

# NROTC PRE-ARRIVAL PHYSICAL TRAINING PLAN



## Prior to beginning an exercise program, you should ensure the following:

1. You have been medically cleared by a physician to perform strenuous physical exercise.
2. You don't currently have any illnesses or injuries that exercise makes worse.

3. You have appropriate training gear. *Most importantly*, for this program, you should have *new running shoes that are comfortable*. Generally, a Stability running shoe from a reputable running shoe company will work well for you. However, some individuals require Motion Control to support low arches or Cushioned shoes to support rigid, high arches. If you are unsure about what to do, go to your local running shoe store and find a knowledgeable person to help you select your running shoe.

4. Eat a well-balanced diet and ensure that you have a small snack or meal within an hour after completing your exercise session.
5. Get adequate rest. It is essential for recovery.



The privilege of serving in the Navy comes with the expectation that you will develop and maintain a level of fitness that allows you to complete all expected job tasks, respond to emergency situations and be an asset in support of mission accomplishment.

The Navy Physical Readiness Test (PRT) evaluates your cardiovascular and muscular capabilities in a series of events that include the curl-up, push-up and 1.5 mile run.

You are expected to be able to pass this test every 6 months and passing scores are adjusted for age and gender.

Below is the MINIMUM standard we expect you to be able to meet upon arrival at NSI:

	<b>Curl-Up</b>	<b>Push-Up</b>	<b>1.5 mile run</b>
<b>Males</b>	62	51	11:00
<b>Females</b>	62	24	13:30

If you are currently performing a regular exercise program and able to easily meet this standard, please continue your individual exercise plan. If you are not currently exercising regularly and/or are unable to meet this standard, the Pre-Arrival Physical Training Matrix (PT Matrix) has been designed to give you a roadmap for success while avoiding overuse injuries.

### **The PT Matrix Has Four Components:**

**1. Dynamic Warm-up** – this portion of the program prepares your body for physical activity. It is important to increase your heart rate, warm up your joints and increase blood flow to the muscles. This portion of the program is also designed to begin to activate the “core” muscles that stabilize your shoulders, back and pelvis, and is essential for injury prevention and improved physical performance.

**2. Exercise Routine** – this is the structured list of daily physical activity and it is important to follow the sequence of daily events. The program has been designed to ensure that you avoid overuse injuries and arrive for New Student Indoctrination fit and healthy.

**3. Static Stretching** – traditional static muscle stretching should be done after you have warmed up and completed your exercise routine. Do not perform static stretching before exercise. It may have a negative impact on your physical performance that day and your muscles will not be able to stretch as well if they are cold.

**4. Recovery Period** – Weeks 9 and 10 of this program are a recovery period for the two weeks prior to your arrival at New Student Indoctrination. The most important part of this recovery period is that you do not run. Please find alternate ways to perform your cardiovascular workout. For example, you could choose to ride a bicycle, elliptical trainer or swim. This is a ramp-down period that allows your body to recover and will ensure that you don't arrive with any nagging injuries or stress fractures. Your training will be physically challenging. You want to show up ready to go. If you begin the program too late to complete all 10 weeks, do not cut the recovery period. For instance, if you only have 8 weeks before training, cut out Weeks 7 and 8 from the PT matrix.

# Navy Physical Readiness Test (PRT)

The PRT consists of three events; curl-ups, push-ups and the 1.5 mile run. This test is performed semi-annually. As you prepare for physical training, please perform curl-ups and push-ups as described to ensure that you are doing so in accordance with Navy policy.

## **CURL-UP (click for example)**

Curl-ups are performed with a partner holding the feet and the person performing the exercise must be wearing shoes. The exercise is performed on a flat, level surface. A blanket, mat or other padding may be used, however your entire body must be on the padding.

Begin the exercise by lying flat on your back with knees bent, heels about 10 inches from the buttocks. Arms shall be folded across and touching the chest with palms of the hands touching the upper chest and shoulders (thumbs touching the collar bone). Grasping the shirt is not allowed.



