

CASE STUDY 5

» INTERPRETING A MOCK FITNESS ASSESSMENT

Directions: Step 1

Design a resistance training program for the individual listed below based on his fitness assessment results. Be sure to address specific ways in which you would meet their individual needs through the resistance training principles discussed in the textbook.

Information

Richard is a retired, 71 year old male who was diagnosed with adenocarcinoma of the rectum, but he was never told the stage. Richard is currently undergoing FOLFOX treatment (started 1-month ago) containing Oxaliplatin, 5-fluorouracil, and leucovorin). He knows he will have surgery 2 months from now to excise the tumor and will need external beam radiation. However, his radiation oncologist has not yet presented a time table for when the radiation treatments should begin.

Due to fatigue and feeling unwell, Richard has begun hiring teams to help cut his grass, clean his house and manage his property. Richard would like to discontinue these services and get back to managing his property himself. Using his push lawnmower is his biggest concern, as he says he lacks the strength to pull the ripcord and fears he could not push his mower for more than 10 minutes before needing to rest due to shortness of breath and weakness in the legs.

Pre-existing conditions: High cholesterol and fatigue

Surgeries*: Cholecystectomy (15 years ago), Laparoscopic ventral incisional hernia repair with mesh (3 years ago), Endovascular repair of abdominal aortic aneurysm with stent placement (3 years ago), Repair of left iliac aneurysm (2 years ago).

**Note: All surgeries were resolved without complications*

Tobacco use: Stopped smoking 5 years ago

Fall history: No falls within the last calendar year

Medications:

- Aspirin - 325 mg daily for the last 3-years
- Finasteride - 5 mg daily for the last 2-years
- Tamsulosin - 0.4 mg daily for the last 2-years
- Azelastine Hydrochloride - as needed for the last 2-years
- Dexamethasone - 4mg twice per day for 2 days following each FOLFOX session

Exercise History: Richard tried to walk the 1 mile loop around his neighborhood 5-days per week. This takes him approximately 20-25 minutes to complete. Richard has access to his local YMCA's gym where he used to attend a TRX class but has stopped due to increasing fatigue and decreasing strength. Assume the YMCA has an extensive equipment selection.

Fitness Assessment Results

Blood pressure: 140/80
Resting Heart Rate: 65 bpm
Max Heart Rate: 149 bpm
Resting Oxygen Saturation: 98%
Respirations per minute: 12

Height: 68 inches
Weight: 173.4 lbs
Body Mass Index: 26.4

Postural Evaluation: Richard presents with elevation of the right shoulder, rounding of both shoulders, left lateral tilting of the pelvis, posterior tilting of the pelvis, bilateral lateral thigh rotation, bilateral knee varus, and excessive foot pronation.

Balance Test: Richard completed all balance stage tests with the exception of the single-leg stand test. Richard stood for 5.69 seconds on his left leg and 1.79 seconds on his right.

Circumference Measurements: There were no abnormal findings from the circumference measurement test.

Body Fat Percentage (BIA)*: 31.2% (poor)

**Note: BIA was used in place of Skinfold Calipers due to the presence of FOLFOX chemotherapy unit*

Muscular Strength:

Handgrip Dynamometer (Left): 81 lbs (below average)
Handgrip Dynamometer (Right): 88 lbs (average)

** Note: Standing with the elbows flexed to 90 degrees*

Cardiorespiratory Fitness*:

RMCRI Treadmill Test: VO₂max: 16.6 ml/kg/min (low)

**Note: Handrails were used*

Muscular Endurance:

60-second squat test: 27 reps (good)

Flexibility:

Chair Sit & Reach (Right): 0.5 inches (average)

Chair Sit & Reach (Left): 2 inches (average)

Age: 71

BP: 140/80

Body Fat: 31.2%

Height: 68 in

Resting Heart Rate: 65 bpm

Muscular Strength: Below Average

Weight: 173.4 lbs

VO₂max: 16.6 ml/kg/min

Muscular Endurance: Below Average

Flexibility: Average

Exercise Prescription:

Type of Exercise	Strength	Aerobic	Flexibility
Minutes per Day			
Days per Week			
Total Minutes per Week			

Program Components:

Example Program: Hooked up to FOLFOX

Program Set Up	Week 1/Day 1	Week 1/Day 2	Week 1/Day3
# of sets			
# of reps			
Rest time			
Overload %			
Warm Up			
Exercises 1. 2. 3. 4.			
Stretches 1 2 3 4			
Cool Down			

Directions: Step 2

Using the same information given on the previous pages, write an exercise program that would be appropriate for Richard assuming he would NOT be hooked up to a FOLFOX machine during the session.

Program Components:

Example Program: NOT hooked up to FOLFOX

Program Set Up	Week 1/Day 1	Week 1/Day 2	Week 1/Day3
# of sets			
# of reps			
Rest time			
Overload %			
Warm Up			
Exercises 1. 2. 3. 4.			
Stretches 1. 2. 3. 4.			

End of Case Study 5