

Body Types

The 3 basic Somatotypes are the 1) Endomorph 2) Mesomorph 3) Ectomorph

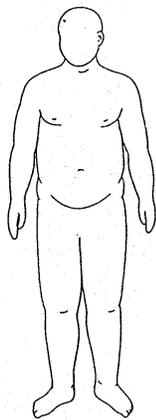
1) Endomorph: Have little muscle definition, small bones, large heads, short arms, long trunks, and legs tapered to the ends.

2) Mesomorph: Large bones, well defined musculature, long neck, broad shoulders, slender waist, broad hips, and long extremities.

3) Ectomorph: Slender, tall individuals having long thin bones and narrow chest, head, and fingers.

The body type (Somatotype) of an exerciser may determine his/her potential in the weight room. For example, an Ectomorph (President Abraham Lincoln) does not have the same potential to achieve the visible muscle mass of a Mesomorph body type (Arnold Schwarzenegger). Nor does an Ectomorph have the same potential to achieve the muscle mass or definition as a Mesomorph.

Before designing a weight training program, the exerciser should understand the realistic potentials of his/her weight training program.



Endomorph



Mesomorph



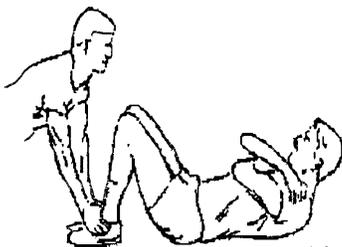
Ectomorph

Curl-Ups

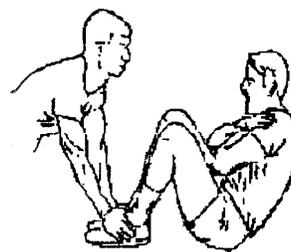
Abdominal curl-ups are an indicator of abdominal muscle group endurance which has been identified as an important predictor in low back injury. This exercise, along with running and push-ups, will be tested many times throughout your career in the Navy.

Safe and Effective Abdominal Curl-Ups: Abdominal curl-ups are an important component of your pre-entry training program. Curl-ups are the best exercise for strengthening the abdominal muscles. Curl-ups must be done with the knees flexed to 90 degrees to eliminate the curve in the low back. The abdominal muscles should be contracted. The head should be lifted off the floor, and the trunk should curl into the sit-up position. Alteration of this technique may cause additional strain to the low back. It is necessary only to do a partial curl-up to provide maximal benefit to the abdominal muscles. A full sit-up may place additional stress on the low back. Your shoulders should come above the ground only 30 degrees. (*diagram 5*).

Curl-Ups During Basic Training and Physical Readiness Testing: During basic training physical regimen and during the Navy's semi-annual Physical Readiness Testing, curl-ups will be performed similarly, but your arms will be folded across the chest, and your feet will be held to the floor by a partner. You will curl-up touching elbows to thighs and will then lie back touching shoulder blades to deck. (*diagram 6*).