Feet shall be flat on the ground and held by your partner's hands. Partners may use their knees to stabilize the side of the feet if desired.

The exercise begins by curling the upper body to touch the elbows anywhere on the thighs while keeping the hands firmly against the chest and shoulders. After touching the elbows to the thighs, return to the starting position, touching the shoulder blades to the ground.



During the PRT, you will have two minutes to complete as many curl-ups as possible. You will be allowed to rest in the up or down position. The test will be terminated before the two minutes expire if you lower your legs, lift your feet from the ground, lift your buttocks from the ground, or fail to keep your arms folded in the correct position.

### **PUSH-UP (click for example)**

Push-ups are performed on a flat, level surface. A blanket, mat or other padding may be used, however your entire body must be on the padding.

Push-ups begin in the “up” position so that the body forms a straight line through the shoulders, back, buttocks and legs. Weight is supported through the toes and palm of the hands. Feet may not be in contact with a wall or any vertical support surface. Arms are straight, with palms flat on the ground, directly under the shoulders or slightly wider than shoulder width.



A complete push-up requires lowering the body to a point where the elbows are bent to at least 90 degrees while keeping the shoulders, back, buttocks and legs aligned and parallel to the ground with a return to the “up” position.



During the PRT, you will have two minutes to complete as many push-ups as possible. You will be allowed to rest only in the “up” position. The test will be terminated before the two minutes expire if you touch the ground with any part of your body except the hands and feet, raise one hand or foot from the ground, or fail to maintain proper body alignment. This includes periods where you choose to rest as well.

## 1.5 Mile Run and/or Walk

This event consists of running or walking 1.5 miles as quickly as possible. Any combination of running or walking is allowed to complete the event.

The run/walk is conducted on a flat and solid surface track or outdoor course and the time will be recorded to the nearest second. The event ends when the 1.5-mile course is properly completed. An event failure will be recorded if you take a short cut or leave the track for any reason except for injury.

If weather conditions prevent you from training outdoors, you may train on a treadmill. However, if this test is conducted on a treadmill, you will be required to do so with the treadmill inclined to a 1.0 percent grade.



# DYNAMIC WARM-UP EXERCISES

## 1. Standing Chest Press/Shoulder Press (click for example)

This exercise is conducted in a standing position beginning with your arms at your side, your elbows bent to 90 degrees, and palms facing away from the body. Begin by pushing away from the body until the elbows are extended with the arms parallel to the ground and returning to the start position. This is immediately followed by pushing the palms over the head until the arms are perpendicular to the ground and then returned to the start position. Each completed cycle is considered a repetition. Complete 20 repetitions.



## 2. Pillar Bridge (Plank) (click for example)

This exercise begins by lying on your chest with forearms and toes on the floor. Push up onto your forearms with your shoulders and elbows flexed to 90 degrees and your toes supporting the weight of your lower body. Maintain a straight posture from your ears to your ankle with feet shoulder width apart. Hold for 30 seconds. Repeat two times.



# PT MATRIX EXERCISE PLAN

MON

Run up to 1 mile at the following minimum pace:  
M – 7:20/mile  
F – 9:00/mile

TUES

1-minute max push-ups  
1-minute max curl-ups  
Y's – 20 reps  
T's – 20 reps

WED

5 x 50 yard sprints (30 sec rest)  
5 x 10 yard backward sprints

THURS

Push-up and Curl-up Ladder #1  
Lateral Plank 2 x 30 sec  
Bird Dog 10 x 5 sec

FRI

Run 1 mile without stopping  
5x50 yard sprints  
5x10 yard BW sprints

SAT

Push-ups 5x10  
Curl-ups 5x10  
Lateral Plank 2 x 30 sec  
Bird Dog 10x5

SUN

Active warm-up  
Stretching x 2 only

WEEK 1

Run up to 1.5 miles at the following minimum pace:  
M – 7:20/mile  
F – 9:00/mile

