

USCGA Health and Physical Education Fitness Preparation Guidelines



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USCGA Health and Physical Education

Fitness Preparation Guidelines

HOW THIS GUIDE WORKS

This guide provides you with advice and a sample workout to get you ready for Swab Summer at the US Coast Guard Academy. The main goal is to prepare you for the physical and mental demands of Swab Summer, and to get you physically fit. By preparing for Swab Summer you will reduce the risk of preventable overuse injuries such as shin splints and rhabdomyolysis.

MUSCULAR STRENGTH & ENDURANCE

Muscular strength and endurance can be improved by systematically increasing the load (resistance) that you are using. Any overload will result in improvement, but higher intensity and effort will result in greater improvements. Start at a level that is easy for you to perform and complete, then add resistance gradually. Apply these general weight training principles when beginning the strength program.

AEROBIC OR CARDIOVASCULAR FITNESS

Aerobic exercises are those that strengthen your heart and improve circulation. Systematically increasing load, intensity, volume, while decreasing rest times will result in improved performance in Aerobic exercises (running, swimming, biking, etc.). Prior to initiating the running portion of this training program, it is recommended that you ensure you have proper footwear. Worn-out or improperly fitting shoes are the leading cause of injury. Running surface can also play a role in lower leg injuries. Make every effort to run on softer surfaces like grass and trails (dirt, woodchips, or crushed gravel) over pavement and cement. In some cases, harder surfaces cannot be avoided in order to achieve the volume recommended in this guide.

The running portion of the program has the following elements:

1. **Easy Run:** the largest part of the cardio program, completed as a single continuous run at a comfortable pace (not a jog). Talking to a running partner shouldn't be a problem, but if you can chat continuously, it may be too slow.
2. **Medium Effort:** Faster than an Easy Run, but still slower than your PFE pace; you can still speak in a full sentence if asked, but you won't want to. A session at this pace should be done as a single continuous run or repetitions as short as 4 minutes. Be sure to warmup and cool down.
3. **Hard Effort:** these workout sessions are conducted during weeks 4-7 and only after running the 1.5 Mile Time Trial during week 4. The goal paces for these workouts are listed on the "Recommended Running Pace" table on page 5 and are based off of your time from the 1.5 Mile Time Trial. The best comparison for this pace is running a hard one mile effort.
4. **Hill Running:** Find a hill (100-150 meters long) with a gradual ascent (approx 5-15° incline). If a hill is not available where you train, utilize a treadmill and aim for a 3-6% incline.
5. **Strides:** Running very fast, but smooth and under control. Aiming for 85-90% of maximum effort for the distance you are covering. Thoroughly warm up and cool down for any speed work.

6. **Non-running:** A day where you should do your scheduled time for running as a non-running cardio exercise, such as biking, swimming, etc.

FLEXIBILITY

Muscles and joints become stiff and lose their range of motion with inactivity or activity overload. The Dynamic Flexibility and Movement Prep warm-up listed on page 5 is designed to maintain good joint mobility, reduce injury risk, improve the ability of your muscles to adapt to physical stresses, and enhance overall muscle performance. This is a whole body warm-up that target major areas of the body such as lower back, hips, hamstrings, quadriceps, shoulders, etc. If you feel the need to take a few extra minutes to stretch after the prescribed warm-up below, you may conduct static stretching by holding each stretch 10-20 seconds and any muscle group desired. Don't over-stretch to the point of pain and avoid bouncing movements.

RECOVERY

Recovery is a critical part of your weekly training program. There are several ways rest is built into the program. First, there are times when a "Rest" day is planned, which means no exercise should take place. This will allow your body to rest and recover in an effort to prepare for the next conditioning session. Next, there are "Active Rest" components to the conditioning program that appear as "Non-Running" or "Easy-Runs". These are less intensive on the body, but still provide both valuable training opportunities and to aid in the recovery process.

WALKING

You will be constantly transiting around campus all summer to and from various activities. Many times, this transit will be a very FAST paced walk. The hilly terrain at the USCGA and the different mechanism of walking from running, can also lead to an increase in overuse injuries. It is important that along with working on your muscular strength and endurance, your aerobic fitness, and flexibility you also focus on improving your ability to walk efficiently in both boots and in running shoes. Walking Fast, Walking Up and Down Hills, should be incorporated into any training that you do.

CLOSING NOTES

Although not every prospective swab will have identical levels of physical fitness, enclosed in this document, you will find a program to help get you ready for the demands of Swab Summer. You will find a Master Schedule (8 Weeks in total), followed by more detailed instructions on each of the components of the workout. This includes suggested paces for your runs, sample circuit training workouts, and an entry level swimming program.

