

5 Pillars of Fitness

Fitness over 50 needs to look different. For those of us over 50, we are starting to notice some subtle, and other not so subtle differences in our physical bodies.

Click [here](#) to access the video playlist about each Pillar of Fitness.

When it comes to our overall fitness, we at Live Well 50 recommend training all *5 Pillars of Fitness*.

In order to do that, we must measure each Pillar to gain an honest assessment of where we are at. The 5 Pillars include:

1. Mobility/Flexibility
2. Strength/Stability
3. Power
4. Balance
5. Cardiorespiratory

Pillar 1 Mobility & Flexibility

Good Mobility & Flexibility is critical as we age for everyday functional activities including getting up and down from the floor and reaching overhead or behind us.

Regardless of how you get up or down from the floor, the idea is to keep mobility and strength to make it as easy as possible. Below is just one example.

1. Sit - Rise Test for lower body mobility:

Disclaimer- This is NOT a good test if you have significant knee or hip issues. The take home message is practice getting up and down from the floor daily.

The goal: to get down and back up from a sitting position with minimal support. Results are based on a scale of 1-10. Score 3 or less and your risk of dying is 5 x greater over the next 5 years.

The test: Cross your feet, and go into a seated position. That is worth 5 points. Then coming back up is another 5 points. However, you can lose points very easily. You lose a point for each hand, arm, or knee you need for support. Take a ½ point off if you lose your balance either on the way up or down.

Total them all up for your final score. For every point you get, there is a 21% decrease in mortality from all causes. Record your score here: _____

Shoulder Mobility Test for Upper Body Mobility

You will need: a tape measure and an assistant to help measure.

1. Raise your right arm straight up over your head.
2. Bend your right elbow. Let your right palm rest on the back of your neck with your fingers pointing down toward your feet.
3. Using your left hand, reach your hand behind your back then up your back toward the right hand. The back of your hand will be touching your back and the palm will be facing out.
4. Without straining, slide your right hand down your neck and your left hand up your spine (your hands should be moving toward each other).
5. Once you have reached as far as you can, the examiner will measure the distance between your fingers.

6. Switch hands to perform the test on the opposite shoulder.

Record your results here: R_____L_____

If your fingers touch, the examiner will record your score as zero ("0 inches").

If your fingers overlap, the results will be recorded as a negative figure (for example "-1 inch").

Scoring

Excellent: Fingers overlap

Good: Fingers touch

Average: Fingers are less than two inches apart

Poor: Fingers are more than two inches apart

Pillar 2 Strength & Stability

Sarcopenia is the “softening” of our muscles as part of the natural aging process. However, by regular strength training we can actually remain strong and even increase our strength as we age.

Functional Strength/Stability Test

Plank Test: Can be performed either on your elbows or hands.

Your goal is to hold a steady plank for 2 minutes or more. (We have 80 y.o. + women patients who can hold a 2 minute plank so it can be done!)

The inability to hold for at least 2 minutes puts your spine at risk due to below average core strength.

Results: _____

Push Up Test: The starting position is facing down with your weight distributed on the hands and feet, arms straight. The body is rigid and straight, and the hands are placed approximately shoulder width apart. Lower your body until your chest nears the floor at the bottom of the movement, and then return up to the starting position. This is one repetition. Women have the additional option of using the "bent knee" technique

Do as many push-ups as possible until exhaustion. Count the total number of push-ups performed. Use the charts below to find out how you rate.

Results: _____

Compare your results with normative values from the tables below.

Table: push-up test norms for MEN

Age	17-19	20-29	30-39	40-49	50-59	60-65
Excellent	> 56	> 47	> 41	> 34	> 31	> 30
Good	47-56	39-47	34-41	28-34	25-31	24-30
Above average	35-46	30-39	25-33	21-28	18-24	17-23
Average	19-34	17-29	13-24	11-20	9-17	6-16
Below average	11-18	10-16	8-12	6-10	5-8	3-5
Poor	4-10	4-9	2-7	1-5	1-4	1-2
Very Poor	< 4	< 4	< 2	0	0	0

Table: push-up test norms for WOMEN

Age	17-19	20-29	30-39	40-49	50-59	60-65
Excellent	> 30	> 32	> 28	> 20	> 16	> 12
Good	22-30	24-32	21-28	15-20	13-16	10-12
Above Average	11-21	14-23	13-20	10-14	9-12	6-9
Average	7-10	9-13	7-12	5-9	4-8	3-5
Below average	4-6	5-8	3-6	2-4	2-3	2
Poor	1-3	1-4	1-2	1	1	1
Very Poor	0	0	0	0	0	0

