

What You Should Know About Body Fat

Studies show being overweight increases our risk of heart disease, hypertension, certain cancers, diabetes, joint disorders—the list goes on and on.

How can you lose weight and fat without losing muscle?

Drastically reducing calories (“crash dieting”) may result in weight loss but of muscle not fat. Weight loss from crash dieting is seldom permanent. Proper weight loss has two sides: modifying eating patterns and committing to a regular, but reasonable, exercise program.

Body fat versus weight

A person may have an acceptable weight and figure, but if their body contains too much body fat, their health could be at risk. By comparison, someone who exercises most every day may weigh the same weight, but because their body is composed of dense, lean muscle, they may be “thinner.” You can be thin or fat at the same weight—depending on your individual fat-to-muscle content.

Healthy Body Fat Range		
	Under 30 years old	Over 30 years old
Men	14%-20%	17%-23%
Women	17%-24%	20%-27%

Three simple steps to good health

1. Eat Right

Most countries recommend that no more than 30% of your total daily caloric intake consist of fat, with no more than 10% of it saturated fat. (1)

Saturated fat does the most damage to health and, naturally, is the most difficult to burn. Also we must the number of calories, regardless of the source, to what we need for good overall weight. Calories not used are stored in the body as fat.

The Food Pyramid is an excellent guide to picking different food types. Choose the majority from the lower portion of the food pyramid. Grains, fruits, and vegetables supply low fat, moderate calories with high nutrient fiber content. The longer you practice a low-fat diet, moderate calorie diet, the quicker you are going to see results as you monitor your progress.

2. Exercise Regularly

Even if you consumed no fat in your diet (a near impossibility), you still wouldn't reduce your current body fat percentage. In fact, as we age we lose about 250 grams (½ pound) of muscle each year while we gain 750 grams (1 ½ pounds) of fat. Only as we exercise regularly do we burn excess calories, fat, and build lean body mass—muscle.

3. Monitor Your Program

A method gaining wide support by medical and fitness experts is bioelectrical impedance analysis (BIA). This technology is incorporated into a simple bathroom scale. When you step bare-foot onto the scale (available at several booth locations), a very safe, low electrical current is passed through the body and body fat percentage is calculated based on the amount of impedance. Current passes much faster through lean muscle than it does through fat. In just seconds you will learn both your current weight and your body fat percentage.

- (1) “Dietary Guidelines for Americans” Third ed. 1990, USDA and HHS
- (2) US Dept. of Agriculture, 1992
- (3) “Hit Your Perfect Weight” Prevention, Nov.1994
- (4) US Dept. of Agriculture, 1992 (based on a 150 lb. or 68 kg person)

Harvard Step Test

For the General Public

Begin by taking the resting pulse and writing it down.

Use a step nine inches high and have the subject step up and down exactly 90 times in three minutes (one step every other second – be accurate), occasionally alternating the lead foot.

If the person cannot move this quickly, do not urge them beyond their abilities.

Use common sense with this test. If the person taking the test shows signs of distress, pain, faintness, or anything other than being winded, do not push them to finish. But even if the stepping has to be discontinued, count the pulse.

At the end of the three minute test immediately do a 10 second reading of the pulse, as the pulse quickly returns to normal. After counting the pulse for ten seconds, multiply by 6 to be equivalent to a 60 second pulse rate. The box below shows the results.

Excellent	Below 110
Very good	110-119
Good	120-129
Fair	130-139
Poor	Above 140

After five minutes of sitting re-check their pulse. The pulse rate should return to pretest levels by that time.

This test is based on the premise that for all sub maximal work the person with a higher level of cardiovascular fitness not only will have a smaller increase in heart rate but also will have a heart rate that returns to normal faster after the task than it would in a person with a normal level.

The pulse is affected by smoking, caffeine, anxiety, smog, alcohol, too much food, drugs of many kinds, hormones, and many other things. Physical fitness decreases the pulse rate.