Exercises should begin on **Monday, 07 May 2018** in order to accommodate the full 8 week training period.

Upon arrival at the Coast Guard Academy for Swab Summer you will be completing a Physical Fitness Exam (PFE). This exam will be given in the first week of training as well as at the end. Following the summer training period, cadets take the PFE two times a year. The PFE consists of push-ups (2 minutes), sit-ups (2 minutes) or Max Plank Hold (4:15), and a 1.5 mile run. The first two items measure the muscular strength and endurance of the upper body and the abdominals. The 1.5 mile run is a measure of your cardio-respiratory fitness.

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Swab Summer Readiness Program Endurance Notes

Recommended Running Pace (Based on PFE 1.5 Mile Time Performance)

1.5 Mile Time	1.5 Mile (in Seconds)	Easy Pace	Hard Effort 400 meters
7:30	450	6:30 - 7:30 per mile	1:12
8:00	480		1:16
8:30	510		1:20
9:00	540	7:30 - 8:30 per mile	1:26
9:30	570		1:30
10:00	600		1:34
10:30	630	8:30 - 9:30 per mile	1:38
11:00	660		1:42
11:30	690		1:46
12:00	720	9:00 - 10:30 per mile	1:50
12:30	750		1:54
13:00	780		1:58
13:30	810	10:00 - 11:30 per mile	2:02
14:00	840		2:06
14:30	870		2:10
15:00	900	11:30 - 13:00 per mile	2:18
15:30	930		2:23
16:00	960		2:28

Movement Prep & Dynamic Flexibility		
EXERCISE	Wks 1-4	Wks 5-8
Low Skip with Arm Hugs	2 Sets/20 yds	2 Sets/30 yds
Side Shuffles w/Lateral Arm Swings (Right)	1 Set/20 yds	1 Set/30 yds
Side Shuffles w/Lateral Arm Swings (Left)	1 Set/20 yds	1 Set/30 yds
Walking Hip Circle	2 Sets/20 yds	2 Sets/30 yds
Carioca Left	1 Set/20 yds	1 Set/30 yds
Carioca Right	1 Set/20 yds	1 Set/30 yds
Lunge with Twist	2 Sets/20 yds	2 Sets/30 yds
Walking Quad Stretch	2 Sets/20 yds	2 Sets/30 yds
Hamstring Kicks	2 Sets/20 yds	2 Sets/30 yds
High Knees	2 Sets/20 yds	2 Sets/30 yds
Butt Kicks	2 Sets/20 yds	2 Sets/30 yds
Accelerations	2 Sets/20 yds	2 Sets/30 yds

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Swab Summer Readiness Program

Week 1

Monday
10-12 min run at easy pace

Tuesday
Physical Fitness Test
Dynamic Flexibility & Movement Prep followed by....
Execute the Coast Guard Academy Physical Fitness Exam.
Part 1: Begin with Push-ups on a cadence (1 sec up & hold, 1 sec down & hold) for 2:00. Max for Men is 60, Max for Women is 48
Rest 2 minutes
Part 2: Proceed to Sit-ups. Execute as many Sit-ups in 2:00 as possible. Max is 100 Sit-ups. Or Hold Plank position for as long as possible - max is 4:15 refer to guidance for PFE on www.cgapsorts.com
Rest 10 minutes
Part 3: Run 1.5 miles as fast as possible.

Wednesday
Elliptical, Bike, Swim, etc for 15-20 min

Thursday
Circuit Training
Dynamic Flexibility & Movement Prep followed by....
Complete as Many Rounds in 5:00
10 Box / Bench Jumps Overs
:30 sec Plank
Rest 3:00
Complete as many rounds in 5:00
10 Burpees
10 Back Extensions

Friday
10-12 min run at easy pace
After easy run, 5 x 100 meter strides (light jog back to start)

Saturday

Sunday

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Swab Summer Readiness Program

Week 2

Monday
10-15 min run at easy pace

Tuesday
Bodyweight Circuit
<u>Dynamic Flexibility & Movement Prep followed by....</u>
Pyramid (level 1 - 5)
Pull-ups x 1
Push-ups x 2
Sit-ups x 3
:30 sec plank hold
Level 1 of Pyramid: 1 Pull-up, 2 Push-ups, 3 Sit-ups, :30 sec plank hold
Level 2 of Pyramid: 2 Pull-ups, 4 Push-ups, 6 Sit-ups, :30 sec plank hold
Level 3 of Pyramid: 3 Pull-ups, 6 Push-ups, 9 Sit-ups, :30 sec plank hold
Continue Until Level 5, Rest :30 sec Between Levels