Abdominal Curl Up
Diagram 5

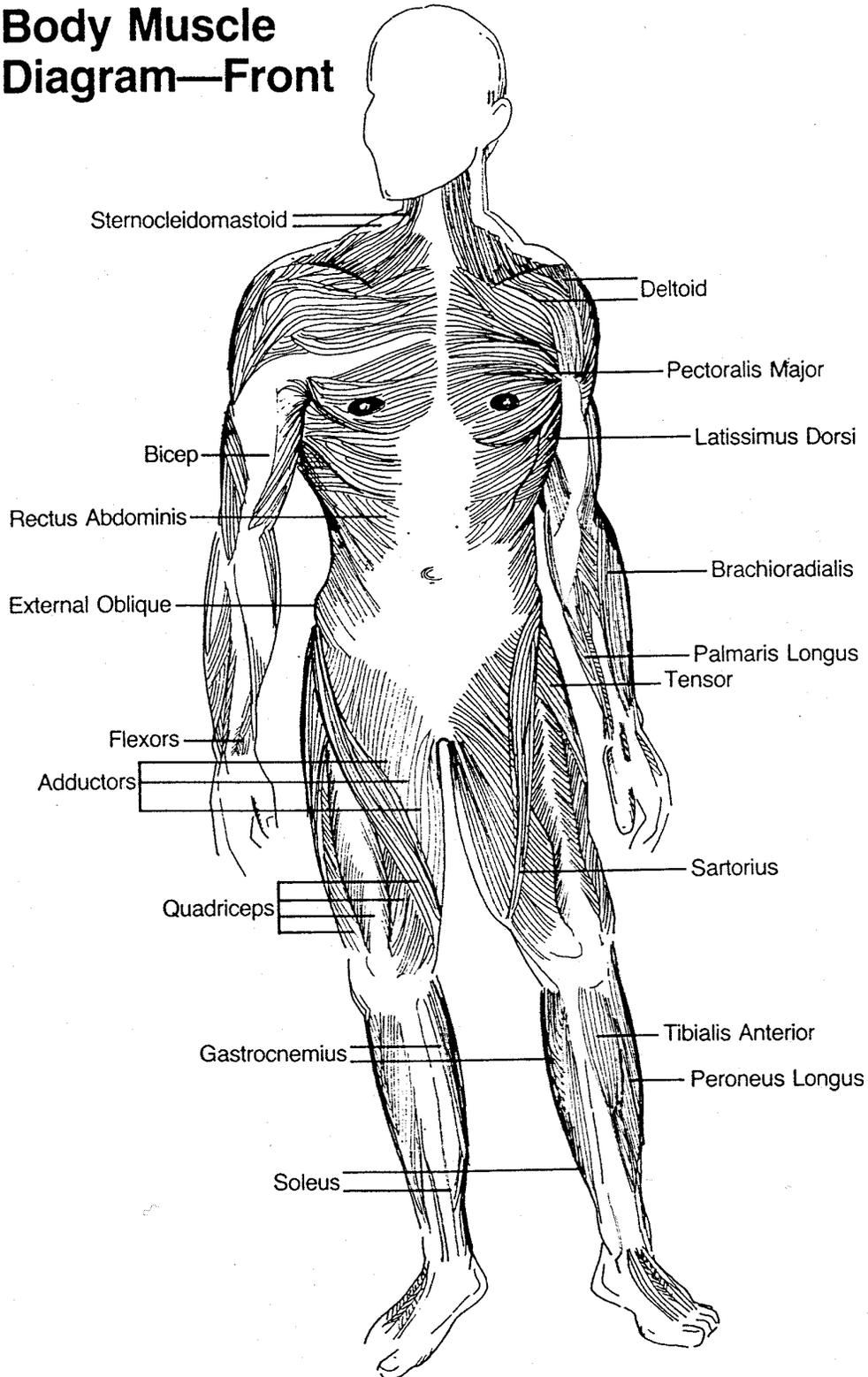


Full-Sit Up
Diagram 6

To Prepare: If you have not been performing curl-ups prior to this program it is recommended that you allow yourself a week of gradual increase in intensity. For the first 3 sessions, do 3 sets of sit-ups stopping at the first sign of abdominal fatigue, allowing 2 minutes of rest between each set. After 1 week (3 sessions) of abdominal acclimation, you should do as many curl-ups as you can in two minutes. Rest for two minutes, do another set of as many as you can. Rest again for two minutes and then a third set of as many as you can in two minutes. These 3 sets of maximum effort sit-ups should be done 3 times a week.

