

Step ① ② ③

# home **fitness** test

FIND OUT HOW FIT YOU REALLY ARE

To complete your home fitness check-up you will need:

- Accurate scales
- A stable step or bench 30cm high or use the bottom step of a staircase
- A cloth tape measure
- 40cm ruler
- Notebook and pen
- Piece of chalk or marker tape
- A watch with second hand or stopwatch
- Training partner, weights, bench, barbell (optional).

## PERSONAL ASSESSMENT

### Testing your readiness and suitability for exercise.

You will know whether your relationship with that elusive partner, fitness, has been a fleeting one, a tempestuous one with many partings and reconciliations, or a long-lasting and trusting one.

**Answer the following questions truthfully.**

#### 1) Over the last two years how many times (approximately) have you been to the gym?

Once a week: give yourself 1 mark.

Twice a week: give yourself 2 marks.

Three times plus a week: give yourself 3 marks

2) Only answer this question if you attended a gym two or more times a week on average. Otherwise go on to question 3.

#### Have these workouts predominantly combined cardiovascular (CV) work with resistance based exercise?

If they have, give yourself 3 marks.

CV predominantly (include aerobics and sports such as football and workout classes): give yourself 2 marks.

Resistance predominately: give yourself 2 marks

3) Again, only answer this question if you worked out on average, two or more times a week.

#### Over the last year, on average, have your workouts involved:

15 minutes or less continuous exercise: give yourself 1 mark.

15-30 min continuous exercise: give yourself 2 marks.

30-45 min: give yourself 3 marks.

45 min plus: give yourself 4 marks.

Continuous exercise is deemed to be a workout in which your exertion level never drops back down to pre-exercise commencement levels no matter how slightly (or strenuously!) you're exerting yourself – breathing above normal levels, experiencing muscular fatigue or sweating more than normal.

#### 4) Injury problems

This is a test of your body's readiness for an exercise programme.

No current injury problems: 3 points

Some pain in activity but not limited by the injury: 2 points

Activity limited by the injury: 1 point

Unable to do much strenuous training: 0 points.

#### 5) Age

In general, the younger you are, the less time you will have had to slip out of condition. However, we've given this question two categories – for non active versus active people regardless of age. See below for definitions of active/non active and answer only one part of the question, part a or b.

A) Non active person – defined for our purposes as scoring 6 or less points on the first four questions above.

Under 20: 4 marks

21-29: 3 marks

30-39: 2 marks

40 plus: 1 mark.

B) Active person regardless of age – defined for our purposes by scoring more than 5 points on questions 1- 4. Give yourself 4 points.

#### Conclusions

Adding up your scores will allow you to ascertain a measure of your personal fitness history and suitability to undertake your home gym workout.

#### Score between 3 and 6

Ready for a low (beginners) level programme.

#### Score between 7 and 11

Ready for a moderate (intermediate) programme.

#### Score of 12 and above

Ready for an intensive (advanced) programme.

If you've scored less than 3 points, it's advisable that you consult your doctor. Don't be dismayed; once you've been given the go-ahead you'll also be on your way.

## Step 2 Home Fitness Test



### BODY MEASUREMENTS

First, an accurate assessment of your body measurements will allow you to track your physical improvements throughout your programme. In a standing position in front of a mirror, use a cloth tape measure and apply even pressure on the tape while you measure and record the circumference of the following body parts.

- Chest** at the line of the nipple, during normal expiration.
- Waist** at the point of minimal abdominal girth, above the hip bone.
- Hips** at the point of maximal buttocks protrusion.
- Thigh** midway along the femur bone, in a relaxed state.
- Calf** at the point of maximal circumference.
- Upper arm** with the elbow flexed at 90°, and the arm relaxed.

Record your absolute body weight, but don't be preoccupied with this figure. Regardless of your goal, don't weigh yourself more than once a week; this may even be too often. Remember, it's your body composition (how much of you is fat compared to lean body mass) and not your absolute weight, which is the important statistic.

A simple, yet accurate technique to assess your body composition is to use your waist to hip ratio. This is achieved by dividing your waist measurement by the hip measurement. If the ratio exceeds 0.8 for females or 1.0 for men, you're considered overweight. A measurement of 0.7 for females or 0.85 for men is considered lean. Any measurement of less than 0.65 for females or 0.75 for men is considered very lean.

### YOUR HEART RATE

Once you have an accurate assessment of your body composition, it's time to determine your physiological characteristics. Because the number of heart beats correlates to the number of pulse beats per minute, if you measure your pulse you will be able to determine the number of heart beats per minute. Record and measure your resting heart rate before you begin your warm-up. The most accurate method to determine your resting heart rate is to measure it first thing in the morning. Do this four mornings in a row and take an average.