Peak Flow Meter Use

The Peak Flow Meter measures expiratory flow—the fastest speed at which you can blow air out of your lungs after taking in as BIG a breath as possible. It measures how well you are breathing by measuring how well air is moving through the airways in your lungs. Your breath pushes an indicator up a scale. The indicator remains at your peak flow value.

The use of this instrument for the Health-Expo is to encourage proper care of the lungs, to prevent asthma, encourage no smoking, and evaluate lung capacity for anyone. Low readings can be compared with the high ones and tell people how much the lungs are blocked. (See Chart)

There is a charge of 25¢ for each test.

HOW TO USE THE PEAK FLOW METER:

When a single unit is used repeatedly as a screening device, persons should be instructed to inhale *before*

placing the instrument to their mouths. They will breathe *out only*.

Disposable mouthpieces are used, and discarded after each person.

1. Place a new mouthpiece on the peak flow meter.
2. Make sure that the red indicator is at the bottom of the scale.
3. Hold the peak flow meter upright, being careful that your fingers *do not block* the opening in the back.
4. Stand up. Inhale as deeply as you can and place your mouth firmly around the mouthpiece, making sure your lips form a tight seal.
5. Blow out as hard and fast as you can. This will cause the red indicator to move up the scale. The final position of the red indicator is your peak flow rate.
6. Take three readings and record the *highest value*. Compare the results with the chart below.
7. To repeat the test, slide the red indicator back to the bottom of the scale.

NORMAL PREDICTED AVERAGE PEAK EXPIRATORY FLOW (For Adults use only)

Male						Female							
Age	(in)	5'	5'-4"	5'-8"	6'-2"	6'-7"	Age	(in)	5'-4"	5'	5'-4"	5'-8"	6'-2"
(Years)	(cm)	152	165	178	191	203	(Years)	(cm)	140	152	165	178	191
20		554	575	594	611	626	20		444	460	474	486	497
25		580	603	622	640	656	25		455	471	485	497	509
30		594	617	637	655	672	30		458	475	489	502	513
35		599	622	641	661	677	35		458	474	488	501	512
40		597	620	641	659	675	40		453	469	483	496	507
45		591	613	633	651	668	45		446	462	476	488	499
50		580	602	622	640	656	50		437	453	466	478	489
55		566	588	608	625	640	55		427	442	455	467	477
60		551	572	591	607	622	60		415	430	443	454	464
65		533	554	572	588	603	65		403	417	430	441	451
70		515	535	552	568	582	70		390	404	416	427	436
75		496	515	532	547	560	75		377	391	402	413	422

Anti-Stress Chair Massage

Massage Techniques

- 1. Effleurage**—warms up the muscles. Can be used at the beginning of the massage and for transitioning from one technique to another.
- 2. Petrissage**—like kneading bread, using fingertips or flat of the fingers and heel of the hands, goes deeper into the muscle stimulating and toning them.
- 3. Friction**—moves the deeper muscle layers. It stretches and warms the muscles, relieves muscle spasms and tightness and removes toxins and waste from the tissues.
- 4. Tapotement**—such as hacking and tapping is slightly stimulating sending vibrations into the body cavities and underlying deeper tissues.
- 5. Vibration**—uses the fingertips with added vibration moving over the body surface to relax the subject.

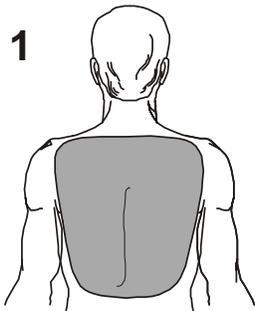
Benefits of Chair Massage

The 5-minute anti-stress chair massage is excellent for reducing tension, increasing circulation in the head, neck, shoulders, and upper back, and may help relieve a headache. This procedure can be easily done in a public setting.

The Procedure

The massage subject should remove all extra clothing such as a jacket, sweater or tie. Seat the person where they can be comfortable, preferably in a chair where the head and upper back are in easy access. Both feet should be flat on the floor. If possible, the head should be supported by some kind of face rest.