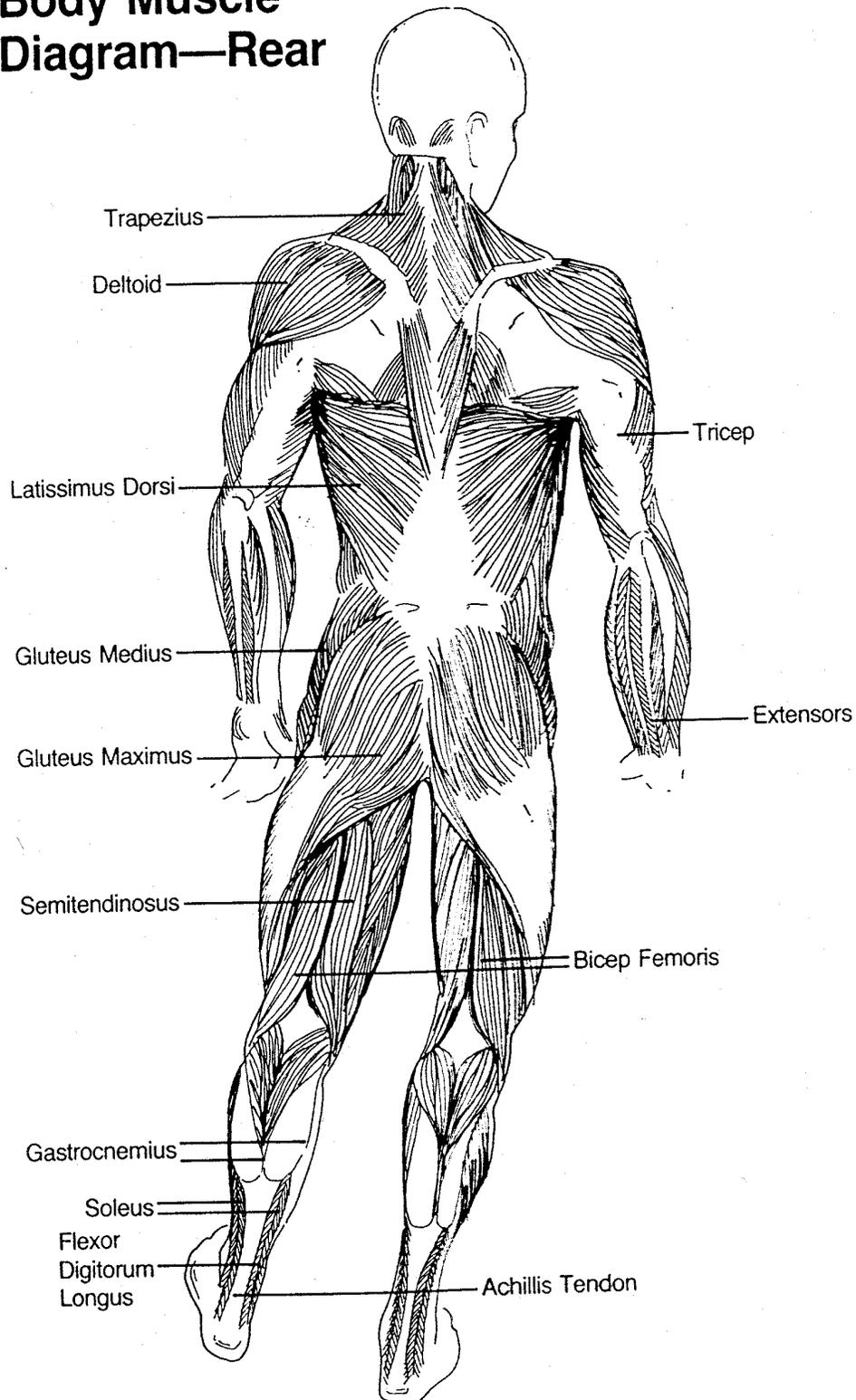
Major Muscles of the Body

Body Muscle Diagram—Front



Major Muscles of the Body

Body Muscle Diagram—Rear



Muscular Training for Fitness

Tips for your personal training program



ACSM MUSCULAR EXERCISE GUIDELINES:

- Include 8 to 10 Separate Exercises
- Plan Efficient Total-Body Workouts- condition all major muscle groups in your workout
- Perform At Least One Set of 8 to 12 Reps
- Perform Each Exercise At Least 2 Non-Consecutive Days a Week
- Perform Each Exercise Through Full Range of Motion



SAFE AND EFFECTIVE STRENGTH TRAINING:

- Use Proper Techniques (Don't Lock "Out"; Maintain Natural Back Arch; Don't Hold Your Breath)
- Work Out Larger Muscles First (Before Working Out Smaller Musde Groups)
- Perform Both Lifting and Lowering in a Controlled Manner: Lift Slowly & Steadily
- When Using Free Weights, Use Collars to Hold Plates in Place - train with a partner
- Onboard Ship, Be Aware of Rolling Motions



ALLOW MUSCLES TO REST:

- Plan Strength Workouts for Two Non-Consecutive Days Per Week
- Allow a Day of Rest Between Sessions
- If You Want to Work Consecutive Days, Work on Different Muscle Groups



DURATION:

- Varies with Personal Goals
- Good Workout Can Be Accomplished in Less Than 30 Minutes
 - Plus Warm Up and Cool Down (Begin with 5 - 10 Minute Warm-up)
- Workouts Lasting Too Long (+ 1 hour) Have a Higher Drop Out and Injury Rates



BALANCE and SYMMETRY:

When Muscles on One Side of a Joint Are Worked, Then Muscles on the Other Side Should Also Be Worked

- *Abdominal Muscles and Lower Back Muscles*
- *Quadriceps and Hamstrings*
- *Pectorals and Rhomboids*
- *Biceps and Triceps*



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Push-Ups

Push-ups are a measure of your upper body strength (chest, shoulders, and triceps). Always use correct form to prevent injury and to improve physical performance.

1: Start in the rest position (*diagram 7*). Assume the front leaning position with hands approximately shoulder width apart and feet together. The arms, back, buttocks and legs must be straight from head to heels and must remain so throughout the push-up. Shoes may/may not be worn.

2: Begin the push-up by bending the elbow and lowering the entire body until the top of the upper arms, shoulders, and lower back are aligned and are parallel to the deck. (*diagram 8*).

3: Return to the starting position by extending the elbows until the arms are straight. (*diagram 7*).

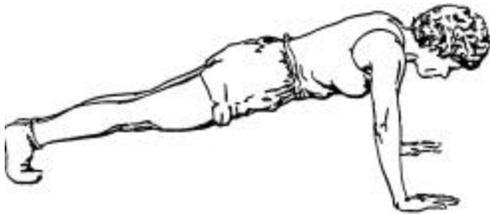


Diagram 7

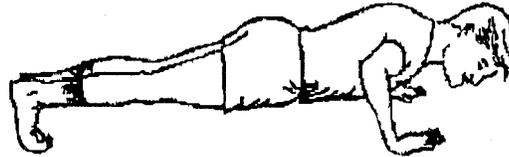


Diagram 8

To Prepare: If you have not been doing push-ups prior to this program it is recommended that you allow yourself a week of gradual increase in intensity. For the first 3 sessions you should do 4 sets of push-ups, each 2 minutes apart, stopping at the first sign of arm or shoulder fatigue. After a week (3 sessions) you should do a regimen of 6 sets. The first 2 sets would be to perform as many push-ups as you can in 30 seconds. Then 2 sets of as many as you can for 20 seconds followed by 2 sets of maximum effort in 15 seconds. Remember to first warm-up and stretch prior to any physical training, and always use proper form. Approximately every two weeks attempt a single maximum set for two minutes and record your progress.