

NAVAL SPECIAL WARFARE

# PHYSICAL TRAINING GUIDE

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DISCLAIMER: Preparation for this training can be equally strenuous. You should consult a physician before you begin any strenuous exercise program, such as the one described here, or any diet modification, especially if you have or suspect that you may have heart disease, high blood pressure, diabetes, or any other adverse medical conditions. If you feel faint or dizzy at any time while performing any portion of this training program, stop immediately and seek medical evaluation. The United States Government and any service member or civilian employed by the United States Government disclaims any liability, personal or professional, resulting from the misapplication of any training procedure, technique, or guidance described in this guide.

# Physical Training Guidelines

The *Naval Special Warfare Physical Training Guide* (NSW PTG) exists to provide guidance regarding physical preparation for NSW-NSO programs such as BUD/S or BCT. The PTG provides a specific program for preparing for the Physical Screening Test (PST) along with more general fitness advice to promote endurance, strength, and resistance to injury once a candidate has received a contract. This *Physical Training Guide Supplement* provides additional guidance for developing a strength program. Key points:

- Keep it simple
- Use proper technique (get coaching from qualified sources if necessary)
- Develop the whole body, especially the parts known to be vulnerable to injury

This illustrated guide provides details regarding which areas of the body should be targeted for training. There are examples of exercises that target these areas, but recognize this is not meant to be a definitive list and many other exercises may be used if they target the proper areas. For more detailed discussion of concepts such as sets, reps, frequency of training, split routines, etc. – please consult SEALSWCC.com:

<https://www.sealswcc.com/forums/forum/fitness/strength-training/149-strength-training-start-here>

Another excellent resource that includes a wide variety of exercises appropriate for this program is the Navy Operational Fueling & Fitness System (NOFFS):