### Determining pulse rate

The most convenient place to measure the pulse is at the carotid artery which is located at the side of your neck, just under the jaw bone. You can also measure your pulse at your radial artery, which is located on the inside of your wrist. Place the tips of two fingers below the base of the thumb and count the number of beats for ten seconds, starting with zero. Multiply the number by six to establish your pulse in beats per minute. Do not take this measurement with your thumb. Once you have established your resting heart rate, calculate your estimated maximum heart rate. To do this, subtract 85% of your age from 217 beats per minute: ie. if you are 37 years of age, your estimated maximum rate would be 186 beats per minute (bpm).



**WARNING:** If in doubt about any of the following physical tests, consult your doctor before proceeding. Remember, if it hurts or you feel faint, stop immediately. If you're over 35 or have a history of heart disease, gain clearance from your doctor before attempting these tests.

### FLEXIBILITY

Once you have established your resting and maximum heart rates, warm-up for ten minutes with passive aerobic exercise before establishing your flexibility level. Flexibility is the range of movement of a joint and its muscle groups. It indicates the ability to use a muscle throughout its maximum range of motion. Flexibility is not uniform throughout the body. It is specific to the area being measured. It is impractical to assess the flexibility of every joint in the body, so a standard measurement used is the sit and reach test, which measures trunk flexion and the lower back and hamstring muscles.

You will need a small box, approximately 40cm square. Sit on the floor with your legs fully extended and feet against the box, shoulder width apart. Set the tape measure or a ruler, protruding 15cm either side of the box. Fully extend your arms along the ruler as far as you can and hold for three seconds. Measure the distance that you reach before or beyond your toes. If you do not reach your toes, the measurement is negative, past your toes, the measurement is positive. It is important you don't bounce or bend your knees while taking these measurements.

#### Sit and reach scores (cm)

	Men	Women
<b>Below average</b>	<0	<2
<b>Average</b>	+2	+5
<b>Above average</b>	>+5	>+8



## ABDOMINAL STRENGTH ▶

To measure the strength and endurance of your abdominal muscles use the curl-up test. Lie on your back with your legs flexed at the knees and feet shoulder width apart. Place your hands at the side of your head with your neck in a relaxed position. Do not lock your feet. Keep your feet flat on the floor and do not pull on the back of your head with your hands. Now, focus on drawing your ribs up towards your hips. As you do this, your head, shoulders and torso will lift. The small of your back should still be in contact with the floor. Return to the start position and keep performing the curl up crunch with control with each completed movement taking about 3 seconds. Complete as many curl up crunches as you can without pause (to a maximum of 75). Record your total and see how you compare with the table below.

### Standards for partial curl-up test

Age	Men			Women		
	< 35	35-44	> 45	< 35	35-44	> 45
<b>Excellent</b>	60	50	40	50	40	30
<b>Good</b>	45	40	25	40	25	15
<b>Marginal</b>	30	25	15	25	15	10
<b>Needs work</b>	15	10	5	10	6	4



## HOW POWERFUL ARE YOU? ▼

A simple yet effective measure of lower body power is the vertical jump test. This test determines the power of the extensor muscles of the hip. Face the wall with your arms extended fully above your head. Mark the wall where your extended fingers touch the wall. Turn side on to the wall; flex the knees to maximise the jump height. Mark the wall at the highest point with the chalk piece. Record the distance between your standing reach and the point marked on jumping. Subtract the standing height from height jumped. It is important to keep the test standard, so ensure there is no counter movement when jumping.

### Standing jump test scores (cm)

	Men	Women
<b>Excellent</b>	70	70
<b>Good</b>	55	40
<b>Average</b>	48	30
<b>Fair</b>	40	25
<b>Poor</b>	30	20

## STEP TEST AEROBIC FITNESS (CARDIOVASCULAR ENDURANCE)

To assess your heart's ability to adapt to and recover from exercise, use the step test. Use the commands, "Up, two, three, four," repeated every four seconds to ensure you are paced at the correct cadence.

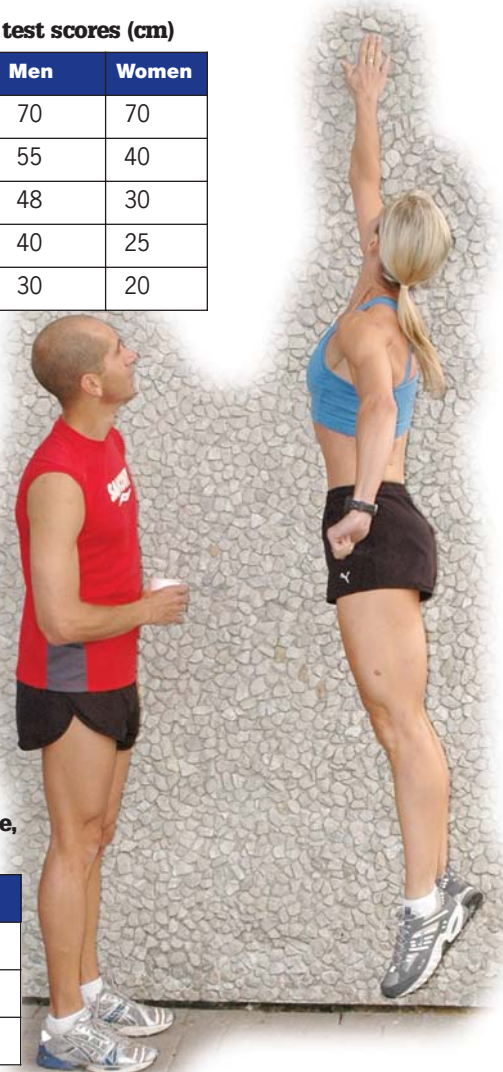
- Up** take a step on to the bench with your lead leg.
- Two** follow step with the second leg.
- Three** step down with the lead leg.
- Four** step down with the second leg.

