

GUIDE 9

COMMAND/UNIT PHYSICAL TRAINING (PT) AND FITNESS ENHANCEMENT PROGRAM (FEP)

APPROVED
THOMAS P. YAVORSKI
N171 BRANCH HEAD

Table of Contents

	Page
Section 1: Command Physical Readiness Program Overview	
1. Overview.....	4
2. Program Strategies.....	4
3. Medical Screening.....	4
4. Command/Unit Physical Training (PT).....	4
5. Procedures.....	4
6. Commercial Programs.....	5
7. Emergency Response Plan (ERP).....	5
 Section 2: Fitness Enhancement Program (FEP) Overview	
1. Overview.....	6
2. Program Administration.....	6
3. Lessons Learned/Best Practices.....	8
 Section 3: Activity Guidelines and Physical Training (PT) Components	
1. Purpose.....	10
2. Components of Fitness.....	10
3. Basic Fitness Principles.....	11
4. Overload and Progression.....	13
5. Overtraining and Overreaching.....	14
6. Cueing Command PT.....	14
7. Exercise Tempo.....	15
8. Movement Compensations.....	15
9. Overcoming Obstacles to Command PT/FEP.....	16
10. Contraindicated Exercises.....	17
11. Resources.....	17
 Section 4: Command/Unit Physical Training (PT) Components	
1. Pre-Physical Activity Questions.....	20
2. Dynamic Warm-Up (Pillar and Movement Prep).....	20
3. Pre-Planned PT Session.....	21
4. Regeneration (Cool Down, Stretching, Recovery).....	23

Appendices

A. Pre-Physical Activity Questions for Command/Unit PT and FEP.....	25
B. Command PT Regeneration.....	27
C. Contraindicated/High Risk Exercises and Stretches.....	34
D. Sample Workouts.....	39
E. Improving PRT Scores.....	44
F. FEP Monthly Tracking Log.....	46
G. Glossary of Terms	48

Section 1: Command Physical Readiness Program Overview

1. Overview. The Command Physical Readiness Program is the command's action plan to maintain and improve the entire crew's overall health and fitness.
2. Program Strategies. Program strategies include increased opportunities for physical activity, education, and resources. Program strategies that target the entire command are more likely to be sustainable and promote healthy lifestyle behaviors.
 - a. Command/Unit Physical Training (PT) Guidelines for developing PT programs are provided in Section 3 of this guide.
 - b. Command/Unit PT Components (Section 4), provides details on the command PT components. Command Fitness Leaders and Assistant Fitness Leaders (CFL/ACFLs) need to familiarize themselves with this information before conducting Command/Unit PT or the Fitness Enhancement Program (FEP).
3. Medical Screening. All members must complete the required medical screening to confirm health status and screen for physical activity risk factors. CFL/ACFLs must ask the five Pre-physical Activity Questions before every Command/Unit PT and FEP session (See Appendix A).
4. Command/Unit PT. Command/Unit PT is any command-led physical activity. Command/Unit PT must be led by a certified CFL, ACFL, or Morale Welfare Recreation (MWR) Fitness Specialist per OPNAVINST the 6110.1 Series. Military personnel must wear the authorized Navy Physical Training Uniform (PTU) or the Optional PTU.
5. Procedures. Below are the procedures for an effective Command/Unit PT session:
 - a. Schedule a location and time for command members to meet.
 - b. Publish location and time to all participants.
 - c. Instruct all participants to bring water (if water is not readily available).
 - d. Always have a PT session plan. Know in advance what space, activities, and equipment will be utilized in the PT session.
 - e. Ensure all ACFLs know their role during the sessions.
 - f. Take muster before and after the PT session.
 - g. Read aloud the five Pre-Physical Activity questions before Command/Unit PT (Appendix A).
 - h. Start with an appropriate dynamic warm-up exercise routine.

i. Provide instruction on alternative options for personnel with limited exercise capabilities.

j. End the session with cool down and regeneration (Appendix B).

6. Commercial Programs. The Navy does not endorse any commercialized fitness programs. CFL/ACFLs are not authorized to display commercial copyrighted programs (e.g., video, paper, social media, mobile apps) during Command/Unit PT sessions.

7. Emergency Response Plan. An Emergency Response Plan (ERP) must be in place for contacting emergency medical services when conducting Command/Unit PT on base. Consult local medical facilities for guidance. At a minimum, the ERP will include telephone numbers, location of the nearest automated external defibrillator (AED), procedures for summoning aid, and clear directions for emergency response personnel to avoid confusion and expedite response times. Include guidance for contacting base security personnel to assist with unimpeded emergency personnel access to the desired location. If conducting Command/Unit PT at a MWR facility (fitness center), default to the facility's ERP.

Section 2: Fitness Enhancement Program (FEP) Overview

1. Overview. FEP is a command-wide program to improve physical activity and nutrition behaviors. Per the OPNAVINST 6110.1 series, Commanding Officers/Officers in Charge (CO/OICs) must establish and monitor a FEP.

2. Program Administration.

a. Program Management: FEP is managed by the CFL on behalf of the CO. The CFL is responsible for administering all aspects of the program. ACFLs play an important role in assisting the CFL in conducting FEP activities, documenting participation, and monitoring member progress.

b. Program Participation: Any member that fails to meet the Physical Fitness Assessment (PFA) standards is required to be formally enrolled into FEP. Members may also participate in FEP by self-referral.

c. Mandated FEP Requirements:

(1) **Written Counseling for FEP enrollment**. Enlisted members are issued a NAVPERS 1070/613 (Page-13) and Officers are issued a Letter of Notification (LON) to officially inform them of FEP enrollment and nutrition requirements. Refer to PRP Guide 3 for additional information.

(2) **FEP PT**. FEP sessions are only led by designated CFLs, trained ACFLs, or MWR Fitness Specialists. It is the CFLs responsibility to ensure ACFLs administering FEP are familiar with the OPNAVINST 6110.1 series and PRP guides. In the event a member is assigned to a joint command without a certified CFL, FEP may be administered by the service-equivalent CFL or Fitness Specialist of the sponsoring military service.

(3) **FEP Hours**. Unless otherwise directed by the command's mission/commitments, FEP activities are to be conducted during normal working hours and a minimum of 3 times per week for a total of 150 minutes or more.

(4) **FEP Nutrition**. Nutrition plays an important role in a member's performance, weight management, and disease prevention. Each member enrolled in FEP must select a nutrition option based on BCA versus PRT failure. Each option must include goal setting, long-term behavior modification, and ongoing support. The CFL has an important role in making referrals to registered dietitians/healthcare providers (HCP). CFLs and ACFLs do not provide diets, recommend caloric intakes, or provide nutrition counseling. PRP Guide 10: Nutrition Resources provide available and credible nutrition resources for members to develop an individual plan. CFLs will annotate the nutrition option selected by the member in the FEP section of PRIMS.

(a) FEP participants that failed their PRT and passed the BCA will select from one of the options below:

i. Consult with a Registered Dietitian or attend a Navy Nutrition Performance Class (located with Health Promotions or Nutrition office on base). Review nutrition guidelines with a dietitian or a health promotion officer/coordinator.

ii. Review Navy Operational Fitness and Fueling Systems (NOFFS) performance nutrition guidelines and resources. Member may seek assistance from CFL/ACFL or MWR Fitness Staff to locate NOFFS nutrition resources.

iii. Attend MWR Mission Nutrition Course. Member should coordinate with CFL/ACFL and MWR Fitness Staff to attend course.

iv. Download the official Navy PFA app and complete the Nutrition self-study course. Member will report to CFL/ACFL when complete so it can be properly documented in member's FEP record.

(b) FEP participants that failed their BCA will select from one of the options below:

i. ShipShape (Navy Marine Corps Public Health Center Course)

ii. Registered Dietitian (Individual Consult or Class)

iii. Nutrition Self-study Course (Official Navy PFA App)

iv. MWR Mission Nutrition Course

v. Commercial Weight Management Program. Review Guide 10: Nutrition Resources for guidelines.

d. FEP Documentation. All FEP records are the property of the command and are to be maintained for no less than five years. FEP documents include:

(1) Weekly PT sessions

(2) Weekly body weight weigh-ins

(3) Monthly mock PFA results, including BCA and PRT components

(4) Nutrition education. Maintain documentation of any courses/programs offered, completed, or declined.

e. FEP Participation and Monitoring. Members are required to remain enrolled in FEP until passing one mock or official PFA and be within AAS. If a member fails the BCA and/or PRT and is subsequently medically waived from an event, they will remain on FEP until they successfully pass a mock or official PFA for the events which they are medically cleared for.

f. Progress. Progress may be assessed via program participation records and monthly mock PRT and BCA results. Each member's progress will vary and depend on members' age, health status, fitness level, and body composition levels.