<http://www.navyfitness.org/fitness/noffs/>



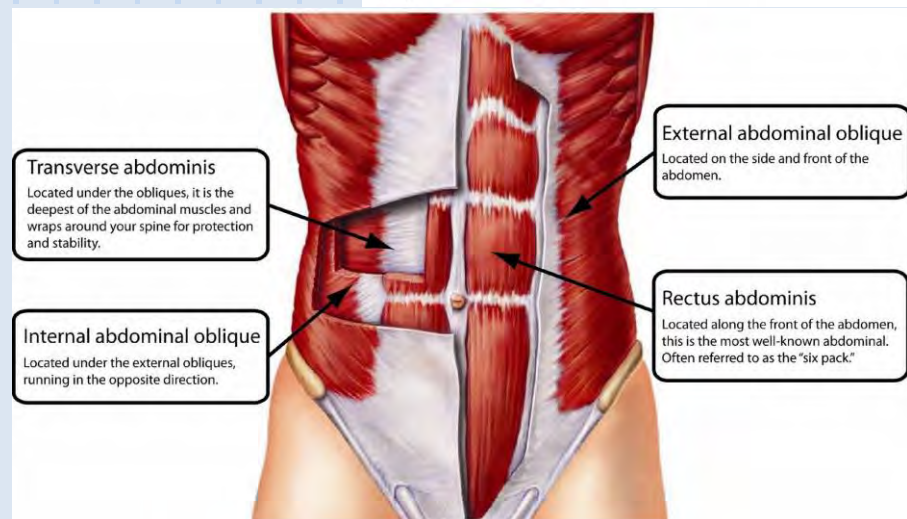
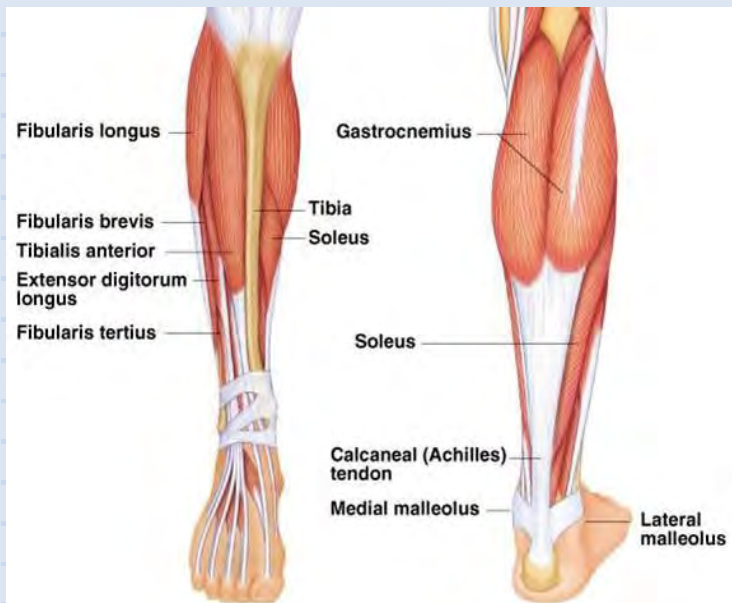
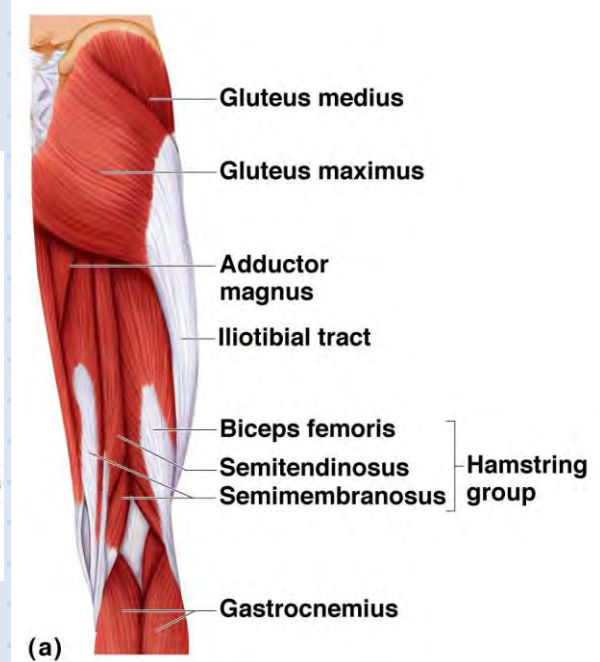
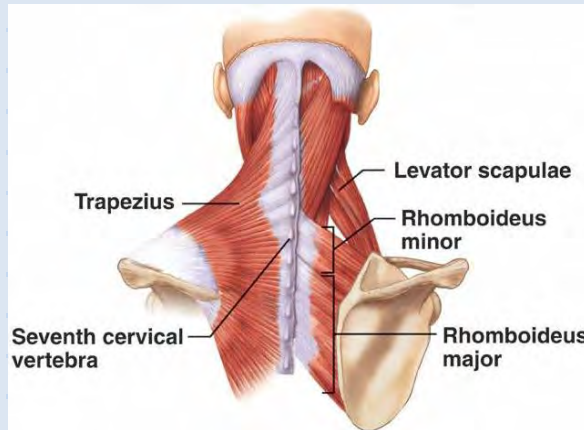
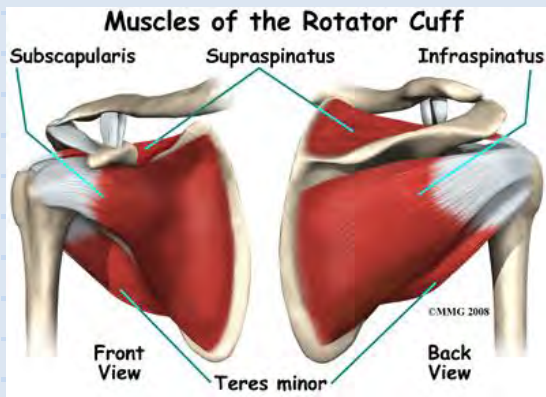
## How To Create a Workout:

- Choose exercises for the upper body, trunk, and lower body
- Choose exercises that create movement in all three planes
- Choose exercises that create balance (push-pull; right-left; front-back)
- Movements should be controlled through a full Range of Motion using proper technique
- Emphasize negative (eccentric) contractions
- Use multiple variations of each basic movement (e.g., outward push, downward pull)
- For the trunk, use a variety of static as well as dynamic exercises
- Be sure to include exercises for the vulnerable or underdeveloped areas
- Mix up the order of exercises (but alternate push-pull)