Table: push-up test norms for WOMEN (modified - performed from the knees)

Age	17-19	20-29	30-39	40-49	50-59	60-65
Excellent	> 35	> 36	> 37	> 31	> 25	> 23
Good	27-35	30-36	30-37	25-31	21-25	19-23
Above Average	21-27	23-29	22-30	18-24	15-20	13-18
Average	11-20	12-22	10-21	8-17	7-14	5-12
Below average	6-10	7-11	5-9	4-7	3-6	2-4
Poor	2-5	2-6	1-4	1-3	1-2	1
Very Poor	0-1	0-1	0	0	0	0

Pillar 3 Power

Power can be thought of the “speed” component of strength. While it is important to have strength, we also need to be able to move weight or resistance quickly and safely.

Think about putting a small suitcase in the overhead bin or quickly lifting up a garbage bag to throw it in a dumpster. Also consider the necessity of quick movement to regain your balance if you have tripped over something.

Remember, any weight training exercise can be converted to “power” by incorporating a speed aspect. An example might be doing a push up with explosive power to lift your hands off the ground. Below is a standard test for older adults.

Squat Test for Power: *The 30 Second Sit to Stand Test*, also known as *30 second chair stand test*, testing leg strength and endurance in older adults (>60)

Sit in the middle of a chair, back straight; feet approximately shoulder width apart and placed on the floor at an angle slightly back from the knees. Arms are crossed at the wrists and held against the chest.

- Try to complete as many full stands as possible within 30 seconds, fully sitting between each stand.
- Practice a repetition or two before completing the test.
- If you need to use your arms to complete the test you are scored a “0”.

Your Score is the total number of stands within 30 seconds (more than halfway up at the end of 30 seconds counts as a full stand). Incorrectly executed stands are not counted.

Results:

See the table below for normative values for your age and gender. A below average number of stands for the patient's age group indicates a high risk of falls.

WOMEN

Age group (years) Figures represent: Below Average; Average; Above Average

- 60 – 64: < 12; 12 – 17; >17
- 65 – 69: < 11; 11 – 16; >16
- 70 – 74: < 10; 10 – 15; >15
- 75 – 79: < 10; 10 – 15; >15
- 80 – 84: < 9; 9 – 14; >14
- 85 – 89: < 8; 8 – 13; >13
- 90 – 94: < 4; 4 – 11; >11

MEN

Age group (years) Below Average Average Above Average

- 60 – 64: < 14; 14 – 19; >19
- 65 – 69: < 12; 12 – 18; >18
- 70 – 74: < 12; 12 – 17; >17
- 75 – 79: < 11; 11 – 17; >17
- 80 – 84: < 10; 10 – 15; >15
- 85 – 89: < 8; 8 – 14; >14
- 90 – 94: < 7; 7 – 12; >12

Pillar 4 Balance

Fact: 1 in 4 older adults over 60 falls due to a lack of balance resulting in injury, fractures, and tragically, sometimes death.

Having a balance component in your fitness routine is a must. Below are two ways to test your balance.

1. Modified Stork Test: (more challenging) Remove the shoes and place your hands on your hips, then position the non-supporting foot against the inside knee of the supporting leg. You have one minute to practice the balance. The stopwatch is started as the unsupported leg is raised from the floor and is against the knee of the support leg. The stopwatch is stopped if any of the follow occur:

- The hand(s) come off the hips
- The supporting foot swivels or moves (hops) in any direction
- The non-supporting foot loses contact with the knee.

Your results/Scoring: The total time in seconds is recorded. The score is the best of three attempts. Attempt #1 _____ Attempt #2 _____ Attempt#3 _____

Compare with normative values from the tables below.

Rating

Score (seconds)

Excellent

> 50

Good

40 - 50

Average

25- 39

Fair





10 - 24

Poor

< 10

2. The 4 Stage Balance Test:

- There are 4 positions you will try to balance in.
- Try to stand in each position for 10 seconds.
- You can hold your arms out, or move your body to help keep your balance, but don't move your feet.
- Try to hold each position for at least 10 seconds:

	① Stand with your feet side-by-side.	Time: _____seconds
	② Place the instep of one foot so it is touching the big toe of the other foot.	Time: _____seconds
	③ Tandem stand: Place one foot in front of the other, heel touching toe.	Time: _____seconds
	④ Stand on one foot.	Time: _____seconds

If you cannot hold the “tandem” position for at least 10 seconds, you unfortunately are at risk of falling.

