

PHASE 2

[DATA COLLECTION SHEET]



UNIVERSITY OF
**NORTHERN
COLORADO**

**Cancer
Rehabilitation
Institute**

NAME

DATE

☐ INITIAL ASSESSMENT

☐ REASSESSMENT #

☐ STUDY

NAME OF STUDY

Date of Birth

Age

Subject #

☐ Male

☐ Female

START TIME:

1) Initial BP mmHg

2) Initial HR (RHR) bpm

Method used

3) Initial SpO₂ %

4) Height inches (without shoes)

5) Weight pounds (without shoes)

COMPLETION TIME:

15) Final BP mmHg

16) Final HR (RHR) bpm

17) Final SpO₂ %

☐ REMOVED Heart Rate Monitor

6) Body Composition

A) Body Fat Percent (Skinfolds)

Jackson and Pollock (1980). *Abdominal fold is vertical*

MALE

Chest

Abdomen

Thigh

1.

2.

3.

Average

Sum of skinfolds (SKF)

Witness

Men % Body Fat

$$D_b = 1.109380 - 0.0008267 (SKF) + 0.0000016 (SKF)^2 - 0.0002574 (age)$$

Male 18-59: (4.95 / D_b) - 4.50

Male 60-90: (4.97 / D_b) - 4.52

Body Fat = %

FEMALE

Triceps

Suprailiac

Thigh

1.

2.

3.

Average

Sum of skinfolds (SKF)

Witness

Women % Body Fat

$$D_b = 1.0994921 - 0.0009929 (SKF) + 0.0000023 (SKF)^2 - 0.0001392 (age)$$

Female 18-59: (4.96 / D_b) - 4.51

Female 60-90: (5.02 / D_b) - 4.57

Body Fat = %

B) Circumference Measurements (in inches)

Forearm - 3" up from styloid process of ulna (wrist bone)

OR _____ " up from styloid process of ulna **L** **R**

Upper Arm - 5" up from olecranon process (point of elbow)

OR _____ " up from olecranon process **L** **R**

Lower Leg - 5" up from lateral malleolus (ankle bone)

OR _____ " up from lateral malleolus **L** **R**

Thigh - 5" up from superior ridge of patella (knee cap)

OR _____ " up from superior ridge of patella **L** **R**

Waist - narrowest part of torso

Hip - widest part of torso

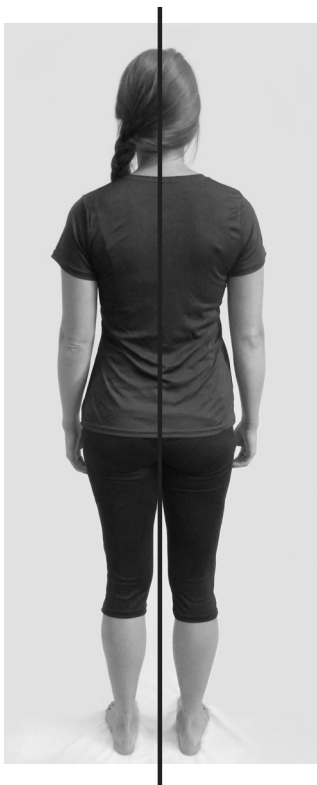
Waist-to-Hip Ratio

7) Anatomical Plumb Line

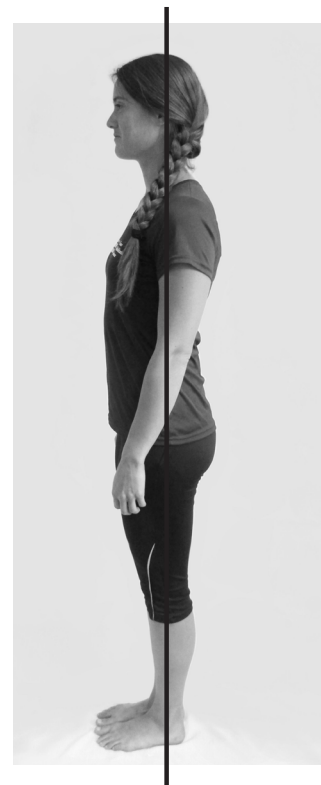
ANTERIOR VIEW



POSTERIOR VIEW



**SAGITTAL/
TRANSVERSE VIEW**



Note any irregularities in posture or stance and/or corrections that need to be made.