Movement Categories		Resistance Sources (Examples)	
		Body Weight	Other (External)
UPPER	1 Overhead Push ↑	pike push-ups	bar, DB, KB, machine (also lateral or front raise w/ DB)
	2 Overhead Pull ↓	pull-ups, rope climbs	pull-ups w/ vest, lat pulldown machine
	3 Chest Press →	push-ups, clapping push-ups	bar, DB, KB, machine, push-ups w/ vest (also incline/decline)
	4 Row Pull ←	horizontal pull-ups (on dip bars)	bar, DB, KB, machine
	5 Downward Push ↓	dips	triceps pushdown or kickback, weighted dips, ring dips
	6 Upward Pull ↑	chin-ups	upright row, curl, shrug
	7 Rotator Cuff ↻	n/a	DB, cable, elastic band
	8 Mid/lower traps	arm haulers	DB, cable, elastic band
TRUNK	9 Flexion	sit-ups, crunches, reverse crunches, knees-to-elbows, leg lever hold	inclined sit-up, BOSU, stability ball, machine
	10 Extension	Superman, front plank	RDL, platform, machine
	11 Rotation	leg wipers, Russian twist, scissors, bird dog, scorpion	cable wood chopper, medicine ball toss
	12 Lateral	side plank	single arm push or pull w/ DB or KB (hold torso stable)
LOWER	13 Hip Ext	vertical jumps, broad jumps	squat, leg press, dead lift, KB swing, box jump
	14 Hip Flex	sit-ups, flutter kicks, good morning darlings	elastic band, cable, machine
	15 Hip ABD	side plank, agility/COD, carioca, side hops (1- or 2-leg)	elastic band, cable, machine
	16 Knee Ext	vertical jumps, squats, lunges	machine, squat, leg press, weighted lunge, box jump, dead lift
	17 Knee Flex	bridges, manual resistance (provided by partner)	machine, elastic band, cable
	18 Ankle Ext	vertical jumps, broad jumps	weighted heel raise, box jump
	19 Ankle Flex	heel walks	elastic band, machine, weighted heel walk
	20 Foot ABD/ADD	balance, agility/COD, 1-leg side hops	elastic band, cable

# Problem Areas: Weak & Underdeveloped

*Rotator cuff, mid/lower traps, rhomboids, posterior & medial glutes, hamstrings, tibialis anterior, torso rotators*





## Push-Up, Side View

- **Category:** upper body push away
- Back straight; straight line from heels through knees, hips, shoulders
- At top: elbows locked out and shoulders fully protracted
- At bottom: chin, chest barely touch ground to achieve full ROM, but body weight remains on hands and feet
- Elbows move next to body, not flared out away from body



## Push-Up, Front View

- Hands directly under shoulders, not wider
- Fingers forward, not inward (to direct elbows next to body, not flared away)
- Feet close together (narrower than hips)



## Clapping Push-Up

- **Category:** upper body push away
- Same criteria as regular push-up regarding back, shoulder, hand positions
- Push upward explosively and clap hands firmly together
- As hands return to ground, be sure to immediately bend elbows to absorb impact



## Pike Push-Up, Side View

- **Category:** upper body push overhead
- Hips/trunk flexed (pike position)
- Create resistance to simulate an overhead press
- At top: elbows locked out and shoulders fully protracted
- At bottom: neck carefully extended; gently touch forehead to ground to create full ROM
- Attempt to keep elbows near body, not flared away



## Pike Push-Up, Front View

- Hands directly under shoulders, not wider
- Fingers forward, not inward (to direct elbows next to body, not flared away)
- Feet comfortably spaced for balance (not too wide)



## Pull-Up

- **Category: upper body pull overhead**
- Hands comfortably spaced, approximately shoulder width
- At bottom: arms at full extension and completely relaxed
- At top: chin entirely above bar
- Do not swing or kip



## Chin-Up

- **Category: upper body pull upward**
- Similar movement as a biceps curl
- Hands comfortably spaced, approximately shoulder width
- At bottom: arms at full extension and completely relaxed
- At top: chin entirely above bar
- Do not swing or kip



## Horizontal Pull-Up

- **Category: upper body pull towards**
- Hands comfortably spaced, approximately shoulder width
- Back should remain straight at all times (don't arch back or sit towards ground)
- At bottom: arms fully extended and relaxed
- At top: chest contacts bar while drawing shoulder blades back
- Place feet away from bar so body is approaching horizontal, not vertical
- A lower bar or elevated feet create a better effect





## Dip (Side View)

- **Category:** upper body push downward
- At bottom: armpits above hands, upper arm parallel to ground
- At top: arms straight with elbows locked out
- Keep head up and torso vertical at all times



