Physiologist
- Any licensed clinician with functional movement assessment training

Estimated Time

Approximately 60–75 minutes for the full evaluation, including both functional questionnaires.

Equipment Required

- Stopwatch or timer
- Heart rate monitor or pulse oximeter (or manual pulse counting)
- Treadmill, flat track, or flat sidewalk (for Walk/Run Test)
- 12-inch step (sturdy, weight-bearing)
- Armless chair with 17-inch seat height
- Metronome (app is acceptable)
- Exercise or yoga mat
- 5-pound dumbbell
- 20-pound box (for lifting test)
- Two 20-pound dumbbells (for carry test)

Patient Information

Patient Name: _____	Date of Birth: _____
Age: _____	Gender: _____
Height: _____	Weight: _____
Evaluation Date: _____	Evaluator Name: _____
Evaluator Credentials / Title: _____	

Pain Assessment (Palpation)

Before the evaluation begins, palpate each area below and record the patient's self-reported pain level on a scale of 0 (no pain) to 10 (severe pain). Repeat immediately after the full evaluation. Lipedema tissue is characteristically tender to palpation; this tenderness may worsen with exertion.

Source: Pain palpation protocol consistent with Herbst (2012) and Forner-Cordero et al. (2012) lipedema clinical criteria.

Body Area	Pain Before (0–10)	Pain After (0–10)
Thighs		
Calves		
Arms		
Hips		
Buttocks		
Abdomen		

Heart Rate Log

Record resting and post-test heart rate at each measurement point below. Use the radial or carotid pulse and measure for one full minute. Use the same method for all measurements. The patient may be seated or standing record consistently.

Measurement	Timing	BPM
HR #1	Resting — before evaluation begins	
HR #2	Immediately after Walk/Run Test	
HR #3	Immediately after Step Test	
HR #4	Immediately after Plank Test	
HR #5	Immediately after Carry Test	
HR #6	End of full evaluation	

Standardized Fitness Tests

Test 1 — Six-Minute Walk/Run Test

Purpose: Assesses cardiovascular endurance, lower extremity function, and the impact of excess lipedema tissue on gait and mobility over a sustained period.

Protocol: The patient walks or runs on a treadmill or flat surface for six (6) minutes, using their best effort. If the patient has a BMI under 35 or is highly athletic, the test should be performed as a run when possible; note if walking is required. This is not a speed or distance test it is a measure of effort, gait quality, and symptomatic response.

Source: *ATS Committee on Proficiency Standards for Clinical Pulmonary Function Laboratories (2002). ATS Statement: Guidelines for the Six-Minute Walk Test. American Journal of Respiratory and Critical Care Medicine, 166(1), 111–117.*

Activity	Gait	Pain Before (0–10)	Pain After (0–10)
☐ Walk ☐ Run ☐ Both	☐ Normal ☐ Abnormal		
Notes: _____			

Rate of Perceived Exertion	No Effort	Easy	Moderate	Hard	Very Hard	Maximal
Mark one:	☐	☐	☐	☐	☐	☐

Test 2 — One-Minute Squat Test

Purpose: Assesses lower extremity muscular strength and endurance, particularly the quadriceps, hamstrings, and glutes — regions directly impacted by lipedema tissue accumulation.

Protocol: The patient stands in front of an armless chair (17-inch seat height) with feet shoulder-width apart, hands on hips. They squat to lightly touch the chair and return to standing. Count total repetitions in 60 seconds.