Wednesday
Elliptical, Bike, Swim, etc for 15-20 min

Thursday
Circuit Training
<u>Dynamic Flexibility & Movement Prep followed by....</u>
Complete the Following Circuit 8x
100 Yard Run
10 Push-ups
20 sit-ups / :20 sec plank hold
30 Bodyweight Squats
Rest :30

Friday
Running Workout
10-15 min run at easy pace
6-7 x 100 meter strides (light jog back to start)

Saturday

Sunday

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Swab Summer Readiness Program

Week 3

Monday
Running Workout
15-20 min run at easy pace
6-7 x 100 meter strides (light jog back to start)

Tuesday
Circuit Training
Dynamic Flexibility & Movement Prep followed by....
Complete 5 Rounds of the Following for Time:
15 Push-ups
:45 sec plank
40 Bodyweight Squats

After the Completion of 5 Rounds, Run an 800m at PFE Race Pace

Wednesday
Elliptical, Bike, Swim, etc for 15-20 min
See Swim Workout tab for swimming ideas

Thursday
Dynamic Flexibility & Movement Prep followed by....
Pull-up Circuit
1, 2, 3, 4, 5....to Max
15 Seconds Rest Between Each Set or Level of the Pyramid

5 Circuits of the following in order
Push-up x 5 (3)
hand release push-ups x 5 (3)
Slow cadence push-ups x 5 (3)
Repeat 5 Times (:30 sec rest between)

Friday
15-20 min run at easy pace
6-7 x 100 meter strides on a hill (walk down recovery)

Saturday
Optional Easy Run
10-15 min run at easy pace

Sunday
Rest

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Swab Summer Readiness Program

Week 4

Monday
Running Workout
5-10 Min Warm-up
1.5 Mile Time Trial
Rest 5:00
Max plank hold
5-10 Min Cool-Down

Tuesday
Non-Running Workout:
Elliptical, Bike, Swim, etc for 15-20 min
See Swim Workout tab for swimming ideas
Bodyweight Circuit
Dynamic Flexibility & Movement Prep followed by....
Pyramid (level 1 - 7)
Pull-ups x 1
Push-ups x 2
Sit-ups x 3
Example:
Level 1 of Pyramid: 1 Pull-up, 2 Push-ups, 3 Sit-ups
Level 2 of Pyramid: 2 Pull-ups, 4 Push-ups, 6 Sit-ups
Level 3 of Pyramid: 3 Pull-ups, 6 Push-ups, 9 Sit-ups
Continue Until Level 7, Rest 30 Sec Between Levels

Wednesday
Running Workout
15-20 min run at easy pace
6-7 x 100 meter strides (light jog back to start)

Thursday
Circuit Training
Dynamic Flexibility & Movement Prep followed by....
For 10 min, each min, On the min Complete the Following:
5 Burpees
5 Push-ups
5 Bodyweight Squats
After the Completion of 10 min Circuit, Run 1 Mile For Time

Friday
Medium Effort Run
5-10 Min Warm-up (.5-1.5 Miles)
3-4 x 3:00 Medium Effort Run (:45 sec rest between reps)
5-10 Min Cool-Down

Saturday
Optional Easy Run
15-20 min run at easy pace

Sunday
Rest / Walk 30min

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Swab Summer Readiness Program

Week 5

Monday
Easy Run
15-20 min run at easy pace
6 x 100 Meter Strides on a hill (walk down recovery)

Tuesday
Circuit Training
<u>Dynamic Flexibility & Movement Prep followed by....</u>
Complete 4x Through the Following each round on 5:00
400 meters at PFE Race Pace followed by max rep burppes untill clock hits 3:00
3:00 of 400m run+max rep burppes + 2:00 rest = 5:00 per round

Wednesday
Running Workout
5-10 Minute Warm-Up
2 x 5:00 at Medium Effort, no more than 2:00 rest.
5-10 Minute Cool-Down

Thursday
<u>Dynamic Flexibility & Movement Prep followed by....</u>
<u>Pull-up Circuit</u>
1, 2, 3, 4, 5....to Max
15 Seconds Rest Between Each Set or Level of the Pyramid
<u>10 Circuits of the following in order</u>
Push-up x 10 (5)
Hand release puhs ups x 10 (5)
Slow Cadence push-ups x 10 (5)
Repeat 10 Times (:30 sec rest between)

Friday
5-10 Min Warm-Up
4x400 meters of a Hard Effort with 2 minutes of light jogging for recovery between. See Pace Chart for goal times
5-10 min Cool-Down (.5-1.5 Miles)