8) NASM Overhead Squat Solutions Table

Adapted from the National Academy of Sports Medicine

View	Checkpoint	Compensation	Probable Overactive Muscles	Probable Overactive Muscles	Example Flexibility Exercise (SMR and Static)	Example Strengthening Exercise
ANTERIOR	Foot	Foot Turns Out	Soleus Lateral Gastrocnemius Biceps Femoris (Short Head) Tensor Fasciae Latae	Medial Gastrocnemius Medial Hamstring Gluteus Medius/Maximus Gracilis Popliteus	Calf Stretch Hamstring Stretch Standing Tensor Fasciae Latae Stretch	Single-Leg Balance Reach
	Knee	Moves Inward	Adductor Complex Biceps Femoris (Short Head) Tensor Fasciae Latae Vastus Lateralis Lateral Gastrocnemius	Gluteus Medius/Maximus Vastus Medialis Oblique Medial Hamstring Medial Gastrocnemius	Adductor Stretch Hamstring Stretch Tensor Fasciae Latae Stretch Calf Stretch	Lateral Tube Walking Ball Squat with Abduction Ball Bridge with Abduction
		Moves Outward	Piriformis Biceps Femoris Tensor Fasciae Latae Gluteus Minimus/Medius	Adductor Complex Medial Hamstring Gluteus Maximus	Piriformis Stretch Hamstring Stretch Tensor Fasciae Latae Stretch	Ball Squat with Adduction Ball Bridge with Adduction
LATERAL	L-P-H-C	Excessive Forward Lean	Soleus Gastrocnemius Hip Flexor Complex Abdominal Complex (Rectus Abdominis, External Oblique)	Anterior Tibialis Gluteus Maximus Erector Spinae	Calf Stretch Hip Flexor Stretch Ball Abdominal Stretch	Ball Squat
		Low Back Arches	Hip Flexor Complex Erector Spinae Latissimus Dorsi	Gluteus Maximus Hamstrings Intrinsic Core Stabilizers (Transverse Abdominis, Multifidus, Internal Oblique, Transversospinalis, Pelvic Floor Muscles)	Hip Flexor Stretch Latissimus Dorsi Stretch Erector Spinae Stretch	Ball Squat Floor Bridge Ball Bridge
		Low Back Rounds	Hamstrings Adductor Magnus Rectus Abdominis External Obliques	Gluteus Maximus Erector Spinae Intrinsic Core Stabilizers (Transverse Abdominis, Multifidus, Internal Oblique, Transversospinalis, Pelvic Floor Muscles)	Hamstring Stretch Adductor Magnus Stretch Ball Abdominal Stretch	Floor Cobra Ball Cobra Ball Back Extension
	Upper Body	Arms Fall Forward	Latissimus Dorsi Pectoralis Major/Minor Teres Major Coracobrachialis	Mid/Lower Trapezius Rhomboids Rotator Cuff Posterior Deltoid	Latissimus Dorsi Stretch Pectoralis Stretch Self-Myofascial Release Thoracic Spine	Floor Cobra Ball Cobra Squat to Row
		Forward Head (Pushing-Pulling Assessment)	Levator Scapulae Sternocleidomastoid Scalenes	Deep Cervical Flexors	Levator Scapulae Stretch Sternocleidomastoid Stretch Scalene Stretch	Tuck Chin, Keeping Head In Neutral Position During All Exercises
		Shoulder Elevation (Pushing-Pulling Assessment)	Upper Trapezius Sternocleidomastoid Levator Scapulae	Mid/Lower Trapezius Rhomboids Rotator Cuff	Upper Trapezius Stretch Sternocleidomastoid Stretch Levator Scapulae Stretch	Floor Cobra Ball Cobra
POSTERIOR	Foot	Foot Flattens	Peroneals Lateral Gastrocnemius Biceps Femoris (Short Head) Tensor Fasciae Latae	Anterior Tibialis Posterior Tibialis Medial Gastrocnemius Gluteus Medius	Peroneal Stretch Calf Stretch Hamstring Stretch Standing Tensor Fasciae Latae Stretch	Single-Leg Balance Reach Single-Leg Medial Calf Raise
		Heel Rises	Soleus	Anterior Tibialis	Soleus Stretch	Single-Leg Balance Reach Single-Leg Squat
	L-P-H-C	Asymmetrical Weight Shift	Adductor Complex Tensor Fasciae Latae (Same Side) Piriformis Biceps Femoris Gluteus Medius (Opp. Side)	Gluteus Medius (Same Side) Adductor Complex (Opposite Side)	Adductor Stretch (Same Side) Tensor Fasciae Latae Stretch Piriformis Stretch Hamstring Stretch (Opposite Side)	Gluteus Medius (Same Side) Adductor Complex (Opposite Side)