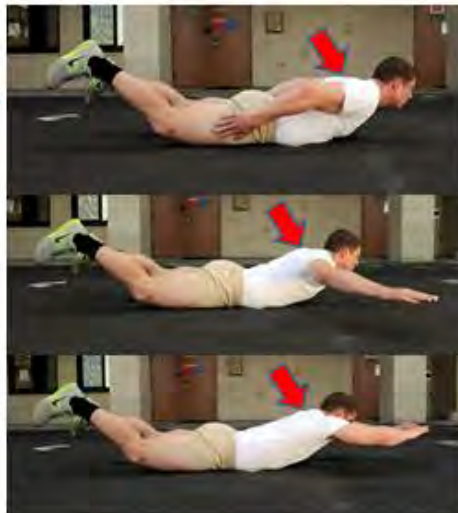
## Dip (Front View)

- Keep elbows over bars
- At top: shoulders depressed/head elevated as much as possible (see picture at lower right)



## Arm Hauler

- **Categories:** upper body posterior shoulder; torso static extension
- Lift chest and legs off ground
- Move arms back and forth from directly at sides to straight out in front of torso
- Sweep arms parallel to ground without touching to keep tension on posterior shoulders



## Front Plank

- **Category:** torso static extension
- Forearms comfortably placed to support body weight
- Shoulders protracted (pushed forward)
- Feet close together (no wider than hips)
- Keep back straight at all times
- Keep a straight line through heels, knees, hips, spine, and shoulders
- Do not let the buttocks push into the air or sag towards the ground



## Side Plank

- **Category:** torso static lateral flexion
- Forearm comfortably placed to support body weight
- Front view: hips off ground with midline straight from feet to neck
- Top view: line of chest/shoulders is perpendicular to ground
- Hips remain between feet and shoulders; do not let buttocks push out behind torso
- Right side plank mirrors the left side



## Side Plank (Advanced)

- **Categories:** torso static lateral flexion; lower body hip abduction/adduction
- Straight midline and perpendicular chest/shoulders (same as basic side plank)
- More challenging than basic side plank to stabilize midline, and also provides resistance to lateral and medial hip



## Leg Lever Hold

- **Category:** torso static flexion
- Legs straight and together, with feet 6-8" off ground (not higher)
- Pelvis in neutral position – keep small of back in contact with ground; think of drawing the navel down towards the ground
- Tailbone will be pointed away from ground and protected by buttocks, so it should not be necessary to place hands under buttocks
- Keep hands behind head with neck in comfortable position (up or down)



## Reverse Crunch

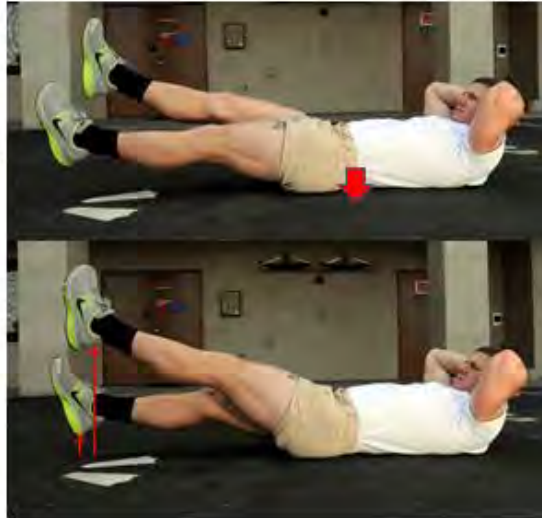
- **Category:** torso dynamic flexion
- Starting position is leg lever hold
- Lift hips off ground and bring knees in contact with elbows
- Do not move chest or torso; do not move elbows towards knees
- Return to leg lever hold position with legs straight and feet slightly off the ground
- Attempt to complete all reps without letting the feet touch the ground





## Flutter Kick

- Categories: torso static flexion; lower body hip flexion
- Starting position is leg lever hold
- Focus on keeping pelvis neutral with small of back against the ground
- Keeping legs straight, alternate raising and lowering right and left feet
- Do not let feet touch ground, and only raise feet 12-18" above ground – keep constant tension on hip flexors