(1) PRT. Improved mock scores are the number one indicator of improvement for fitness.

(2) BCA. Members assigned to FEP due to BCA failure must participate in the FEP mock PRT. Training emphasis should focus on decreasing body fat versus weight loss. Adequate progress is 1-2 pounds per week or 1-2% body fat per month and should not exceed more than 5% of body weight in any week.

g. FEP Session Uniform Requirements.

(1) Uniform. The Navy PTU or Optional PTU is the official uniform for Command/Unit PT, the PFA, and FEP.

(2) Footwear. Shoes will be comfortable and support the planned exercise and athletic socks are not to exceed mid-calf. Low-cut socks are permitted.

h. Local Resources. Command CFL/ACFLs, Dietitians, local health promotions personnel, medical department representatives, ShipShape facilitators, and MWR fitness professionals can help structure a member's program to produce the greatest benefit.

3. Lessons Learned/Best Practices.

a. Each member requires an individualized plan. The member should play an active role in developing their plan for obtaining a healthier lifestyle, as well as meeting Navy physical readiness standards. Monthly data are required to be recorded in PRIMIS. Review each member's progress at least monthly. A FEP plan provides, at a minimum:

(1) Exercise goals: How will the member acquire the recommended amount of exercise each week?

(2) Nutrition goals: What nutrition resources will be utilized and what are the goals within that program?

(3) Progress monitoring: FEP tracking logs with weekly PT and body weight weigh-ins as well as mock BCA and PRT scores reviewed monthly.

b. When possible, partner with MWR for assistance with Command PT and FEP. MWR fitness specialists are the experts in the field and trained to assist with group and individualized exercise programs.

c. Promote additional caloric expenditure outside of FEP PT. It is recommended that members focusing on weight-loss perform daily physical activity. Regular, daily exercise is required to maintain a healthy weight. All members should strive to increase activity outside of FEP.

d. Command/Unit and FEP PT Guidance.

(1) Section 3 provides group exercise guidance.

(2) Limit formation runs. Formation runs alter stride lengths, potentially over-training the least fit and under-training the fittest. Use PRT run times to group members into three to four like-fitness levels.

(3) Avoid fitness programs that promote overtraining, increasing the risk of overuse injuries to muscles and joints. Limit long runs and incorporate speed work to improve run performance.

(4) Avoid contraindicated exercises (Section 4) at all command-led PT sessions.

(5) Promote a variety of activities beyond regimented, group calisthenics, and formation runs.

(6) Provide members with the resources, knowledge, command direction, and monitoring to maintain a healthy lifestyle and mission accomplishment.

Section 3: Activity Guidelines and PT Components

1. Purpose. This resource has been developed to assist commands in conducting a safe and effective fitness program.

2. Components of Fitness.

a. Cardiorespiratory fitness (i.e., Energy System Development [ESD]): The body's ability to uptake, transport, and utilize oxygen as fuel in working muscles during sustained exercise. Sailors should perform at least 150 minutes (2 hours and 30 minutes) to 300 minutes (5 hours) per week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) to 150 minutes (2 hours and 30 minutes) per week of vigorous-intensity cardiorespiratory activity, or a combination of both.

(1) Command PT sessions should use all of the body's energy systems:

(a) Anaerobic lactic & alactic systems: energy pathways used in the body when oxygen is absent.

(b) Aerobic system: energy pathway used when oxygen is present.

b. Strength Training (i.e., resistance training): the ability of muscles to exert, absorb, or neutrally produce a force on external resistance.

(1) Exercises include muscle-strengthening activities that are of moderate or high intensity. Muscle-strengthening sessions should involve all major muscle groups, being performed two or more days a week.

(2) Types of muscle contraction:

(a) Eccentric: muscle lengthens.

(b) Concentric: muscle shortens.

(c) Isometric: no change in the length.

(3) Types of resistance training:

(a) Power: ability to move the weight with acceleration.

(b) Muscular Strength: maximum amount of force that a muscle (or muscle group) can exert against an external resistance.

(c) Muscular Endurance: the ability of a muscle (or muscle group) to exert force against resistance repeatedly over time.

c. Flexibility and mobility: the ability of a joint to move freely through its full range of motion.

(1) Flexibility is an important but often overlooked component of exercise. Include exercises focused on improving flexibility in each PT session. Sessions should involve all major muscle groups two or more days a week.

(2) A stretching session will be led after the PT session because muscles are warmer and more pliable after exercise.

(3) Stretching exercises should be slow and controlled instead of fast or bouncy.

(4) There are two forms of stretching that can be performed, static stretching, which consists of 10-30 second holds per muscle group, and Active-Isolated Stretching (AIS) that uses the principle of reciprocal inhibition and the muscle's stretch reflex. The recommended stretches and procedures for static and AIS stretching is located in Appendix B.

d. Neuromuscular Exercise: the ability of the central nervous system to send signals to muscles to contract. Incorporation into PT sessions assist members in increasing their muscle strength, balance, and movement. Neuromuscular fitness components includes plyometrics, speed, agility, and quickness.

3. Basic Fitness Principles. CFL/ACFLs should use the FITT (Frequency, Intensity, Time, and Type) Principle when developing the command's physical readiness program. For a list of exercise-related terms, refer to Appendix G.

a. Frequency: The number of training sessions conducted per day or per week. The frequency of sessions is largely dependent upon the intensity exerted. Higher intensity sessions are performed less frequently than lower intensity sessions.

b. Intensity: The level of physical effort required to perform an activity at any given time. There are several ways to measure intensity: Target Heart Rate, Rate of Perceived Exertion (RPE), the talk test, and repetition max (RM).

(1) Target heart can be calculated by using the maximum heart rate (HR) equation by subtracting your age from 220. For example, a 26 year old Sailor would have a max heart rate of 194 beats/minute ($220 - 26 = 194$). An alternative equation is the Karvonen formula which takes your resting heart rate into consideration for maximum heart rate. The Karvonen formula is used to determine your target HR based on intensity level $[(\text{max HR} - \text{resting HR}) \times \% \text{Intensity}] + \text{resting HR}$. Knowing your target heart rate during training allows Sailors to match effort levels to the intended intensity.

(2) The Talk Test is a common method to monitor exercise intensity. The method entails determining the intensity of exercise based on the ease of conversation.

(3) Rate of Perceived Exertion (RPE) is an additional method in which CFLs/ACFLS can measure a Sailor’s effort by using a scale from 1-10 which measures the perceived intensity level of a physical activity.

Below is a sample Exercise Intensity chart that incorporates RPE, the Talk Test and Target Heart Rates.

	Target	Description	Target
MAX	10/10	Maximum effort. Give it all you got!	100% Max HR
HARD	9/10	Extremely strenuous and difficult to maintain.	90% Max HR
MODERATE	7/10	Rapid breathing. Can’t talk now!	80% Max HR
EASY	5/10	Moving with purpose, but still able to talk comfortably.	65% Max HR

(4) In addition to establishing appropriate intensity levels, the work-to-rest ratio can help ensure the exercise intent matches the desired outcome. Table 1 depicts the amount of work (i.e., exercise) and rest.

Table 1: Recommended Work:Rest Ratio Based on Exercise Intensity

Intensity of Drill	Duration of Drill	Work: Rest Ratio
90-100%	0-6 seconds	1:12 to 1:20
75-90%	6-30 seconds	1:3 to 1:5
30-75%	30 seconds to 3 minutes	1:3 to 1:4
20-30%	>3 minutes	1:1 to 1:3

c. Time: The number of minutes of activity.

(1) The amount of time depends on the intensity. The more intense the exercise, the shorter the time. Examples of training types and duration is displayed in Table 2.