Push-up and Curl-up Ladder #1  
Y's – 20 reps  
T's – 20 reps

8 x 50 yard sprints (30 sec rest)  
5 x 15 yard backward sprints

Push-up and Curl-up 5x15  
Lateral Plank 2 x 30 sec  
Bird Dog 10 x 5 sec

Run 1 mile without stopping  
5x50 yard sprints  
5x10 yard BW sprints

1-minute max curl-ups and push-ups  
Lateral Plank 2 x 30 sec  
Bird Dog 10x5

Active warm-up  
Stretching x 2 only

WEEK 2

Run up to 1.5 miles at the following minimum pace:  
M – 7:20/mile  
F – 9:00/mile

1.5 min. max push-up and curl-up  
Y's – 20 reps  
T's – 20 reps

8 x 75 yard sprints (30 sec rest)  
5 x 15 yard backward sprints

Push-ups and Curl-ups 5x20  
Lateral Plank 3 x 30 sec  
Bird Dog 10 x 5 sec

Run 1.5 miles without stopping  
5x50 yard sprints  
5x10 yard BW sprints

Push-up and Curl-up Ladder #1  
Lateral Plank 3 x 30 sec  
Bird Dog 10x5

Active warm-up  
Stretching x 2 only

WEEK 3

Simulated PRT  
Curl-ups x 2 min  
Push-ups x 2 min  
Run 1.5 mi.

Alternate Aerobic Training (bike, swim, elliptical) 30 min  
Y's – 20 reps  
T's – 20 reps

6 x 100 yard sprints (1 min rest)  
5 x 15 yard backward sprints

Push-up and Curl-up Ladder #2  
Lateral Plank 3 x 30 sec  
Bird Dog 10 x 5 sec

Run 1.5 miles without stopping  
5x50 yard sprints  
5x10 yard BW sprints

Push-ups 5x20  
Curl-ups 5x20  
Lateral Plank 3 x 30 sec  
Bird Dog 10x5

Active warm-up  
Stretching x 2 only

WEEK 4

Run up to 2 miles at the following minimum pace:  
M – 7:20/mile  
F – 9:00/mile

2 sets max push-up and curl-up (1 min rest between sets)  
Y's – 20 reps  
T's – 20 reps

8 x 100 yard sprints (1 min rest)  
5 x 15 yard backward sprints

Push-up and Curl-up Ladder #3  
Lateral Plank 3 x 30 sec

Run 1.5 miles without stopping  
5x50 yard sprints  
5x10 yard BW sprints

Push-ups 5x25  
Curl-ups 5x25  
Lateral Plank 3 x 30 sec

Active warm-up  
Stretching x 2 only

WEEK 5

WEEK

WEEK 6

WEEK 7

WEEK 8

WEEK 9

WEEK 10

Run up to 2 miles at the following minimum pace:  
M - 7:20/mile  
F - 9:00/mile

Push-up and Curl-up Ladder #3  
Y's - 20 reps  
T's - 20 reps

Push-up and Curl-up 5x25  
Y's - 20 reps  
T's - 20 reps

Simulated PRT  
Curl-ups x 2 min  
Push-ups x 2 min  
Run 1.5 miles

Alternate Aerobic Training (bike, swim, elliptical) 30 min

Alternate Aerobic Training (bike, swim, elliptical) 30 min

Push-up and Curl-up Ladder #3  
Y's - 20 reps  
T's - 20 reps

4 x 200 yard sprints (1 min rest)  
5 x 15 yard backward sprints

Push-up and Curl-up 5x25  
Y's - 20 reps  
T's - 20 reps

Alternate Aerobic Training (bike, swim, elliptical) 30 min  
Y's - 20 reps  
T's - 20 reps