Pillar 5 Cardiorespiratory Fitness

When you work out, are you doing too much or not enough to improve your cardiorespiratory fitness? In order to improve your cardiorespiratory fitness, you need to get your heart rate in the Target Zone.

Determine your Target Heart Rate Zone:

1. First, determine your *resting heart rate* (your health tracker watch may do this for you). Your resting heart rate is the number of beats per minute (bpm). Try to check your resting heart rate first thing in the morning right when you get up, before your first cup of coffee or tea.

The lower the heart rate the better. This indicates how hard your heart is working. The normal range is between 60 and 100 beats per minute. Active and fit individuals can sometimes have resting heart rate in the 40's and 50's.

2. Now determine your Target Heart Rate for exercise intensity. Your maximum heart rate is about $220 - \text{age} \times (.85)$.

For example, if you were 50 y.o. then your maximum heart rate would be $220 - 50 = 170$ beats per minute. **To get your target heart rate zone** during exercise multiply your max heart rate x 50%-85%. In the example of a 50 y.o. their heart rate during exercise should be in between 85 and 144 beats per minute.

If you are new to cardiorespiratory exercises, then aim for the 50% of your Maximum Heart Rate. As you become more fit, try to work harder, closer to the 85% range. Below is a table for 50-70 year olds to help make the math easier:

Age	Target HR Zone 50-85%	Average Maximum Heart Rate, 100%
50 years	85-145 bpm	170 bpm
55 years	83-140 bpm	165 bpm
60 years	80-136 bpm	160 bpm
65 years	78-132 bpm	155 bpm
70 years	75-128 bpm	150 bpm

Test your Cardiorespiratory Fitness?

The 1 Mile Walking Test:

- mark out a 1 mile course (flatter the better, high school track is best, treadmills are not as accurate).
- Use a stopwatch on your phone to see how long it takes you to walk the mile.
- Use the table below to give you your Cardiorespiratory fitness level
- Results_____

Age	20-29	30-39	40-49	50-59	60-69	70+
Excellent	<11:54	<12:24	<12:54	<13:24	<14:06	<15:06
Good	11:54-13:00	12:24-13:30	12:54-14:00	13:24-14:24	14:06-15:12	15:06-15:48
Average	13:01-13:42	13:31-14:12	14:01-14:42	14:25-15:12	15:13-16:18	15:49-18:48
Fair	13:43-14:30	14:13-15:00	14:43-15:30	15:13-16:30	16:19-17:18	18:49-20:18
Poor	>14:30	>15:00	>15:30	>16:30	>17:18	>20:18

Ratings for Women, Based on Age

Age	20-29	30-39	40-49	50-59	60-69	70+
Excellent	<13:12	<13:42	<14:12	<14:42	<15:06	<18:18
Good	13:12-14:06	13:42-14:36	14:12-15:06	14:42-15:36	15:06-16:18	18:18-20:00
Average	14:07-15:06	14:37-15:36	15:07-16:06	15:37-17:00	16:19-17:30	20:01-21:48
Fair	15:07-16:30	15:37-17:00	16:07-17:30	17:01-18:06	17:31-19:12	21:49-24:06
Poor	>16:30	>17:00	>17:30	>18:06	>19:12	>24:06

Ways to improve your Cardiorespiratory Fitness

Depending on your level of fitness, you may have to start with low intensity activities and work your way up. Either way, you now know to find your Target Heart Rate Training Zone for whichever activity you choose.

Low intensity:

- Walking
- Biking
- Swimming
- Yoga
- Tai chi

Moderate intensity:

- Jogging
- Power Pump type classes
- Group fitness classes
- Golfing
- Power walking
- Pickleball or Tennis
- Ballroom dancing

High intensity:

- Circuit training with weights

- Sprint workouts
- High Intensity Interval Training (H.I.I.T.)

Ideal Workout Weekly Program

- 1. Strength Training 2-3 times per week:** If we want to maintain our level of current strength, then we train 2 x week. To improve strength, we need to train 3 x per week. Within each workout, we have components of Power and Balance.
- 2. Flexibility and Mobility:** 2 x week we are working on Stretching and Mobility work. This could be a stretching class, foam rolling session, or Yoga
- 3. Cardiorespiratory Fitness:** 5 days a week for about 30 minutes. This could be a daily brisk walk, cycling, swimming, or activities we discussed above.

Your workout week may not look perfect, but trying to incorporate as many of these activities will give you the greatest chance of Aging Strong!

And remember, we will be there with you every step of the way.

Best,

Ed and Elizabeth