Source: *Canadian Society for Exercise Physiology (CSEP). Canadian Physical Activity, Fitness & Lifestyle Approach (CPAFLA), 3rd ed. (2013).*

Repetitions (1 min)	Performance Rating
	☐ Excellent ☐ Good ☐ Above Avg ☐ Average ☐ Below Avg ☐ Poor ☐ Very Poor

Age-Based Norms (repetitions):

Age	Excellent	Good	Above Avg	Average	Below Avg	Poor	Very Poor
20–29	>29	27–29	24–26	21–23	18–20	15–17	<15
30–39	>26	24–26	21–23	18–20	15–17	12–14	<12
40–49	>23	21–23	18–20	15–17	12–14	9–11	<9
50–59	>20	18–20	15–17	12–14	9–11	6–8	<6
60+	>17	15–17	12–14	9–11	6–8	3–5	<3

Test 3 — 30-Second Sit-to-Stand Test (STS)

Purpose: Measures lower body strength and functional independence. This test is widely used in rehabilitation to assess fall risk and lower extremity function in adults of all ages.

Protocol: Using an armless chair with a 17-inch seat height, the patient crosses arms at the chest and performs as many complete sit-to-stand repetitions as possible in 30 seconds. Count only full stands.

Source: Rikli, R.E. & Jones, C.J. (1999). Development and validation of a functional fitness test for community-residing older adults. *Journal of Aging and Physical Activity*, 7(2), 129–161.

Repetitions (30 sec)	Performance Rating
	☐ Excellent ☐ Good ☐ Average ☐ Below Average ☐ Poor

Age-Based Norms (repetitions in 30 seconds):

Age	Poor	Below Avg	Average	Good	Excellent
18–24	<24	24–27	28–30	31–34	>34
25–29	<24	24–27	28–29	30–32	>32
30–34	<20	20–23	24–26	28–30	>30
35–39	<18	18–21	22–24	25–28	>28
40–44	<16	16–19	20–22	23–26	>26
45–49	<14	14–17	18–20	21–24	>24
50–54	<12	12–15	16–18	19–22	>22
55–59	<10	10–13	14–16	17–20	>20
60–64	<8	8–11	12–14	15–18	>18
65–69	<8	8–11	12–13	14–16	>16
70–75	<7	7–10	11–12	13–15	>15

Test 4 — Three-Minute Step Test

Purpose: Estimates aerobic fitness and cardiovascular response using post-exercise heart rate as the primary outcome measure. Also assesses leg strength and coordination relevant to stair navigation.

Protocol: Set a metronome to 96 beats per minute. Using a 12-inch step, the patient steps up and down to the beat for three full minutes. Immediately upon stopping, record heart rate for one full minute.

Source: McArdle, W.D., Katch, F.I., & Katch, V.L. (1972). Reliability and interobserver reproducibility of the five-minute step test. *Research Quarterly*, 43, 50–55. Norms from CSEP CPAFLA (2013).

Post-Test Heart Rate (BPM)	Performance Rating
	☐ Excellent ☐ Above Average ☐ Average ☐ Below Average ☐ Poor

Age-Based Norms (heart rate in BPM — lower is better):

Level	18–25	26–35	36–45	46–55	56–65	66+
Excellent	<88	<91	<93	<96	<97	<93
Above Average	88–103	91–106	93–106	96–111	97–109	93–108
Average	104–116	107–118	107–117	112–120	110–117	109–121
Below Average	117–128	119–129	118–130	121–127	118–129	122–129
Poor	>129	>130	>131	>128	>130	>130

Rate of Perceived Exertion	No Effort	Easy	Moderate	Hard	Very Hard	Maximal
Mark one:	☐	☐	☐	☐	☐	☐

Test 5 — Curl-Up Test (Abdominal Endurance)

Purpose: Assesses abdominal muscle strength and endurance. Abdominal involvement is common in lipedema and may contribute to postural compensation and chronic low back pain.

Protocol: Patient lies on back, knees bent at approximately 140 degrees, feet flat, arms straight and parallel to the trunk with palms on the mat. Curling slowly at 20 reps per minute (one rep every 3 seconds), fingers slide forward 4.5 inches as the head rises, then return. The test ends when the patient cannot maintain pace or proper form (feet lifting, head not reaching mat).

Source: Canadian Society for Exercise Physiology (CSEP). CPAFLA, 3rd ed. (2013).