9) InBody Percent Body Fat

10) Balance (Bertec Balance Screener) **OR** (Unipedal Stance Test):

Client stands with malleolus on the medial-lateral line, at a comfortable width apart, symmetric around the center line.

BERTEC BALANCE SCREENER

CLINICAL SCORES			LOS (%)	
Hard Surface	Eyes Open	%	Front	
	Eyes Closed	%	Back	
Foam Pad Surface	Eyes Open	%	Left	
	Eyes Closed	%	Right	
			LOS %	

UNIPEDAL STANCE TEST

Circle best time in each category.

Dominant Leg (circle one): **L** **R**

	TRIAL 1 (SECONDS)	TRIAL 2 (SECONDS)	TRIAL 3 (SECONDS)
Eyes Open			
Eyes Closed			

11) Pulmonary Function: Record measured liters, not predicted liters.

Attempt 1:	FVC	liters	% predicted	FEV1	liters	% predicted
Attempt 2:	FVC	liters	% predicted	FEV1	liters	% predicted
% var between FVC trials (If greater than 5%, repeat the test)						
Attempt 3:	FVC	liters	% predicted	FEV1	liters	% predicted

12) Cardiovascular Endurance: Perform a $\text{VO}_{2\text{peak}}$ test using the UNCCRI protocol. Estimated HR MAX

UNCCRI CANCER TREADMILL PROTOCOL WORKSHEET

Stage	Speed	Grade	Time	BP	HR	RPE	SpO ₂
0	1.0mph	0%	1 min				
1	1.5mph	0%	1 min				
2	2.0mph	0%	1 min				
3	2.5mph	0%	1 min				
4	2.5mph	2%	1 min				
5	3.0mph	2%	1 min				
6	3.3mph	3%	1 min				
7	3.4mph	4%	1 min				
8	3.5mph	5%	1 min				
9	3.6mph	6%	1 min				
10	3.7mph	7%	1 min				
11	3.8mph	8%	1 min				
12	3.9mph	9%	1 min				
13	4.0mph	10%	1 min				
14	4.1mph	11%	1 min				
15	4.2mph	12%	1 min				
16	4.3mph	13%	1 min				
17	4.4mph	14%	1 min				
18	4.5mph	15%	1 min				
19	4.6mph	16%	1 min				
20	4.7mph	17%	1 min				
Cool Down	*	0%	**				

*Identify speed for cool-down.

**Identify total time of cool-down

Note: If client changes from a walk to a run during this test, identify the time when the gait changed.

UNCCRI GUIDELINES TO STOP TREADMILL TEST

- 1) Indications to stop the test established by ACSM (pg 119, 8th edition)
- 2) HR does not increase with increased intensity
- 3) SBP does not increase with increased intensity
- 4) DBP fluctuates more than 10 mmHg from baseline
- 5) Oxygen saturation drops below 80% (pulse ox)
- 6) HR exceeds calculated maximum HR using the following formula: $\text{HR}_{\text{max}} = 208 - (0.7 \times \text{age})$

(Based upon ACSM calculation using last completed stage. Use chart in the UNCCRI Assessment and Training Manual)

Time to peak/volitional fatigue: _____ as a decimal: _____

Did patient hold the handrails? ☐ Yes ☐ No

Was the patient running during the last completed stage? ☐ Yes ☐ No

Comments: _____

VO₂peak _____

13) Muscular Strength / Endurance

A) Estimated 1- Repetition Maximum

Reps must be between 1 and 10

EXERCISE	Weight Lifted	Number of Repetitions	Seat Position	Comments	Estimated 1-RM
Lat Pull-Down					
Shoulder/Overhead Press					
Chest Press					
Seated Row					
Leg Curl					
Leg Extension					
Leg Press					