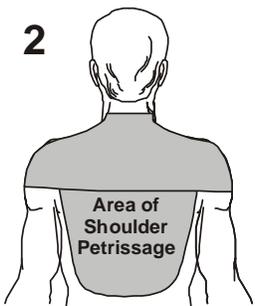
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1. Effleurage (bilateral) to the entire back, five times

Standing behind the subject, place hands on shoulders, lean body weight forward as you press firmly but gently glide your hands over the clothes (careful not to pull the shirt/blouse), down the entire back, warming up the muscles.

2



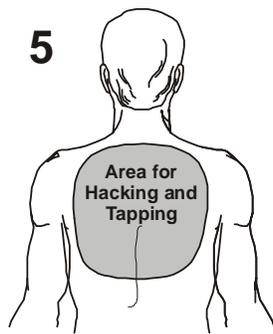
2. Shoulder Petrissage

With one hand on each shoulder petrissage the upper Trapezius, moving hands laterally to the Deltoids and down to the Latissimus Dorsi. (Covers the whole back) See illustration.

3. Palm Friction

With the heel of your hand in a circular motion move alongside the spine from the bottom to the top. Work away from the spine. Work one side first, then the other, repeat 3 times.

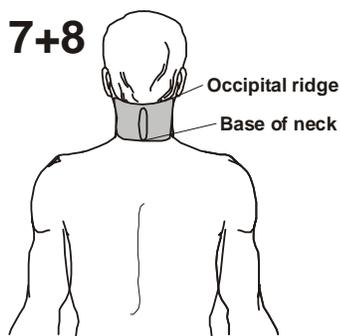
4. Transition briefly with another Shoulder Petrissage (or Effleurage)



5. Tapotement

A. Hacking—With the side of the hand (pinky finger border) and with fingers spread apart, do approximately 15-20 seconds of hacking on the area of the back as illustrated. B. Tapping—with your finger tips

6. Transition with another Shoulder Petrissage (or Effleurage)



7. Digital Friction

If the head is not supported, place one hand on the forehead to stabilize it while with the other hand do a stationary fingertip friction of the neck muscles using the thumb, index, and middle fingers. Massage from the base of the skull (occipitalis) to the base of the neck and back up to the base of the skull again.

8. Pinching petrissage to the neck

Using the thumb, index, and middle fingers, squeeze the neck muscles at the base of the skull with firm pressure. Progress down to the base of the neck. Repeat this sequence three times.

9. Scalp Massage (optional)

Stabilize the head by placing one hand on the forehead if necessary. With the fingertips of the other hand, start just *above* the occipitalis, make small circles while applying firm pressure moving the scalp over the underlying skull. Make 3-4 circles then progress gradually over the entire scalp area. Be careful not to pull the hair by sliding the fingertips across the scalp.

10. Nerve Vibration

End with a fingertip vibration from the neck down the back, deep to light.

Principles to Remember

1. Once you touch the subject don't remove your hands until the massage is completed.
2. In all massage strokes, maintain rhythm and even pressure.
3. Ask the subject several times throughout the massage if the level of pressure is comfortable.
4. Be attentive to the body language of the patient. Not all people are willing to tell you if they are not comfortable.
5. Do not over talk.
6. Avoid disheveling their clothes and/or hair.
7. Use a clean face pad for the chair massage unit or clean with alcohol wipes or tissues.

Summary

1. Effleurage (bilateral) to the entire back, five times
2. Shoulder Petrissage
- 3. Palm Friction**
- 4. Transition briefly with another Shoulder Petrissage (or Effleurage)**
- 5. Tapotement**
 - A. Hacking—With the side of the hand (pinky finger border) and with fingers spread apart, do approximately 15-20 seconds of hacking on the area of the back as indicated in Diagram __. Finish by soothing with firm strokes in an upward direction.
 - B. Tapping—with your finger tips
6. Transition with another Shoulder Petrissage (or Effleurage)
7. Digital Friction (Neck Kneading)
8. Pinching petrissage to the neck.
9. Scalp Massage (optional)
10. Nerve Vibration