Saturday
20-25 min run at easy pace or Fast Paced Walk 2miles

Sunday
Rest

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Week 6

Monday
Running Workout
5-10 Minute Warm-Up
2 x 6:00 at Medium Effort, 2:00 rest
5-10 Minute Cool-Down

Tuesday
Non-Running Workout
Elliptical, Bike, Swim, etc for 20-25 min
See Swim Workout tab for swimming ideas
Bodyweight Circuit
<u>Dynamic Flexibility & Movement Prep followed by....</u>
Pyramid (level 1 - 10)
Pull-ups x 1
Push-ups x 2
Sit-ups x 3
Plank hold :30 sec
Example:
Level 1 of Pyramid: 1 Pull-up, 2 Push-ups, 3 Sit-ups, plank hold :30 sec
Level 2 of Pyramid: 2 Pull-ups, 4 Push-ups, 6 Sit-ups, plank hold :30 sec
Level 3 of Pyramid: 3 Pull-ups, 6 Push-ups, 9 Sit-ups, plank hold :30 sec
Continue Until Level 10, Rest 30 Seconds Between Levels

Wednesday
Easy Run
20-25 Minute Easy Run
5 x :25 Strides

Thursday
Circuit Training
<u>Dynamic Flexibility & Movement Prep followed by....</u>
Complete the Following Circuit as Many Times as Possible in 14 min
:30 Second Plank Hold (on Elbows)
10 Walking Lunges Each Leg (With Weight if Available)
10 Hand Release Push-ups (Belly on Ground, Hands Release Ground Each Time)
5 Standing Continuous Broad Jump Leaps
20 Mountain Climbers

Friday
Running Workout
5-10 Minute Warm-Up
6 x 200 Meters at a Hard Effort, :60 rest between each
5-10 min Cool-Down

Saturday
Easy Run
20-25 min run at easy pace

Sunday
Rest / Walk 30min

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Week 7

Monday
Running Workout
5-10 Minute Warm-Up
6 x 300 meters at a Hard Effort (Based on PFE time Chart), 2:00 rest
5-10 Minute Cool-Down

Tuesday
Circuit Training
Dynamic Flexibility & Movement Prep followed by....
30 Walking Lunges (30 Steps), 25 Push-ups, 50 Sit-ups
Run 200 meters
25 Walking Lunges (25 Steps), 20 Push-ups, 40 Sit-ups
Run 200 meters
20 Walking Lunges (20 Steps), 15 Push-ups, 30 Sit-ups
Run 200 meters
15 Walking Lunges (15 Steps), 10 Push-ups, 20 Sit-ups
Run 200 meters
10 Walking Lunges (10 Steps), 5 Push-ups, 10 Sit-ups
Run 200 meters

Wednesday
Plank + Easy Run
Max plank hold
20-25 min run at easy pace
5 x :15 Strides on a Hill

Thursday
Bodyweight Circuit
Dynamic Flexibility & Movement Prep followed by....
Pull-up Circuit
1, 2, 3, 4, 5....to Max
15 Seconds Rest Between Each Set or Level of the Pyramid
10 Circuits of the following in order
: 20 Sec Plank Hold
7 Push-ups
10 Sit-up
7 Push-ups
10 leg raises
5 bupees
(:30 sec rest between)

Friday
Running Workout
5-10 min Warm-up
10 Minutes as a Medium Effort Run
5-10 min Cool-Down

Saturday
Easy Run
20-25 min run at easy pace

Sunday
Rest / 30min Walk

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Week 8

Monday
Easy Run
25-30 min run at easy pace

Tuesday
Elliptical, Bike, Swim, etc for 20-25 min
<u>Dynamic Flexibility & Movement Prep followed by....</u>
Part 1: Begin with Push-ups on a cadence (1 sec up & hold, 1 sec down & hold) for 2:00. Max for Men is 60, Max for Women is 48
Rest 2 minutes
Part 2: Max plank hold - Hold plank up to 4:15
or
Part 2: Proceed to Sit-ups. Execute as many Sit-ups in 2:00 as possible. Max is 100 Sit-ups.
Part 3: Run 1.5 miles as fast as possible.