Table 2: Recommended Duration and Rest intervals for Training Type

Training Type	Intensity Level	Recommended Duration	Recommended Rest
Interval	High	20-30 minutes	3-5 minutes between interval
Circuit Training	Moderate to High	20-30 minutes	30-90 seconds between rests between sets
Strength Training	Moderate	30 minutes	30 seconds - 2 minutes between sets

d. Type: The actual activity performed.

Table 3: FITT Principle for Cardiorespiratory, Strength Training, and Flexibility Components

F.I.T.T.	Cardiorespiratory	Strength Training	Flexibility
Frequency	3 + per week	2 + per week	2 + per week
Intensity	Moderate (5-6 RPE) Vigorous (7-8 RPE)	1-20 + repetitions 3-6 sets	Mild discomfort
Time	150 minutes	Varies	10-30 seconds per stretch (2-4 sets)
Type	Moderate or vigorous movement	Movement specific	Joint and muscle group-specific

4. Overload and Progression.

a. To make improvements in fitness, you must physically work at a level beyond what you are accustomed to. The three factors that are manipulated to induce exercise overload are frequency, intensity, and time.

b. The rule of progression is to implement an exercise program gradually. Avoid doing too much, too soon, or too fast to minimize setbacks and injuries.

c. Pay specific attention to time and intensity when starting a workout program.

(1) Initial intensity and time should reflect the beginning fitness level of the individual. The average aerobic intensity should be that which can be maintained for 15 minutes. For some, this may be a walking, running, or an alternate cardio option.

(2) Always increase time first when increasing overload, then increase the intensity (e.g., a member able to jog for 15 minutes per session should increase the time gradually to 30 minutes before increasing speed).

(3) Increase in 5-10% increments per week. For example, if a member is running 1 mile, do not increase above 1.1 miles the following week, or if jogging 15 minutes, do not increase the following week longer than 16.5 minutes.

(4) More is not always better. After a certain weekly amount of exercise, fitness improvements are negligible, and the potential for injury increases. Members exhibiting signs of tendonitis, muscle soreness, continuous ankle, knee, or other pain, or feeling fatigued regularly, are exercising too often, and may require medical advice.

(5) Quality over Quantity. Monitor participants during activity. Perform movements in a controlled manner, never place fitness on top of dysfunction. When form declines, stop the movement or provide an appropriate regression.

(6) After returning from periods of inactivity, it is recommended to progressively return to exercise. A 5-week reconditioning plan is located at <https://www.navyfitness.org/fitness/5-week-training-plan> which can assist with the safe return to exercise.

5. Overtraining and Overreaching. When intensity, duration, frequency of training, or any combination of these factors exceeds an individual's capacity for adaptation, overreaching and overtraining may occur. Exceeding adaptation capacity without sufficient recovery, normally leads to decrements in physical performance that are based on complex interactions among several biological systems and psychological influences.

a. Overreaching refers to short-term training, without sufficient recovery, that exceeds an individual's capacity. Successful recovery from overreaching can occur within a few days or up to two weeks with an adequate recovery intervention. Without recovery periods, overreaching results in a decrement in performance and physical readiness.

b. Overtraining syndrome is more serious and results from untreated overreaching that produces long-term impairments in performance and other conditions that may require medical intervention.

6. Cueing Command PT.

a. As a CFL/ACFL, your role is to analyze and correct members' movements, providing modifications for difficult or complex movements. During PT sessions, you should "teach by walking," correcting Sailors' form and posture as needed.

b. CFL/ACFLs are responsible for proper movement execution during command PT/FEP sessions. Verbal command strategies such as echo counts, military four counts, and count downs can be utilized to motivate Sailors. These count-based verbal command strategies must consider the tempo of each exercise to maintain the appropriate speed to achieve the desired strength adaption. During PT, provide a "mirror image" approach (e.g., "I lead right, you lead left").

c. Cues can be vocal, visual, or reactive (e.g., tactile).

(1) Vocal cues are used to announce exercise introduction, movement execution, and correct positioning. Vocal cues should be external cues as much as possible instead of internal.

(a) External = focus on the outcome of the movement. Examples of external cues include exploding, pushing, and driving (e.g., squat example, state "push the floor away").

(b) Internal = focus on the body part (e.g., squat example, state “bring your hips back and down”).

(c) Vocal cues allow CFLs to convey a message through body language and proper movement patterns. These cues allow Sailors to self-correct improper movement patterns.

(2) Reactive cues: Reactive cues should be used as a last resort to correct improper movement patterns. When performing a reactive cue, ask the member for permission and inform a member of what you plan to do. An example of a reactive cue is standing in front of a Sailor to signal to them to sit backwards during their squat instead of forward or adding a mini band above the knees to correct movement dysfunction.

NOTE: CFL/ACFLs should never manipulate a Sailor into the ideal position.

7. Exercise Tempo. There are three numbers that can be indicated for exercises that should be performed at a specific tempo/count: eccentric (muscle lengthens), isometric (no movement), and concentric (muscle shortens). Maintaining exercise tempo assists in achieving the associated strength gain. For example, if the tempo is 2:1:2, the muscle will lengthen for 2 seconds (eccentric movement), pause for 1 second (isometric movement), followed by 2 seconds of muscle shortening (concentric movement). When applied to push-ups, it is 2 seconds down, 1 second hold at the bottom, and 2 seconds up to return to the starting position. The prescribed tempo for endurance, strength, and power exercises is found in Table 4.

Table 4: Exercise Tempo for Endurance, Strength, and Power Exercises

Training Outcome	Eccentric (seconds)	Isometric (seconds)	Concentric (seconds)
Endurance	2-6+	1-2	1-2
Strength	1-2	0-1	1-2
Power	Explosive	N/A	Explosive

8. Movement Compensations.

a. A movement compensation is any deviation from optimal patterns and recruitment strategies. Movement compensations are caused by decreased or increased muscle activation, limited joint mobility and/or stability, and inappropriate joint movement sequencing.

b. As a CFL/ACFL, your role in identifying movement compensations includes:

(1) Recognition: Ability to identify poor movement quality.

(2) Trial and error: Utilization of cues to correct less than optimal movement patterns.

(3) Strategic correction: Ability to apply coaching cues to correct compensation.

c. Table 5 provides examples of the common compensations and sample corrective cues.

Table 5: Common Movement Compensations and Corrective Cues

Movement Compensation	Example	What to look for?	Corrective Cue	Optimal Position
Weight shifts	Forward: knee-dominant squat Backward: hip dominant squat	Heels slightly lift off the ground Toe movement in the shoe Uncoordinated hip and knee flexion	Standing weight shift Cue arch Exaggerate the compensation	Weight centered on the arch of the leg with toes engaged
Pelvic tilts	Anterior tilt: extension of lower back Posterior tilt: flexion of the lower back Lateral tilt: lateral flexion of the hip	Excessive extension or flexion in low-back Excessive tone/muscle size in low-back	Cue pelvis and hinge Facilitate neutral spine Torso activation	Pelvis sitting in a neutral position
Head position	Extension of the neck	Cervical extension/flexion	Manual head tilt Remove/minimize visual	Head facing forward in a neutral position
Thoracic hinge	Thoracic extension and rib flare Slight cervical extension	Rib flare	Close down the ribs Torso activation	Neutral spine with ribs closed
Knee collapse	One or both knees collapse to the center	Knee movement during exercise	Exaggerate the compensation Sync hip/knee sequencing	Feet and knee in line, wider than hip-width

9. Overcoming Obstacles to Command PT/FEP. CFL/ACFLs will experience obstacles when trying to assist Sailors in improving physical readiness. Tips are provided for assisting with PT obstacles in Table 6. CFLs should remember that when dealing with these obstacles, they should always keep their CO informed.

Table 6: Strategies for Overcoming Common Obstacles to PT

Obstacle	Strategy
I do not have time (work, family)	Plan ahead. Make time and mark it on your calendar. Aim for earlier in the day to prevent last minute commitments from becoming an excuse.
I do not have anyone to go with	Develop a buddy system. Members are more likely to PT on off days if someone else is waiting for them.
I am so tired after work	Schedule activity early in the day. Look at eating patterns. Have you fueled properly during the day to give you consistent energy? Look at sleep habits as well. Can you go to bed one hour earlier?
I have small children that I have to get home to	Trade babysitting with a friend. Do exercises with your children – walking with a stroller, have them ride a bike while you walk or jog.
The weather...	Use the confined spaces workout indoors.
I do not have access to a gym	A gym is not required. Bodyweight, resistance bands, and workout videos can be used.
I have to.....	Lose the excuses! This is a priority. Rate it that way in your day. Once a routine is established, it becomes second nature, like brushing teeth and getting dressed in the morning.