Follow this sequence for three minutes. At the conclusion of the three-minute period, immediately sit down and find your pulse. Ten seconds after the cessation of exercise, record your pulse for one minute (using the method described above). Your score is the total number of beats in the 60-second period. Ensure you start the count with zero and the bench is secured to the floor during the test.



### Standards for recovery heart rate, 0-1 minute post-exercise

	Men	Women
<b>Poor</b>	>107	>115
<b>Fair</b>	93-106	101-114
<b>Average</b>	84-92	91-100



## Step 2 Home Fitness Test

### MUSCULAR STRENGTH

Muscular strength is not a simple concept. There are different types of strength. Two types of tests have therefore been provided. Dependent on your fitness goals, you may decide initially to do both or just one. Each test measures a different type of muscular strength.

**Local muscular strength** is the ability of a particular part (or parts) of the body to exercise over and over again until fatigue or exhaustion sets in.

#### Press-up Test

The press-up has been chosen as most people will be familiar with its requirements and also because it is a good indicator of local muscular strength.

Warm up thoroughly before commencing the test. Ensure a flat back. Lower your chest to approx 5-6 inches from floor (placing a cushion under your chest will assist you to judge this distance and provide welcome relief when you complete the test). Simply see how many reps you can do without stopping and compare your results against the table below.



#### Muscular Fitness Norms (Press-ups)

Score at age	20-29	30-39	40-49	50-59	60+
<b>Men</b>					
<b>High</b>	> 45	> 35	> 30	> 25	> 20
<b>Average</b>	35-44	25-34	20-29	15-24	10-19
<b>Below average</b>	20-34	15-24	12-19	8-14	5-9
<b>Low</b>	< 19	< 14	< 11	< 7	< 4
<b>Women</b>					
<b>High</b>	> 34	> 25	> 20	> 15	> 5
<b>Average</b>	17-33	12-24	8-19	6-14	3-4
<b>Below average</b>	6-16	4-11	3-7	1-5	1-2
<b>Low</b>	< 5	< 3	< 2	0	0

From Pollock, Wilmore, and Fox, *Health and Fitness Through Physical Activity*, 1978. All rights reserved. Adapted by permission of Allyn & Bacon.



**Maximum strength** can be referred to as Strongman (or woman) type of strength – the ability to lift as heavy a weight as possible. This test is not recommended for those ready only for a low level programme.

Choose an upper body and a lower body weights exercise from the equipment you have available in your home gym. If it is your intention to train for a particular sport, then think about the key areas of the body and the type of strength movement required. An obvious example: if you play basketball or netball, you will require powerful thighs and calves, so the squat becomes a very relevant exercise.

Once you have chosen your two respective exercises, warm up and begin the test. Simply add weight to the barbell or weight stack, gradually progressing in one rep increments until you reach a point where you can lift no more. If you are a regular weight trainer, you will know where to begin the test, having a feel for what you can lift. You must have a spotter to assist you, as the test ultimately requires failure on a repetition and you will not want to be trapped under your new equipment until the service engineer calls.

Once you have established your one rep maximum, record it. This will provide you with a benchmark against which to construct subsequent training sessions. If you are going to emphasise weights in your eventual routine, it's a good idea to record one rep maximums on all your core lifts. The following table is only to be used as a guide to your strength ability.

BENCH PRESS		SQUATS
Body weight minus 20%	Average	Body weight
Body weight minus 10%	Good	Body weight plus 20%
Body weight plus 10%	Very good	Body weight plus 30%
Body weight plus 20%	Excellent	Body weight plus 40%

The percentage figures relate to your body weight. An example: if you weigh 50kg and squat 60kg then you will have squatted body weight plus 20%, as 10kg – the amount you lifted above your body weight – constitutes an additional 20% of your body weight.

#### HOME FITNESS TEST SUMMARY

This range of simple tests requires minimal equipment and it's not necessary to perform the weight exercises unless you have specific strength training goals on your agenda for the early phase of your programme. You have now provided yourself with a personal blueprint as to your state of readiness for exercise, and identified the areas of your fitness that you need to work on. After a month of training, it will be useful to re-take them, obviously excluding the first (exercise history) test, as it must be assumed that you will be hammering your home gym with increasing regularity – so much so that thoughts of replacing it with a conservatory are beginning to enter your head.