Push-up and Curl-up Ladder #1  
Y's - 20 reps  
T's - 20 reps

Push-ups and Curl-ups x 25

4 x 200 yard sprints (1 min rest)  
5 x 15 yard backward sprints

Push-ups and Curl-ups 4x30  
Lateral Plank 4 x 30 sec  
Bird Dog 10 x 5 sec

4 x 300 yard sprints (1 min rest)  
5 x 15 yard backward sprints

5 x 200 yard sprints (1 min rest)  
5 x 15 yard backward sprints

Active warm-up  
Stretching x 2 only

Active warm-up  
Stretching x 2 only

Bird Dog 10 x 5 sec

Push-ups and Curl-ups 4x30  
Lateral Plank 4 x 30 sec  
Bird Dog 10 x 5 sec

Push-up and Curl-up Ladder #3  
Lateral Plank 4 x 30 sec  
Bird Dog 10 x 5 sec

Push-up and Curl-up Ladder #2  
Lateral Plank 4 x 30 sec  
Bird Dog 10 x 5 sec

Push-up and Curl-up Ladder #1  
Lateral Plank 4 x 30 sec  
Bird Dog 10 x 5 sec

Alternate Aerobic Training (bike, swim, elliptical) 30 min

Run 2 miles without stopping  
5x50 yard sprints  
5x10 yard BW sprints

Run 2 miles without stopping  
5x50 yard sprints  
5x10 yard BW sprints

Run 2.5 miles without stopping  
5x50 yard sprints  
5x10 yard BW sprints

Run 3 miles without stopping  
5x50 yard sprints  
5x10 yard BW sprints

Alternate Aerobic Training (bike, swim, elliptical) 30 min

Push-ups and Curl-ups x 25

Bird Dog 10x5

3 sets max  
Push-ups and Curl-ups (1 min rest between sets)  
Lateral Plank 4 x 30 sec  
Bird Dog 10x5

3 sets max  
Push-ups and Curl-ups (1 min rest between sets)  
Lateral Plank 4 x 30 sec  
Bird Dog 10x5

Push-ups 5x25  
Curl-ups 5x25  
Lateral Plank 4 x 30 sec  
Bird Dog 10x5

Active warm-up  
Stretching x 2 only

### 3. Pillar Bridge with Alternating Arm Lift (click for example)

Begin this exercise in the “up” push-up position and spread the feet just greater than shoulder width apart. Engage the muscles in your torso and alternate reaching up and out with your arms for a two second hold. Return to the start position and repeat with the alternate arm. Perform two sets of 20 repetitions.



### 4. Pillar Bridge w/ Alternating Hip Flexion (click for example)

Begin this exercise in the “up” push-up position and spread the feet just greater than shoulder width apart. Engage the muscles of your torso and draw one knee to your chest while keeping your back straight. Return to the starting position and repeat with the alternate leg. One foot should always be in contact with the ground and movement should always be slow and controlled. Perform two sets of 20 repetitions.



### 5. Basic Squat (click for example)

Stand with feet slightly wider than shoulder width apart and squat down to a comfortable depth with no more than a 90-degree bend in the knees and return to the starting position. Perform the exercise with a three count when progressing to the down position and one count when returning to the start position. Perform two sets of 20 repetitions.



# PT MATRIX RECOMMENDED EXERCISES

**1. Monday Pace Runs** – these runs are designed to help you determine your level of readiness to pass the PRT and the pace required for success. The pace provided to you will allow you to pass the PRT at the minimum requirement.

**2. Simulated PRT** – This is a standard Navy Physical Readiness Test. Perform a standard warm-up prior to beginning the PRT events. You may have a five minute rest between the curl-up and push-up events and a 15 minute rest between the push-up and run events.

**3. Y's and T's** – This exercise strengthens the muscles of your upper back and provide balance to the push-ups in your exercise routine.

Prone Y's (click for example) are performed by lying on your stomach with your forehead on the ground, your arms elevated from your side 120 degrees, with your thumbs pointing up. Elevate your arms by squeezing your shoulder blades together. Avoid moving your arms at the shoulder. Hold for 5 seconds.



Prone T's (click for example) are performed by lying your stomach with your forehead on the ground, your arms elevated from your side 90 degrees, with your thumbs pointing up. Elevate your arms by squeezing your shoulder blades together. Avoid moving your arms at the shoulder. Hold for 5 seconds.