10. Contraindicated Exercises and Stretches. Contraindicated movements are potentially dangerous and may lead to injury. Any exercise that incorporates movements that cause extension or flexion of a joint beyond its normal range involves excessive, rapid or repetitive twisting around a fixed base, or requires advanced skills or strength to perform correctly is considered to be contraindicated for command-led PT. Contraindicated exercises and stretches are to be avoided at all command-led PT sessions (Appendix C).

11. Resources.

a. There are many fitness resources available to assist with command physical readiness. MWR fitness professionals can assist in designing and conducting command/FEP PT sessions. MWR fitness professionals are exercise specialists trained and qualified to provide individual and group exercise plans. Contact your local MWR for available services.

b. Additional tools for CFL/ACFLs are the Navy Operational Fitness and Fueling Series (NOFFS) courses offered aboard Navy installations. NOFFS was developed by Navy physical readiness stakeholders and industry experts to provide a comprehensive human performance training system that removes the guesswork. NOFFS is delivered through three different methods: NOFFS Pre-Designed Series (including free NOFFS Apps from your smart phone's app store), NOFFS Educational Courses, and Customized NOFFS Programming. NOFFS includes pillar prep, movement prep, plyometrics - speed, agility, and quickness (SAQ), strength training, cardiorespiratory

conditioning (ESD), regeneration (stretching and flexibility), and nutrition (fueling). CFL/ACFLs have access to certified NOFFS instructors located throughout the fleet to assist in training on NOFFS and incorporation into command PT. Various NOFFS programs and courses are available including the following:

(1) The pre-designed NOFFS series:

(a) Operational Series: Designed to assist individuals with maintaining their physical fitness levels based on various space and equipment restrictions. The Operational series includes total body workouts, including cardiorespiratory training for submarines, surface ship, and large decks.

(b) Strength Series: Designed to assist individuals in developing the strength needed to perform at higher levels through three phases; Build Muscle, Get Strong, and Get Powerful.

(c) Endurance Series: Designed to assist individuals with breaking through training plateaus while decreasing injuries often associated with traditional endurance training.

(d) Sandbag Series: Designed to provide individuals with a training plan that can be performed in austere environments with limited equipment options. The Sandbag series assists in developing the raw strength and power needed to meet the performance demands placed upon Sailors in any environment. Exercise modalities (e.g., dumbbells, kettlebells) can be supplemented for a sandbag to complete the series' exercises.

(2) MWR Instructor-led NOFFS Educational Courses:

(a) NOFFS Short Course: Six-hour NOFFS Operational course designed to provide attendees with the foundation behind the methodology and movements found throughout the Operational Series.

(b) NOFFS Operational, Strength, Endurance, and Sandbag Labs: Two-hour labs for each series (Operational, Strength, Endurance, and Sandbag), designed to educate and instruct participants on the movements in each series.

(c) NOFFS Fueling Strategies: Two-hour course reviewing the fueling (nutrition) strategies found in the NOFFS system.

(d) NOFFS Operational Course: Five-day course designed to review the mission, intent, and goal of NOFFS. The course provides attendees with the tools needed to perform and execute the NOFFS Operational workouts through lectures and gym sessions.

(3) Certified MWR NOFFS instructors can develop specific NOFFS training

sessions for individuals or commands to enhance physical readiness. Customized NOFFS programming needs pillar prep, movement prep, plyometric-SAQ, strength training, ESD, and regeneration components.

(4) For more information on NOFFS and other MWR Fitness programs, visit <http://www.navyfitness.org/> for more details.

Section 4: Command/Unit PT Components

The Navy's operational requirements are infinite and multidimensional, requiring multiple joint movements and patterns. The movement-based approach should include a warm-up, strength training, cardiorespiratory conditioning, regeneration, and complemented by adequate fueling strategies (Refer to Guide 10). All command led PT sessions consist of the following components in the order provided in Table 7.

Table 7: Recommended Duration of Components of a PT Session

PT Component	Time Requirement
Pre-Physical Activity Questions	N/A
Dynamic Warm-Up (Pillar & Movement Prep)	5 – 10 minutes
Pre-Planned PT Session	20 – 45 minutes
Cool-down	3 – 5 minutes
Regeneration	5 – 10 minutes

1. Pre-Physical Activity Questions. Prior to each command PT and FEP session the Pre-physical Activity Questions must be asked. The Pre-Physical Activity Questions are located in Appendix A.

2. Dynamic Warm-Up (Pillar and Movement Prep). Each PT session shall begin with a pillar and movement prep. The purpose of the warm-up is to adequately prepare the body for physical activity. The activities performed in the warm-up routine should mimic the activities that will be performed during the exercise session. The warm-up period lasts between 5-10 minutes but is driven by workout intensity, Sailor capacity, and session length. Movements should start with low-intensity and gradually increase in intensity as the warm-up progresses.

a. Take time to warm-up. Benefits include:

- (1) Reducing the potential for muscle and connective tissue injuries.
- (2) Increasing blood flow to exercising muscles. The more blood that reaches the muscles, the easier the delivery of nutrients required for energy production.
- (3) Increasing oxygen delivery to the muscle, which is crucial during a workout.
- (4) Increasing blood flow to the heart leads to reduced risk for exercise-induced adverse cardiovascular events.

b. Pillar Preparation (Prep): The pillar consists of the shoulder/scapular, torso, thoracic and lumbar spine, pelvis and hips, and connective tissue (i.e., muscle, ligaments, and tendons) and incorporates movements to improve muscle quality (soft tissue), joint range of motion (mobility), and neuromuscular control (stability). Table 8 displays the components of pillar prep to include muscles/movements, volume, and focus.

Table 8: Pillar Prep Overview

Component	Muscles/Movements	Volume	Focus
Soft Tissue	2-4 muscles	≤30seconds	Release muscle tensions and adhesions
Positional Activation (Mobility & Stability)	2-4 movements	5-10 repetitions with 2-second holds	Restore symmetry and control by establishing an increased range of motion

c. Movement Prep: The movement prep component of the warm-up is designed to increase core temperature, activate and elongates muscles, enhance movement pattern quality, and activate the central nervous system. Table 9 displays the components of movement prep to include movements, volume, and focus.

Table 9: Movement Prep Overview

Component	Movements	Volume	Focus	Example
Dynamic Activation	2-4	6-15 repetitions 1-2 sets	Activating muscle synergies	Glute bridge
Dynamic Flexibility	4-8	4-6 repetitions 1-2 sets	Actively increase 3-dimensional elongation through movement patterns	Knee hug
Movement Integration	4-6	10-15 yards 1-2 sets	Engrain movement patterns	Lunge with rotation
Neural Activation	4-6	5-15 seconds 1-2 sets	Prime the nervous system for full speed activity	Quick feet

3. Pre-planned PT session. This PT session can include plyometric-SAQ, strength training, and ESD. Pre-planned PT sessions should be sequenced based on the intensity and neurological demand. When performed, plyometric-SAQ exercises should be performed first

a. Plyometric-SAQ.

(1) Plyometric exercises involve quick, explosive movements to enable a muscle to reach maximal force in a short time. Incorporating plyometric exercise can increase power of subsequent movements and overall speed-strength qualities. Plyometric exercise can assist in the development of power and speed, increasing the ability to recruit muscle fibers efficiently and decreasing risk of injury. When incorporated into a command PT session, they should be performed after movement prep and before the strength session.

(2) When performing plyometric exercises, ensure proper warm-up (i.e., pillar and movement prep), emphasizing proper technique during movement integration and neural activation. Sailors should maintain proper form and alignment at all times, landing softly to absorb shock. Between plyometric sessions, allow up to 72 hours for recovery. The focus is on QUALITY, not quantity.

(3) The recommended plyometric volume is based on contacts (i.e., foot contacts with floor or box). Table 10 provides the recommended volume of plyometric exercise based on experience.