Wednesday
15-20 min run at easy pace (approx 2-3 Miles)

Thursday
<u>Dynamic Flexibility & Movement Prep followed by....</u>
Start Line - 20 Bodyweight Squats - Then Run 100m
Endline - 10 Burpees - Run back to Start Line 100m
Start Line - 18 Bodyweight Squats - Then Run 100m
Endline - 9 Burpees - Run back to Start Line 100m
Start Line - 16 Bodyweight Squats - Then Run 100m
Endline - 8 Burpees - Run back to Start Line 100m
Start Line - 14 Bodyweight Squats - Then Run 100m
Start Line - 12 Bodyweight Squats - Then Run 100m
Start Line - 10 Bodyweight Squats - Then Run 100m
Start Line - 8 Bodyweight Squats - Then Run 100m
Start Line - 6 Bodyweight Squats - Then Run 100m
Start Line - 4 Bodyweight Squats - Then Run 100m
Start Line - 2 Bodyweight Squats - Then Run 100m

Friday
25-30 min run at easy pace (approx 3-4.5 Miles)

Saturday

Sunday

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Swab Summer Readiness Program Swimming Workouts

Notes:

1 Length of the Pool = 25 yards (Example: 50 yd = 2 Lengths, 100 = 4 Lengths)

Equipment: goggles (optional)

Workouts are Novice to Intermediate Workouts. To Increase Difficulty, Complete a Workout 2x

Workout Option 1

Warm-up: 150 yd (6 lengths of the pool continuous; mix up strokes)

4 x 50 yd Freestyle or Front Crawl (:30 sec rest after each 50 yd)

1:00 Rest

1 x 100 yd Freestyle or Front Crawl

1:00 Rest

8 x 25 yd (:15 sec after each 25 yd; choose your stroke)

1:00 Rest

1 x 100 yd Freestyle or Front Crawl

1:00 Rest

4 x 50 yd (:30 sec rest; choose your stroke)

Cooldown 50-100 yd

Workout Option 2

Equipment: goggles, kickboards

Warm-up: 150 yd any stroke

3 x 50 yd Freestyle or Front Crawl (:20 sec rest after each 50 yd)

3 x 50 yd any stroke, (:20 sec rest after each 50 yd)

3 x 50 yd flutterkick with a kickboard

3 x 100 yd = 25 Fr / 25 OTF / 25 flutter with kickboard / 25 free (1:00 rest between 100's)

25 yd Freestyle or Front Crawl

25 yd Choice of Backstroke, Side Stroke, or Breaststroke

25 yd Flutter with Kickboard

25 yd Freestyle or Front Crawl

12 x 25 yd Choose your stroke at easy pace

Cooldown 50-100 yd

Workout Option 3

Equipment: goggles (optional), kickboards

Warm-up: 150 yd (6 lengths of the pool continuous; mix up strokes)

5 x 25 Freestyle or Front Crawl (:15 sec rest)

5 x 25 Freestyle or Front Crawl (:15 sec rest)

100 Any Kick (only) (:30 sec rest)

100 Freestyle or Front Crawl (:30 sec rest)

100 Any Stroke (arms only) (:30 sec rest)

4 x 75 yd= Swim any stroke hard for the middle 25 yd of each 75 yd (:30 sec rest)

Cooldown 200 yd at easy pace

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Swab Summer Readiness Program Swimming Workouts

Notes:

1 Length of the Pool = 25 yards (Example: 50 yd = 2 Lengths, 100 = 4 Lengths)

Equipment: goggles (optional)

Workouts are Novice to Intermediate Workouts. To Increase Difficulty, Complete a Workout 2x

Workout Option 4
Equipment: goggles (optional)
Warm-up: 200 yd (8 lengths of the pool continuous; mix up strokes)
6 x 50 yd = 25 yd Flutter Kicking only (no Kickboard), then 25 yd Choose your stroke :20 rest
12 x 25 yd = every 3 rd 25 yd fast (:15 rest)
2 x 150 yd long (:45 rest)
Cooldown 100 yd

Workout Option 5
Equipment: goggles (optional)
Warm-up: 250 yd (10 lengths of the pool continuous; mix up strokes)
8 x 25 yd Freestyle or Front Crawl (:15 sec rest)
4 x 50 yd Any Kick (only) (:10 sec rest)
2 x 100 yd Freestyle or Front Crawl (:20 sec rest)
1 x 200 yd Alternate Breaststroke & Side Stroke each lap (:30 rest)
2 x 100 Freestyle or Front Crawl (:15 sec rest)
4 X 50 yd = 25 yd Any Kick (only) / 25 yd Any Stroke (:15 sec rest)
8 x 25 yd Choose your stroke and swim fast (:10 rest)

Workout Option 6
Warm-up: 10 min swim loosen up mix up strokes: Crawl, elementary back, sidestroke, breast stroke
Tread water:
6 min: 6 x :30 sec arms and legs / :30 sec legs only, hands out of water
Swim Set:
20 x 25 yd get out at each end (no ladder)
1-5 Freestyle or Front Crawl
6-10 Side Stroke
11-15 Breast Stroke
16-20 Freestyle or Front Crawl