Repetitions Completed	Performance Rating
	☐ Excellent ☐ Good ☐ Above Avg ☐ Average ☐ Below Avg ☐ Poor ☐ Very Poor
Notes:	

Age-Based Norms:

Age	Excellent	Good	Above Avg	Average	Below Avg	Poor	Very Poor
20–29	>42	31–42	24–26	21–23	18–20	15–17	<15
30–39	>26	24–26	21–23	18–20	15–17	12–14	<12
40–49	>23	21–23	18–20	15–17	12–14	9–11	<9
50–59	>20	18–20	15–17	12–14	9–11	6–8	<6
60+	>17	15–17	12–14	9–11	6–8	3–5	<3

Test 6 — Forearm Plank Test (Core Stability)

Purpose: Evaluates static core muscular endurance and postural stability. Core weakness and structural instability are frequently reported by women with lipedema, particularly those carrying significant abdominal, hip, or deep pelvic tissue mass.

Protocol: The patient begins in a standard forearm plank position—upper body supported by the elbows and forearms, legs extended straight, weight taken by the toes, with the hips lifted to create a straight line from head to heel. Start the timer as soon as the patient achieves correct posture. Stop the timer immediately when proper form breaks or the hips sag.

Source McGill, S.M. (2010). Core training: Evidence translating to better performance and injury prevention. Strength and Conditioning Journal, 32(3), 33–46; Chase, K.A., et al. Fitness Norms for the Plank Exercise. International Journal of Exercise Science..

Time Held	Performance Rating
	☐ Excellent (>120 sec) ☐ Above Average (90-120 sec) ☐ Average (60-89 sec) ☐ Below Average (30-59 sec) ☐ Poor (<30 sec)

Rate of Perceived Exertion	No Effort	Easy	Moderate	Hard	Very Hard	Maximal
Mark one:	☐	☐	☐	☐	☐	☐

Test 7 — 30-Second Arm Curl Test (5 lb)

Purpose: Evaluates upper extremity muscular strength and endurance. This test is particularly relevant for women with arm lipedema, where excess tissue, chronic pain, and restricted range of motion often impair everyday arm function.

Protocol: Seated, with the upper arm braced against the side of the chair and only the forearm moving, the patient performs as many full-range bicep curls as possible in 30 seconds using a 5-pound dumbbell. Test both arms individually.

Source: Rikli, R.E. & Jones, C.J. (1999). Senior Fitness Test Manual. Human Kinetics. (Adapted for clinical population.)

Age-Based Norms (repetitions in 30 seconds):

Age	18–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–75
Excellent	>36	34	32	30	>27	>25	24	22	20	19	18
Good	33–36	31	29	27	24–26	23–24	21	19	17	16	16
Average	31–32	29	27	25	21–23	21–22	19	17	15	14	13
Below Avg	28–30	26	24	22	18–20	18–20	16	14	12	12	11
Poor	<28	23	21	19	<18	<18	13	11	9	8	8

Arm	Repetitions	Performance Rating
Left		☐ Excellent ☐ Good ☐ Average ☐ Below Avg ☐ Poor
Right		☐ Excellent ☐ Good ☐ Average ☐ Below Avg ☐ Poor

Test 8 — Progressive Lifting Test (20 lb box)

Purpose: Evaluates functional arm and shoulder strength for activities of daily living: cooking, laundry, carrying children or groceries, and workplace tasks. This test is especially meaningful for women with arm lipedema who may have significant lifting limitations.

Protocol: Using a 20-pound box with both hands, the patient performs three progressive lifts in sequence: floor to waist, pause; waist to shoulder, pause; then overhead as one fluid motion. The patient then reverses to lower the box. Rate each phase independently.

Source: Functional lifting standards adapted from occupational and rehabilitation medicine protocols. See NIOSH Lifting Equation (Waters et al., 1993).