Table 10: Plyometric Exercise Recommendations

Plyometric Experience	Volume
Beginner (no experience)	80-100
Intermediate	100-120
Advanced	120-140

(4) SAQ.

- (a) Speed: Ability to move the body as quick as possible
- (b) Agility: Ability to change direction quickly and effectively
- (c) Quickness: Ability of the body to produce reflexive reactions

a. Strength Training

(1) Sailors need to strengthen muscles needed to perform on an operational platform. They should pay close attention to the quality of movement patterns and select a challenging resistance. Table 11 depicts the sets, repetitions, and rest for improving muscular endurance, strength, and/or power.

Table 11: Strength Training Recommendations

Goal	Sets	Reps	Rest
Endurance	3-6	≥12	≤30 seconds
Strength	3-5	≤6	2-5 minutes
Power	3-5	1-5	2-5 minutes

(2) The order of exercises is significant in preventing injury and capitalizing on muscle capabilities.

(a) Exercises should be sequenced based on the intensity and neurological demand. Power exercises (e.g., power clean) should be the first exercises performed during strength training sessions as they require high skill and concentration.

(b) Max strength and strength endurance exercises (e.g., bench press, squat, and push press) follow power exercises as they are core exercises that generally involve multiple joints and muscles groups.

(c) Auxiliary exercises are the last exercises performed during a strength session. Auxiliary exercises are generally single-joint exercises (e.g., bicep curls, tricep curls).

b. Cardiorespiratory Exercise (Energy System Development)

(1) Metabolic Circuit: Metabolic circuits combine interval training principles with resistance training into ESD. These circuits boost fat utilization by maximizing caloric burn through multiple joints and muscle exercises with little rest between exercises. Metabolic circuits include traditional cardiorespiratory exercises (e.g., jogging), strength, endurance, explosiveness, mobility, agility, and power exercises.

(2) Linear Accelerations: Accelerations include sprint pattern drills to improve sprint and movement speed. Accelerations can be performed using the cone drills, linear accelerations, and box drills.

(3) Long Slow Distance (LSD). LSD includes running slowly or running for a set amount of time or distance without regard to time.

(4) Pace/Tempo Training. Pace/Tempo training is cardiorespiratory training at an intensity slightly higher than race pace. This can be accomplished by setting the treadmill at the desired PRT speed, focusing on increasing duration at that speed. The benefits include improved race pace and running economy (form).

(5) Fartlek Training. This term is Swedish for "speed play." A less structured approach to interval training comprised of speed and fun. The session may be made up as you go, to include jogging, running, and sprints.

4. Regeneration (Cool-down, Stretching, Recovery). A critical component of any training program is regeneration. It brings balance back to the body, helping to relieve tension and associated aches and pains while enhancing the body's response to the training. Regeneration activities will help relieve aches, pains, inflammation, and muscle tension while improving flexibility and tissue quality. Regeneration activities will help after training sessions, keeping the body healthy and balanced. Regeneration components of a training session include:

a. Cool-down. The cool-down period's purpose is to gradually lower the heart rate and respiratory rate to pre-activity levels. Eliminating the cool-down (dropping to the deck after cardio) can cause blood to pool in the lower extremities decreasing the body's ability to return blood to the heart and brain. This can cause an irregular heartbeat, dizziness, nausea, and fainting. Use the last 3 to 5 minutes of the workout for a cool-down followed by stretching.

b. Stretching. Stretching sessions should focus on muscles utilized during the training session to increase joint range of motion, decrease injury risk, improve

performance, and aid in post-workout recovery. Static and Active Isolated Stretch exercises can be found in Appendix B.

APPENDIX A

PRE-PHYSICAL ACTIVITY QUESTIONS FOR COMMAND/UNIT PT AND FEP

Pre-Physical Activity Questions

(1) Do you have a current PHA? If no, you are prohibited from participation today.

(2) Do you have chest pain (with or without exertion), bone or joint pain, high blood pressure or high cholesterol? If yes, have you been cleared by your medical provider to participate in PT?

(3) Do you have Sickle Cell Trait (SCT)? If yes, have you been cleared by your medical provider to participate in PT? If not, you are prohibited from participation today.

(4) Have you had a change in your medical status since the last time you were asked these questions? If yes, have you been cleared by your medical provide to participate in PT? If not, you are prohibited from participation today.

(5) Are you ill today or know of any medical condition that may prevent you from participating in physical activity today? If yes, have you been cleared by your medical provide to participate in PT? If not, you are prohibited from participation today.

APPENDIX B

COMMAND PT REGENERATION

Static and Active Isolated Stretching (AIS) Protocol and Recommendations

Static Stretching protocol:





1. When applying a stretch, make sure the body is in balance.
2. Slowly lean into the stretch.
3. Stretch to mild discomfort; the stretch should not hurt. Do not bounce while stretching.
4. Aim to relax into the stretch as you breathe out.

AIS Protocol:

1. Start with the muscle in a relaxed state.
2. Actively move through the range of motion (ROM) without assistance.
3. Apply no greater than one pound of pressure at the end of the ROM.
4. Provide a controlled return back to starting position.
5. The stretch should be no longer than 2 seconds.
6. Repeat the stretch 10 times, with each stretch attempting to increase ROM.
7. Always return the muscle being stretched back to the starting position.
8. Exhale during the stretch and inhale during relaxation.

Additional regeneration exercises can be found at <https://www.navyfitness.org/fitness/noffs-training/noffs-series/regeneration-strategies>

Recommended Static Stretches

Stretch	Description & Caution	Recommended for Movement	Contraindicated Stretch
<p><i>Chest Stretch</i></p> 	<p>Description: In a standing position, gently clasp both of your hands and place them on the back of your neck. Slowly pull your elbows back until you feel a stretch on your chest. Do not pull your head forward or place tension on the neck</p> <p>Caution: You can do this as a partner assisted stretch but they should not force the stretch by aggressively pulling back on the elbows.</p>	Horizontal Push (e.g., push-up, chest press)	
<p><i>Posterior Shoulder Stretch</i></p> 	<p>Description: Place your left hand on the back side of your right arm above your elbow on the front of your body and gently pull your arm across your body. You should feel a stretch on back side of your shoulder and upper arm. Repeat to stretch opposite side of your body.</p>	Horizontal or Vertical Pull (e.g., bent over row, pull up)	
<p><i>Triceps Stretch</i></p> 	<p>Description: Take your left arm and reach behind your back. By placing your right hand on the back side of your left arm, gently push back to achieve a stretch on the left triceps muscle. Repeat on opposite side.</p>	Horizontal or Vertical Push (e.g., bench press, overhead press)	
<p><i>Hip Flexor Stretch</i></p>	<p>Description: In a standing position, place your right foot approximately 3 to 4 feet in front of</p>	Lower Body Push (e.g., back squat, walking lunges)	

	<p>your left foot (like a lunge). Slowly bend both knees until you lower your body towards the ground. Your left knee should almost be at 90 degrees. Gently push your left hip forward to feel the stretch in the front of your hip. If you don't feel the stretch, gently lean your upper body back.</p> <p>Tip: Since you use this muscle group during the Navy Curl-Up, this stretch should be performed after the curl-up event to prevent cramping and prepare this muscle group for the cardio event</p>			
<p>Groin or Butterfly Stretch</p>		<p>Description: While sitting with the upper body nearly vertical and legs straight, bend both knees, and bring the soles of the feet together. Pull feet toward your body. Gently place your hands on your feet and your elbows on your knees. Pull your upper body slightly forward as your elbows push down. You should feel a stretch in your groin area.</p>	<p>Lower Body Push or Pull (e.g., lateral lunge, single-leg RDL)</p>	
<p>Modified Hurdler Stretch</p>		<p>Description: While sitting in a v-position, gently pull your left foot towards your groin area. Your right leg will remain straight with a slight bend in the knee. Gently lean forward and reach for your toes on your right leg to stretch out your hamstring.</p> <p>Note: The stretch will be more difficult if you try to perform the hamstring stretch if you pull your toes back towards your body (vs. pointed).</p>	<p>Lower Body Push or Pull (e.g., deadlift, RDL, squat)</p>	