The Brzycki Equation

$$1\text{-RM} = \text{weight lifted (lb)} / [1.0278 - (\text{reps to fatigue} \times 0.0278)]$$

$$\text{Example: } 45 \text{ lbs} / [1.0278 - (5 \text{ reps} \times 0.0278)]$$

$$\text{Estimated 1-RM} = 50.63 \text{ lbs}$$

B) Handgrip Dynamometer

Dominant Hand **L** **R** (circle one) _____
Non-Dominant Hand **L** **R** (circle one) _____

C) Chair Squat Test

Squats until fatigue: _____

D) Core Stability - Check one

☐ Regular Plank

OR

☐ Modified Plank

Seconds held: _____

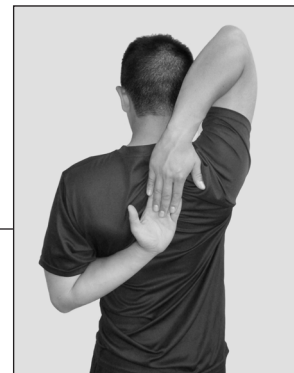
14) Flexibility

A) Sit-and-Reach: Modified **OR** Chair (Circle One):

Use highest value inches: inches: inches:

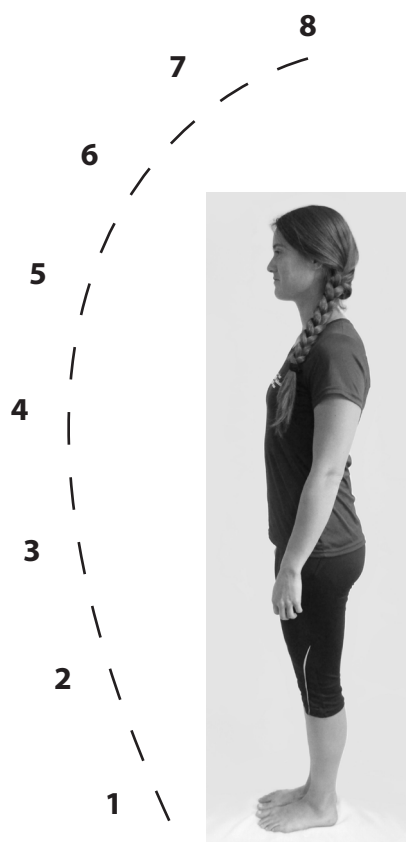
B) Shoulder Back Scratch

Preferred hand on top **L R** (circle one) inches measured:

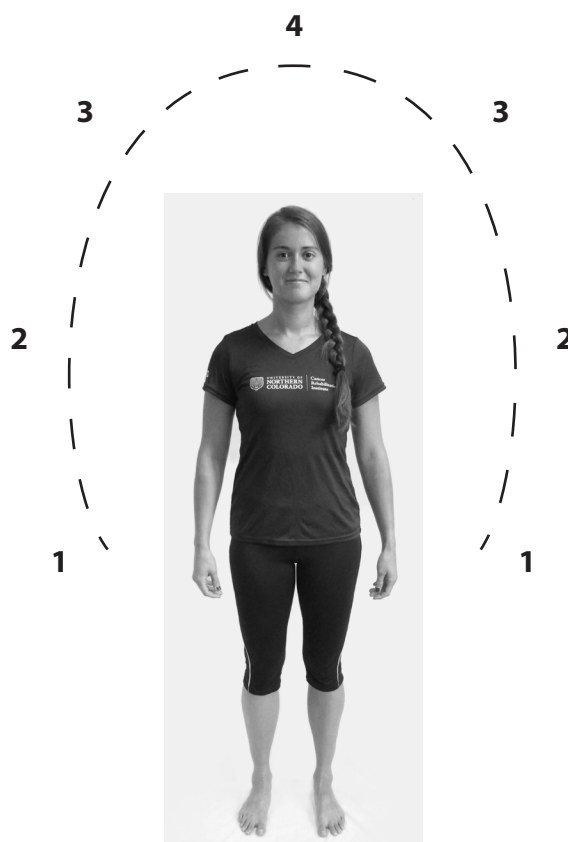


C) Reaching Tests

FRONTAL RAISE SCORING



LATERAL RAISE SCORING



Frontal Raise: Left Right

Lateral Raise: Left Right

PRINT Assessors' Names:

Would patient be interested in attending cancer rehab? ☐ Yes ☐ No

Best days of the week for exercise? Sun Mon Tues Wed Thurs Fri Sat

Best times of day for exercise? _____