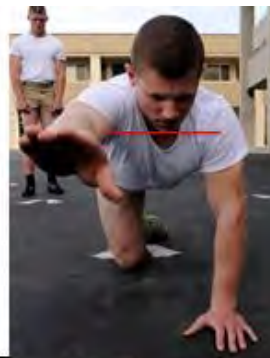
## Single Leg Bridge

- Categories: lower body partial hip extension & knee flexion (works glutes & hamstrings); torso static extension & rotation
- Support leg placed so tibia is perpendicular to ground
- Opposite leg straight, angled approximately 45 degrees
- Thighs together and parallel
- Drive hips/buttocks off ground
- Create a straight line through knee, hip, spine, and shoulder
- Keep hips even off ground (do not roll towards unsupported side)
- Arms across chest so that shoulders are base of support



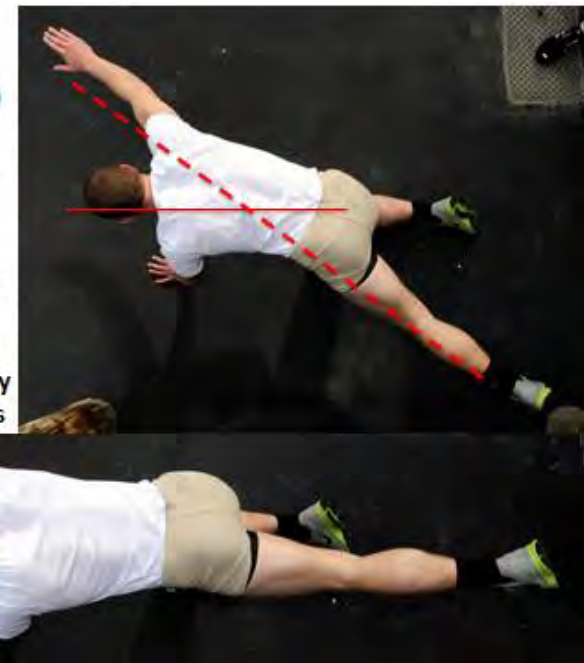
## Bird Dog

- Category: torso static rotation
- One arm and opposite leg raised parallel to ground
- Arm straight forward, leg straight back
- Create a long, flat profile
- Keep torso stable with other arm and leg



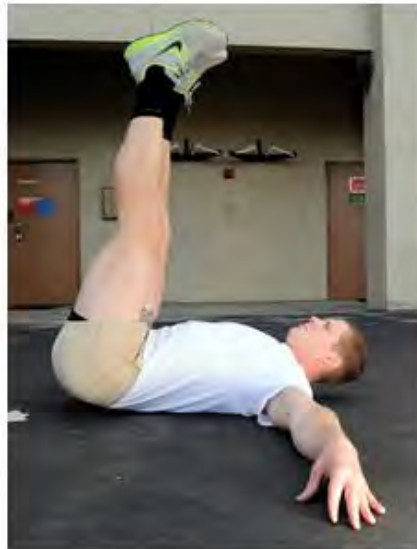
## Bird Dog (Advanced)

- Move arm and leg simultaneously back and forth in a 45 degree arc
- Keep arm and leg in a plane parallel to the ground
- Keep torso completely stable and motionless



## Wiper (Side View)

- **Category:** torso dynamic rotation
- Back and shoulder blades remain in contact with the ground at all times
- Legs straight and together at all times
- Hips at 90 degrees at all times



## Wiper (Front View)

- Use muscles of torso to move legs back and forth in a 180 degree arc
- Keep tempo controlled so the torso moves the legs (momentum of legs does not move torso)



## Sit-Ups

- **Category:** torso dynamic flexion
- Start with knees bent to 90 degrees, shoulder blades touching ground, arms folded across chest
- Smoothly curl trunk up starting with head, then shoulders, then middle back, then lower back, until elbows contact knees
- Smoothly return to starting position in opposite order: lower back touches first, then middle back, then shoulders, finally head



## Scorpion

- **Category:** torso dynamic rotation
- Start in prone position with legs together
- Rotate lower torso and hips to swing one leg across body, touching heel to ground
- Return to starting position and swing other leg across body to other side
- Do not raise chest from ground





## Superman

- **Category:** torso dynamic extension
- Start prone with legs together and arms extended above head
- Lift feet off ground while keeping legs straight
- Lift chest and arms off ground