			
<p>Outer-Hip-and-Low-Back-Stretch</p> 	<p>Description: While in a long sitting position (legs in front of you with knees straight), cross your right leg over the left. Your right foot should be on the ground at approximately your left knee level. Take your left elbow and place it on the outside of your right knee and gently push your knee towards the left side of your body. You should feel a stretch on the outer portion of your right hip and in your low and mid back region. Repeat to opposite side.</p>	<p>Lower Body Push or Pull (e.g., deadlift, squat, lateral lunge, RDL)</p>	<p>Avoid spinal rotations, they are bad for the back</p> 
<p>Piriformis Stretch</p> 	<p>Description: While you are lying on your back, gently cross your right leg over your left thigh (both knees are bent at 90 degrees). Take both hands and place on the back side of your left thigh. Gently pull towards your chest until you feel slight tension in your right buttock and outer thigh. Repeat on opposite side. Note: If you are experiencing low back pain after performing physical activity, seek medical assistance. This exercise should be performed to increase flexibility in this region and may assist in decreasing pain.</p>	<p>Lower Body Push or Pull (e.g., deadlift, squat, lunge, RDL)</p>	
<p>Low Back Stretch</p>	<p>Description: While lying on your back, gently pull one or both knees to your chest. You should feel a stretch in your low back and buttocks.</p>	<p>Lower Body Push or Pull (e.g., deadlift, squat lunge, RDL)</p>	<p>Avoid extreme hyperextension of the spine (arching the</p>



Quadriceps Stretch

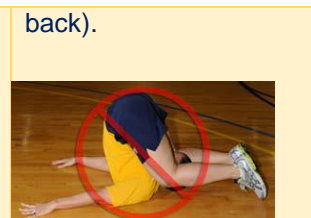


On-the-Ground Description: While lying on your side, with a slight bend in your left knee, grabs your right ankle with your right hand and maintains your balance. Gently pull your right foot towards your buttocks while making sure your knees is aligned with the body (make sure knee is not sticking out and it is directly below your hip. Repeat to opposite side.

Standing Description: In a standing position, with a slight bend in your left knee, grab your right ankle with your right hand and maintain your balance. Gently pull your right foot towards your buttocks while making sure your knees is aligned with the body (make sure knee is not sticking out and it is directly below your hip). You can also stretch out your trapezius (neck) muscles during this quadriceps stretch (neck muscles) by bringing your chin to the opposite side of your chest. Repeat to opposite side.

Note: If you are having difficulty balancing you can hold on to a wall or perform this stretch while lying on your side.

Lower Body Push (e.g., squat, lunge)



Abdominal Stretch



Description: On your stomach, place your hands beneath your shoulder and gently push up until you feel a stretch on your abdominal muscles. Do not fully lock out your elbows and hyperextend your back.
 Note: If you feel any discomfort in your low back while performing this exercise, you can reduce the tension by using the "propped on elbow" position.

Core



Calf Stretch



Description: In a push-up position, cross the left foot over the right. With the right knee straight, gently push the right heel toward the deck. You will feel a stretch in the right calf. Hold for 15 seconds. Repeat to opposite side.
 Note: Your body should remain in a straight line from your shoulders to your ankle to prevent low back injury and to strengthen your core muscles.

Plyometrics (e.g., jumping, bounding), ESD (e.g., running)

APPENDIX C

CONTRAINDICATED/HIGH-RISK EXERCISES AND STRETCHES

Contraindicated/High-Risk Exercises



Contraindicated Exercises	Rationale	Alternative Exercise
Burpees	Extension in the spine	
Donkey Kicks	Places excessive pressure, hyperextension of low back	Glute Bridge
Deep Knee Bends	Overstretches ligaments of the knee	Reverse Lunges
Deep Knee Lunges	Places excessive pressure on the forward knee	Reverse Lunges
Windmill	Places a tremendous amount of stress on the low back and supporting muscles	Toe Tap to the Front / Toe Tap to the Rear
Cherry Pickers	Places excessive pressure on the low back and supporting muscles	Bicep Curls Knee Blocks Steam Engines
Flutter Kicks	Place excessive pressure on low back and/or cervical spine	Bicycles/ Plank/Isometric hold
Hello Dollies	Places excessive pressure on the low back	Bicycles/Plank
Jack Knives	Places excessive pressure on the low back	Bicycles/Plank
8-Count Bodybuilders	Can lead to increased compression of the spine, potentially leading to stress fractures and/or muscles strains	Plank/Side Bridges/ Alternating Superman
Mountain Climbers	Increased compression of the spine during rotation.	Plank / Side Bridges
Ballistic Wood Chops	Incorporates ballistic/bouncing movements which are considered a contraindicated movement	Knee Blocks/Steam Engines/Standing Side Crunch

Star Bursts	Ballistic movement	Jumping Jacks/ Plyo-Jacks
Simultaneous arm and leg lifts on stomach or swimmers	Hyperextends the back and places pressure on spine	Alternate opposite arm, opposite leg/ Bird dog (alternate on hands and knees)
Hurdler's Stretch	Places excessive pressure on flexed knee joint	Modified Hurdler's Stretch
Standing Hamstring Stretch	Places excessive pressure on the low back	Modified Hurdler's Stretch
Quadriceps Stretch (sitting on knees) and lying back	Places excessive pressure on both knee joints	Standing Quadriceps Stretch / Lying Quadriceps Stretch
Swimmer's Arm Stretch (clasp hands behind back and lift)	Could lead to shoulder instability and predisposition to injury as well as places excessive pressure on low back	Standing Chest Stretch (using a doorway)
Lumbar Rolls	Can over compress the lumbar intervertebral disks	Toe Tap to the front/ Toe Tap to the rear
Sit and Reach (Hamstring)	Places excessive pressure on low back	Modified Hurdler's Stretch
Standing Toe Touch	Extreme unsupported lumbar flexion, increases pressure on back and small muscles	
Yoga Plow	Places excessive pressure on cervical intervertebral disks	Superman (alternating arms)
Neck Hyperextension and Neck Rolls	Can pinch anterior cervical nerves and over compress cervical intervertebral disks	Gently lower your chin to your chest (Do not perform neck circles)

Contraindicated Stretches	Rationale	Alternative Exercise
Chest Fling Backs	Involves ballistic, controlled movements	Standing Chest Stretch (using a doorway)
Wide Circle Sun Gods	Overstretches ligaments of the shoulder and could possibly damage shoulder cartilage	Pec Fly w/Overhead Raise

Contraindicated/High-Risk Stretches

It is best to completely avoid *contraindicated* positions or stretches. Although it is not guaranteed that an injury will result, the chances are significantly increased. There are safe and effective alternatives to contraindicated stretches. Even if you do not feel pain while performing a contraindicated stretch, damage may occur, which may show up later.

	
<p>This stretch may cause an individual to get dizzy (extreme hyperextension)</p>	<p>Deep squats that compromise form (e.g., neutral spine)</p>



Do not perform circular motions.



Avoid the knee extending to far beyond the toes

APPENDIX D

SAMPLE WORKOUTS

Operational Workout				
Pillar Prep				
Exercise	Reps	Tempo	Sets	Rest
90/90 with Arm Sweep	4/Each	3:3	1	----
Glute Bridge with Leg Lock	4/Each	2:2	1	----
Pillar Bridge with Hip Flexion	4/Each	2:2	1	----
Bent Over "W"	8	3:3	1	----
Movement Prep				
Exercise	Reps	Tempo	Sets	Rest
Banded Lateral Walks - Band Above Knees	15 Yds/Each	----	1	----
Reverse Lunge with Rotation	4/Each	----	1	----
Inverted Hamstring	4/Each	3:3	1	----
Bent Over "T" with Band	8	3:3	1	----
Drop to Base Pogo	3-5 Sec	----	2	----
Strength				
Circuit 1	Reps	Tempo	Sets	Rest
Rear Foot Elevated Split Squat - Loaded/Unloaded	10-12	3:3	2	----
Med Ball Underhand Toss	10-12	----	2	----
1/2 Kneeling Single Arm Press	10-12	2:2	2	----
Farmers Walk	20-30 Yds	----	2	----
Deadbug	10-12	3:3	2	1:00
Circuit 2				
Deadlift	10-12	3:3	2	----
Lateral Goblet Squat – Alternating	10-12	3:3	2	----
Inverted Row	10-12	2:2	2	----
Single Arm Bench Press	10-12	2:2	2	----
Bird Dog	10-12	3:3	2	1:00
Circuit 3				
Pillar Bridge with Lateral Pull Through	10-12	----	1	----
Bicep Curl to Overhead Press	10-12	2:2	1	----
1/2 Kneeling Rotation Slam with Med Ball	10-12	----	1	----
Leg Curl - Sliders or Stability Ball	10-12	3:3	1	----
Lat Pull Down to Tricep Extension	10-12	2:2	1	----
Toe Pull to Deep Squat	10-12	----	1	----
Energy System Development				
Exercise	Reps	Tempo	Sets	Rest
Reaction Drills	1	----	4	1:00
Linear Acceleration	1	----	4	1:00
Cone Drills (6-Cone)	1	----	4	1:00
Regeneration				
Exercise	Required Time	Tempo	Sets	Rest
Total Body Stretch (See Appendix C recommended static stretches)	8-10 Minutes	20 Sec/Each	1	----