**4. Curl-up and Push-up Ladder** – this exercise is meant to increase your

endurance over 9 sets of activity. On days that you are asked to perform a curl-up or push-up ladder use the following number of repetitions per set with a 5-second rest between sets.

Ladder 1:	2	4	6	8	10	8	6	4	2
Ladder 2:	3	6	9	12	15	12	9	6	3
Ladder 3:	4	8	12	15	18	15	12	8	4

**5. Sprints** – sprinting is meant to increase your ability to use oxygen more effectively and build on your ability to pass the PRT. Rest periods indicated in parentheses are the time you should rest between sprints

**6. Lateral Planks (click for example)** - Lie on your side with your forearm on the ground under your shoulder, legs straight, with your feet stacked together. Keep your body aligned from your ears to your ankles. Hold for 30 seconds. Repeat on the opposite side.



To make this exercise easier, you may bend your knees or put both feet on the ground, while in the same side lying position.



To make the exercise more difficult, assume the standard exercise position and raise your arm 90 degrees while turning your head towards your uplifted hand.



**7. Bird Dogs (click for example)** - Begin this exercise on your hands and knees. Contract your abdominal muscles and flatten your back. While holding these muscles, slowly raise your arm and alternate leg. The arm should be parallel with the ground and the leg should be no higher than the ground. It is okay just to straighten the leg and not lift it as high. It is more important that you maintain your hips in a position that you could balance a broomstick on your low back while performing the exercise. Hold for 10 seconds.



## STATIC STRETCHING EXERCISES

### 1. Eagles (click for example) – 2 x 30 sec hold per leg

Begin this exercise lying flat on your back, with legs extended straight, and arms on the ground and perpendicular to your body. Flex your left knee and hip to 90 degrees and use your left hand to grasp your thigh just above the knee. In this position, straighten the knee as far as you can comfortably do so and feel a good stretch in the back of your thigh. From this position, rotate your torso in a way that maintains the position of your leg until your right foot and left hand are as close together as possible. Hold this position for 30 seconds. Repeat for the right leg, rotating to the left hand.



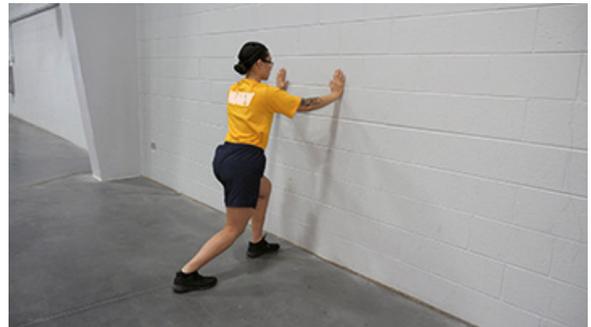
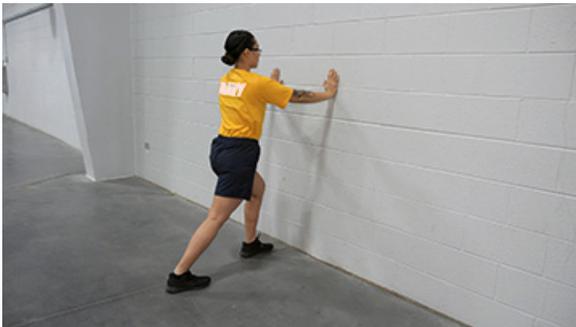
## 2. Side-lying Quad Stretch (click for example) – 2 x 30 sec each

Begin this exercise lying on your side, with the leg being stretched on top. Ensure that your hip is extended so your torso and leg form a straight line. Begin the exercise by flexing your knee and reaching back with the same hand until you are able to grasp your ankle. At this point, relax your leg and flex your knee as far as you can comfortably while feeling a good stretch in the front of your thigh. You may feel a stretch in the front of your hip as well. Hold this position for 30 seconds. Repeat for the opposite leg.