Task	Rating (0=unable, 10=full ability)	Notes
Lift 20-lb box from floor to waist		
Lift 20-lb box from waist to shoulder		
Lift 20-lb box overhead (one fluid motion)		
Lower box from overhead back to floor		

Test 9 — Weighted Carry Test (20 lb × 2, 5 minutes)

Purpose: Simulates sustained real-world carrying tasks — grocery bags, children, work materials, medical equipment. Assesses bilateral upper extremity endurance and grip strength under load over time.

Protocol: Patient carries a 20-pound dumbbell in each hand while walking back and forth across the room for five minutes. Rate ability on a scale of 0 (unable to complete) to 10 (able to complete without impairment). Note any asymmetry between arms.

Source: Functional carry assessment adapted from occupational therapy activity of daily living evaluation standards.

Task	Rating (0–10)	Notes
Carry 20-lb dumbbells in each hand for 5 minutes (walking)	Left arm:	Right arm:

Rate of Perceived Exertion	No Effort	Easy	Moderate	Hard	Very Hard	Maximal
Mark one:	☐	☐	☐	☐	☐	☐

Test 10 — Unipedal Stance Balance Test

Purpose: Evaluates static balance and postural stability. Women with lipedema frequently experience balance difficulties due to disproportionate tissue distribution between the upper and lower body, combined with smaller feet relative to their lower leg mass.

Protocol: Patient stands on one foot (preferably without shoes), lifting the other foot off the ground. Record the best time (in seconds) from three trials on each leg. Compare to age-based norms.

Source: Bohannon, R.W., Larkin, P.A., Cook, A.C., Gear, J., & Singer, J. (1984). Decrease in timed balance test scores with aging. *Physical Therapy*, 64(7), 1067–1070.

Leg	Best of 3 Trials (sec)	Eyes	Comparison to Age Norm
Left		☐ Open ☐ Closed	☐ Better ☐ Average ☐ Worse
Right		☐ Open ☐ Closed	☐ Better ☐ Average ☐ Worse

Functional Scale Questionnaires

The following two validated questionnaires should be completed separately by the patient and submitted alongside this evaluation. They assess self-reported functional limitation in the lower and upper extremities.

Lower Extremity Functional Index (LEFI)

A 20-item validated questionnaire measuring functional ability in the lower extremities across daily activities. Score out of 80; lower scores indicate greater impairment.

Source: Mehta, S.P., et al. (2016). *The lower extremity functional scale was reliable, valid, and responsive in people with musculoskeletal disorders. Journal of Clinical Epidemiology*, 75, 89–98.

Upper Extremity Functional Index (UEFI)

A 20-item validated questionnaire measuring functional ability of the upper extremities across daily activities. Score out of 80; lower scores indicate greater impairment. Particularly relevant for patients with arm, shoulder, or breast lipedema.

Source: Stratford, P., Binkley, J., & Stratford, D. (2001). *Development and initial validation of the upper extremity functional index. Physiotherapy Canada*, 53(4), 259–267.

Questionnaire	Score (out of 80)	Completed
LEFI — Lower Extremity Functional Index	/ 80	☐ Yes ☐ No
UEFI — Upper Extremity Functional Index	/ 80	☐ Yes ☐ No

Evaluator Summary

Did the patient give maximum and consistent effort throughout? ☐ Yes ☐ No ☐ Partial

Additional Clinical Observations:

Evaluator Name & Credentials:

Employer / Clinic:

Evaluator Email:

Evaluator Phone:

Evaluator Signature: _____ Date: _____

References

All fitness tests and scoring benchmarks in this evaluation are drawn from the peer-reviewed sources listed below. These protocols are publicly available and widely used in clinical and fitness settings.

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16. Chase, K. A., Brigham, C. E., & Winchester, L. J. (2015). Fitness Norms for the Plank Exercise. *International Journal of Exercise Science: Conference Proceedings*, 8(2), 14.