Energy System Development

SAQ Drills (Get Up and Go) – 4 sets

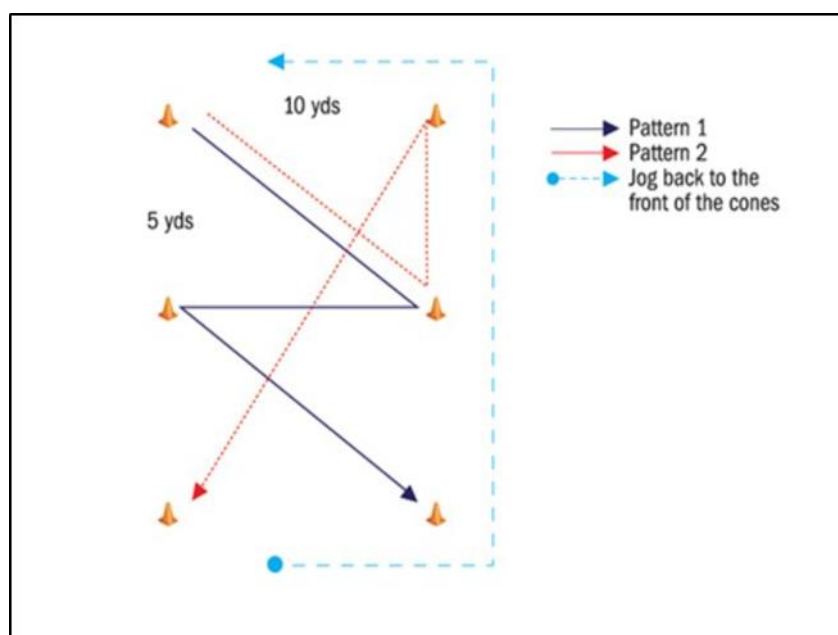
Position	Distance	Reps	Rest
Face Down/Head Forward	20 YDs	1	1-min
On Back/Head Forward – Roll Left	20 YDs	1	1-min
On Back/Head Forward – Roll Right	20 YDs	1	1-min
Face Down/Head Forward – Push up (x2)	20 YDs	1	1-min

Linear Acceleration – 4 sets

Intervals	Distance	Reps	Rest
20yds Easy – 20 yds moderate	40 YDs	1	1-min
20 yds Moderate – 20 yds Easy	40 YDs	1	1-min
10 yds Max – 30 yds Moderate	40 YDs	1	1-min
20 yds Max – 20 yds Moderate	40 YDs	1	1-min

Cone Drills (6-Cone) – 4 sets

Pattern	Reps	Rest
1	2	1-min
2	2	1-min



Endurance Workout				
Pillar Prep				
Exercise	Reps	Tempo	Sets	Rest
90/90 Stretch	4/Each	3:3	1	-----
Glute Bridge Marching	4/Each	2:2	1	-----
Plank with Leg Lift	4/Each	2:2	1	-----
Plank Rolling	4/Each	3:3	1	-----
Bent Over "Y"	8	3:3	1	-----
Movement prep				
Exercise	Reps	Tempo	Sets	Rest
Hip External Rotation with Bands	8/Each	3:3	1	-----
Banded Forward/Backward Walk - Bands Above Knees	15 Yds/Each	-----	1	-----
Inverted Hamstring to Leg Cradle	4/Each	3:3	1	-----
Reverse Lunge Elbow to Instep with Rotation	4/Each	-----	1	-----
Power Skip (Height)	15 Yds	-----	1	-----
Drop to Single Leg Balance to Base Pogo to 2 Inch Run	3-5 Sec	-----	2	-----
Plyos				
Exercise	Reps	Tempo	Sets	Rest
Single Leg Line Hop: Medial/Lateral, Forward/Backward	6/Leg	-----	2	1:30
45 Degree Bound (Focus: Landing Stabilization)	6	-----	2	1:30
Drop Squat to Squat Jump (Focus: Landing Stabilization)	6	-----	2	1:30
Standing Broad Jump (Focus: Landing Stabilization)	6	-----	2	1:30
With Partner, Med Ball Power Chest Pass Lying Down	6	-----	2	1:30
With Partner, Lateral Rotational Power Med Ball Toss	6	-----	2	1:30
ESD				
Exercise	Reps	Tempo	Sets	Rest
Row/Bike/Versa Climber (Machine-Based/Non-Impact)	200m or 30 Sec	RPE = 9/10	2	2:00
300 Yd Shuttle Run (25 Yds Down/Back)	1	RPE = 9/10	2	2:00
Regeneration				
Exercise	Required Time	Tempo	Sets	Rest
Total Body Self Myofascial Release (NOFFS SES Series)	20 Minutes	30-40 Sec/Each	1	-----
Total Body Stretch (See Appendix C recommended static stretches)	8-10 Minutes	20 Sec/Each	1	-----

Sandbag Workout				
Pillar Prep				
Exercise	Reps	Tempo	Sets	Rest
90/90 with Arm Sweep	4/Each	3:3	1	-----
Glute Bridge Marching	4/Each	2:2	1	-----
Quadruped Hip Circles	8/Each	2:2	1	-----
Lateral Pillar Bridge - Dynamic (Hip Touch)	8/Each	2:2	1	-----
Bent Over "T"	8	3:3	1	-----
Movement prep				
Exercise	Reps	Tempo	Sets	Rest
Hip External Rotation with Bands	8/Each	3:3	1	-----
Reverse Lunge with Rotation	4/Each	-----	1	-----
Inverted Hamstring	4/Each	3:3	1	-----
Lateral Squat – Alternating	4/Each	-----	1	-----
Walking Pillar Bridge (Inch Worm)	4	-----	1	-----
Drop to 2 Inch Run	3-5 Sec	-----	2	-----
Strength				
Exercise	Reps	Tempo	Sets	Rest
Squat to Over Head Press – Alternating	30 Sec	2:2	3	15 Sec
Single Arm Sandbag Carry	30 Sec	15 Sec/Arm	3	15 Sec
RDL to Bicep Curl	30 Sec	3:3	3	15 Sec
Rotational Lift - Sandbag Low (Knee Height) to High	30 Sec	2:2	3	15 Sec
Bent Over Row	30 Sec	2:2	3	15 Sec
Supine Single Leg Lowering - Sandbag Hold Over Chest	30 Sec	3:3	3	15 Sec
Push-Up - Staggered Hands (Option: Sandbag on Back)	30 Sec	2:2	3	15 Sec
ESD				
Exercise	Reps	Tempo	Sets	Rest
40 Yd - Sandbag (Across Shoulders) Walking Lunges	20 Yds Down/Back	RPE = 7/10	2	1:00
40 Yd - Sandbag Lateral Toss from Hip	20 Yds Down/Back	RPE = 7/10	2	1:00
20 Yd - Bear Crawl with Forward Pull Through	10 Yds Down/Back	RPE = 7/10	2	1:00
Regeneration				
Exercise	Required Time	Tempo	Sets	Rest
Total Body Self Myofascial Release (NOFFS SES Series)	20 Minutes	30-40 Sec/Each	1	-----
Total Body Stretch (See Appendix C recommended static stretches)	8-10 Minutes	20 Sec/Each	1	-----