## 3. Calf Stretch (click for example) – 2x30 sec each

Stand arms-length away from a support such as a wall or railing. Extend your hip and reach back a comfortable distance with your leg with your knee straight and foot flat on the ground until you feel a comfortable stretch in the upper half of your calf. Hold this position for 30 seconds. Then flex the knee until the stretch is felt in the lower part of the leg. Hold for 30 seconds. Repeat for the opposite leg.



#### 4. Elbow Pull/Triceps Stretch (click for example) – 2x30 sec each

Stand with feet just more than shoulder width apart. Reach behind your back and place the palm of your hand on your upper back. Reach with your opposite hand and grasp your elbow. Gently pull your elbow across your body while until you feel a gentle stretch in the back of your arm. Hold for 30 seconds. Repeat for the opposite arm.



#### 5. Standing Wall/Corner Stretch (click for example) – 2x30 sec

Stand facing the corner of a room or in an open doorway with your shoulders and arms flexed to 90 degrees away from the body, with your forearms resting on the wall or doorway. Lean forward until you feel a gentle stretch in your shoulders and chest muscles. Hold for 30 seconds.



#### 6. Supine Low Back Stretch (click for example) – 4x30 sec

Begin this exercise lying on your back on a firm surface. Bend your knee and hip, one leg at a time, and grasp each leg at the knee. Relax and pull your knees towards your chest until you feel a comfortable stretch in your low back. Hold for 30 seconds.



# NROTC Marine Option Preparation

If you are pursuing a Marine Option scholarship, you will be expected to meet Marine Corps physical fitness standards when you arrive for training. You will be expected to score a 200 on the Marine Physical Fitness Test. This test includes a three mile run, crunches (curl-ups) and pull-ups. A scoring matrix can be found at:

<https://www.fitness.marines.mil/Portals/211/FitnessCalc/calc.html>

As you prepare for the run, use the current training program. The pace provided is fast enough for you to meet the minimum requirement. You should not add to the number of running days. But, you should add up to one mile to the recommended running distance. On Monday of Week 4, you should run the Marine PFT to check and see where you are with regard to your score.

## Pull-ups

Pull-ups are a predictor of strength and success for the physical requirements expected of a Marine. When you arrive at NSI males should be able to complete 10 pull-ups, females 4 pull-ups.

Success on the pull-up bar is found by working at the pull-up bar. The pull-up requires both strength and coordination, so actually performing negative pull-ups, assisted pull-ups (jumping or with a spotter), and full pull-ups are the best methods of training.

The best training method is to perform several individual sub-maximal sets of pull-ups throughout the day. Be careful not to over train. Signs of over training are muscles that are painful and limit your ability achieve full range of motion because of the soreness. If you do over train, discontinue pull-ups until you are pain free. Consult a physician immediately if you have signs of over training and feel ill or have discolored urine.

# Pull-up Training Plan

Pull-ups are performed in one of two ways:

***Inboard:*** Start at a complete dead hang with palms facing you; with elbows completely straight. Initiate your pull-up, continuing until your chin breaks the plane of the bar, then lower your body back to the dead hang position.

***Outboard:*** Start at a complete dead hang with palms facing the bar; with elbows completely straight. Initiate your pull-up, continuing until your chin breaks the plane of the bar, then lower your body back to the dead hang position.

## **If you cannot perform an unassisted pull-up:**

Train 3-5 times per day, 3-5 days per week. Go to the pull-up bar with a spotter. Perform the following:

**1. Partial Pull-ups:** Pull yourself up as far as you can without help three times

**2. Jumping Pull-ups:** Use momentum from a jump to pull yourself all the way up. Lower yourself slowly to an arm hang three times.

**3. Assisted Pull-ups:** Pull yourself up as far as you can and have your spotter assist you at the waist/torso only as much as required to get to a full pull-up three times.

## **If you can perform at least one pull-up:**

Continue to perform pull-ups three times per day. Do not try to perform more pull-ups in any one session if you have to swing your body or use momentum to get that last pull-up.