APPENDIX E

IMPROVING PRT SCORES

Training Methods for Improving the 1.5 Mile Run		
Training Method	Benefit	Example
Long Slow Distance (LSD)	Builds aerobic base	3 mile or 30 min run at members own pace
Pace/Tempo	Train at and improve 1.5 mile race pace	To determine appropriate treadmill setting (mph), divide 90 by your desired 1.5 mile run time. Ex: For a 12:30 run time, divide 90 by 12.5 which equates to 7.2 mph setting on the treadmill.
Interval Sample 1: High Intensity Cardio Circuit*	Improves aerobic power and enhances anaerobic metabolism	<u>Step 1:</u> Jumping Jacks for 30 sec <u>Step 2:</u> Quick Feet/High Knees for 30 sec <u>Step 3:</u> Cross Country Skiing for 30 sec <u>Step 4:</u> Rest for 2 min <u>Step 5:</u> Push-Ups for 30 sec <u>Step 6:</u> Crunches for 30 sec <u>Step 7:</u> Glute Bridge or Plank hold for 30 sec <u>Step 8:</u> Rest for 2 min Repeat 3 times
* As member progresses, periodically increase the allotted time for each event (e.g., from 30 sec to 45 sec), decrease the amount of time for rest (e.g., from 2 min to 1 min), and/or increase the number of cycles completed (e.g., from 3 to 5 cycles).		
Interval Sample 2: "FEP for Five"		5 regular push-ups 5 crunches Plank position (count up to 5 using a military four count) Bridging (count up to 5 using a military four count) Superman (alternating arm with leg, not at same time)
Perform each exercise for 5 repetitions using a military four count. As member progresses, periodically increase the number of repetitions (e.g., 3 to 5) and/or the cycles completed (e.g., from 2 to 3).		
Repetition	Improves running speed, running economy (form), and anaerobic metabolism	Sprint 50 yards* at 50-60% max intensity Sprint 50 yards* at 60-70% max intensity Sprint 50 yards* at 70-80% max intensity Sprint 50 yards* at 80-100% max intensity
* As member progresses, periodically increase the sprint distance (e.g., from 50 to 75 yards) and/or increase the number of cycles completed (e.g., from 3 to 5).		
Training Methods for Improving Push-ups		
Training Method	Benefit	Example
Upper-body Strength Training	Improves upper-body strength and endurance	Bench Press* (1-3 sets of 8-12 reps) Shoulder Press* (1-3 sets of 8-12 reps) Tricep Extension* (1-3 sets of 8-12 reps)
* The amount of weight is determined by how many reps the member is able to complete using proper form. Optimal reps: 8-12. If the member is able to perform 12 or more reps, increase the weight in 5 pounds increments. If the member is only able to perform 8 or fewer reps, decrease the weight in 5 pound increments.		
Training Methods for Improving Forearm Plank		
Training Method	Benefit	Example
Core Strength Training	Improves abdominal, low back, and shoulder strength and endurance	Russian Twists* (2 sets of 15-25 reps) Pillar Bridge with Alternating Arm Lift* (2 sets of 8-12 on each side) Dynamic Lateral Pillar Bridge (R & L; 8-12 reps each side) Bicycle Crunch* (2 sets of 15-25 reps) Glute Bridge Marching* (2 sets of 8-12 reps)
* As member progresses, periodically increase the number of sets performed (e.g., from 2 to 3) and/or the allotted amount of time (e.g., from 30 sec to 45 sec).		

APPENDIX F

FEP MONTHLY TRACKING LOG

FEP Monthly Tracking Log

Week 1		Date:
	Activity Performed / Location	Hours
MON		
TUES		
WED		
THURS		
FRI		
Weekly Results: Wgt: P/U: PLANK: CARDIO:		
Week 2		Date:
	Activity Performed / Location	Hours
MON		
TUES		
WED		
THURS		
FRI		
Weekly Results: Wgt: P/U: PLANK: CARDIO:		
Week 3		Date:
	Activity Performed / Location	Hours
MON		
TUES		
WED		
THURS		
FRI		
Weekly Results: Wgt: P/U: PLANK: CARDIO:		
Week 4		Date:
	Activity Performed / Location	Hours
MON		
TUES		
WED		
THURS		
FRI		
Weekly Results: Wgt: P/U: PLANK: CARDIO:		
Week 5		Date:
	Activity Performed / Location	Hours
MON		
TUES		
WED		
THURS		
FRI		
Weekly Results: Wgt: P/U: PLANK: CARDIO:		
Monthly BCA Results: Hgt: Wgt: AC: Neck: Ab: Hips: BF%:		
Monthly PRT Results: P/U: PLANK: CARDIO:		

Member's Signature

Date

CFL/ACFL Signature

Date

APPENDIX G

GLOSSARY OF TERMS

Glossary of Terms

1. Ballistic Stretching. Forcing a limb into an extended range of motion including bouncing or jerking motions.
2. Cardiorespiratory. The ability of the circulatory (blood) and respiratory (lungs) systems to supply oxygen to the skeletal muscles during sustained physical activity.
3. Circuit Training. Combines high-intensity aerobic and resistance training that is designed to be easy to follow, target fat loss, muscle building, and cardiorespiratory fitness. A "circuit" is one completion of all exercises in the program. Time between exercises is short with rapid movement to the next exercise.
4. Concentric and Eccentric Contractions. Concentric is when the muscle shortens to lift a load. Eccentric is when the muscle fiber lengthens to lower a load. Strength training programs should include both movements.
5. Contraindicated Exercise. A movement that is potentially dangerous to the body. These exercises are not to be performed as a part of any command-led PT.
6. Core. The muscles that stabilize the body located in the abdominal region and lower back. Functional movements are highly dependent on the core, and lack of core development results in a predisposition to injury.
7. Dynamic Warm-up. A 5-10 min period designed to prepare the body for the demands of a work out or practice. These movements progress from low to high intensity and include all planes of motion.
8. Fartlek Training. This term is Swedish for "speed play." A less structured approach to interval training comprised of speed and fun. The session may be made up as you go along including jogging, running, and sprints.
9. FITT Principle. The FITT principle (Frequency, Intensity, Time, and Type) is the fundamental framework for designing physical activity programs. These four principles are applicable to exercising at low to moderate levels and are used to establish guidelines for both cardiorespiratory and resistance training.
10. FEP for Five. A Navy concept used to slowly introduce exercises whether to deconditioned members or new exercise programs that utilizes small repetitions (no more than 5 repetitions) within a set of 5 exercises.
11. Flexibility. This is the range of motion of a joint that may increase by stretching. Stretch after your workout when your muscles are warm and pliable.
12. Functional Movement. These are movement patterns used on a daily basis. Specific exercises can assist in preparing our body and preventing imbalances (e.g., plank is a functional movement that engages entire core vice crunches).

13. Interval Training. Training that involves bursts of high-intensity work. High-intensity work (near-maximum effort) for 3-5 minutes (may start off at 1 minute for FEP) is alternated with periods of rest or low-intensity activity. Work-to-rest ratio should be 1:1 so a 3 minute run should be followed by a 3 minute walk.
14. Isometric Exercise. This is a type of strength training where the contraction of the muscles occurs without any visible movement in the angle of the joint (vice concentric or eccentric). Isometrics are done in static positions (e.g., plank).
15. Long Slow Distance (LSD). Running slowly or running for a set amount of time or distance without regard to time.
16. Overload. Greater than normal stress on the body is required for training adaptations/improvements to be made. Increased stress can refer to additional weight (as in resistance training) or speed or distance (as in aerobic conditioning).
17. Pace/Tempo Training. Aerobic training at a intensity slightly higher than race pace. This can be accomplished by setting the treadmill at a desired PRT speed with focus on increasing duration at that speed. The benefits include improved race pace and running economy (form).
18. Progression. This is a periodically increase in training stimulus in order for training improvements to continue over time. The principle of progression states that there is an optimal level of overload and an optimal time frame for this overload to occur. Too much overload too soon can lead to injury and too little overload not often enough can lead to training plateaus.
19. Repetition Training. This is the most intense form of aerobic training. Work intervals are usually only 60-90 seconds separated by rest intervals of 5 minutes or more. Typical work-to-rest ratio is 1:5. Repetition training helps to improve running speed and running economy.
20. Static Stretching. These are techniques that gradually lengthen a muscle to an elongated position (to the point of discomfort). Stretches (e.g., hamstring stretch) are performed after the body is warmed up vice prior to beginning exercise.