- **Category:** hip, knee, ankle extension
- Begin with buttocks down, sitting back on heels, head and chest up
- Feet are hip width and aligned forward, and knees are above feet
- Jump upward explosively to maximum height
- Upon landing, immediately flex knees and use quads to eccentrically absorb impact
- Knees aligned between feet & hips; don't let knees bow out or knock together
- With control, return to starting position

## Vertical Jump



- **Category:** hip, knee, ankle extension
- Initial foot placement same as vertical jump
- Use arm swing and countermovement
- Jump forward explosively to maximum distance
- Upon landing, immediately flex knees and use quads to eccentrically absorb impact
- Land with control and balance, without shuffling feet or touching hands to ground
- After brief pause, jump again; repeat for desired number of reps

## Broad Jump



## Lateral Hop

- **Category:** lateral hip & ankle
- Begin with feet close together (hip width or less)
- Keeping feet together, jump as far as possible to one side
- Land with control, pause briefly, and jump back to the other side
- Repeat for desired number of reps





## Forward Hop (One Leg)

- Category: hip & knee extension; ankle extension & lateral
- Begin balanced on one foot
- Using one leg, jump forward as far as possible while landing secure on the same foot
- Pause briefly with balance before jumping again
- After completing desired reps, do same with other leg



## Lateral Hop (One Leg)

- Category: lateral hip & ankle
- Begin balanced on one foot
- Leap to the side as far as possible while landing secure on the opposite foot
- Pause briefly with balance before leaping back in the other direction
- Alternate leaping side to side from one foot to the other, maintaining balance when landing, for desired number of reps



## Manual Hamstring Curl

- Category: Knee Flexion
- Partner provides resistance in both directions (concentric and eccentric)
- Move through full ROM, with leg straight at the bottom and heel as close to buttocks as possible at top
- Keep toes pointed towards ground; keep both thighs together
- Partner adjusts resistance so leg moves up and down smoothly in a normal cadence without pausing
- Partner provides enough resistance to make effort difficult, but able to keep moving up and down



## Nordic Hamstring Curls

- Category: knee flexion (hamstrings)
- Feet secured
- Begin with torso erect; keep back straight at all times
- Fall forward, using hamstrings to slow descent as much as possible, using hands to absorb impact at very end
- Push off ground with hands, and use hamstrings to pull torso erect
- Goal is to maximize contribution of hamstrings and catch/push with hands as little as possible





## Single Leg Balance

- **Category:** lateral foot/ankle
- Fold arms across chest, draw heel of one foot up to knee of opposite leg
- Maintain balance on one leg with no movement for as long as possible
- Begin with eyes open. As balance improves (stable for 45 seconds or more), try to maintain balance with eyes closed
- Progress from hard floor to unstable surface



## Heel Walk

- **Category:** ankle flexion (dorsiflexion)
- Walk entirely on heels, with toes pulled upward (dorsiflexed) as far as possible
- Keep tension on *tibialis anterior*
- Walk with a medium tempo and take medium steps (not a speed walk)
- Carry weight (farmer's walk) if desired



## Box Jump

- **Category:** hip, knee, ankle extension
- Choose appropriate box height (challenging but attainable)
- Begin with feet under hips and toes forward
- Squat down (counter movement) before jumping upward explosively
- Land with both feet entirely on top of box. Pause briefly with legs fully extended
- Jump off backward, away from box



## Box Jump

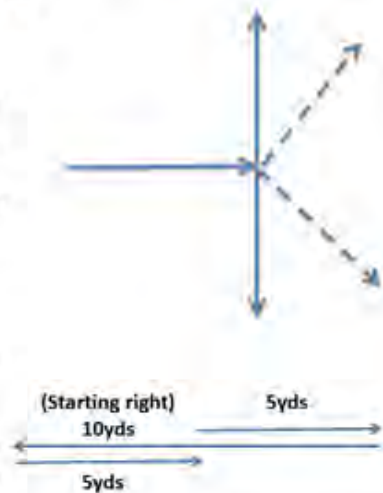
- **Landing technique** is critical: begin bending knees at first contact, bend knees sufficiently to absorb impact, and try to keep knees aligned between ankles and hips





## Sprints/Agility

- **Category:** hamstrings; lateral hip/ankle
- Warm up thoroughly. To avoid injury, do not perform sprints when fatigued
- All-out effort on each rep (top speed)
- Distance: approx. 40-60yds each rep
- Reps: approx. 4-6 total (or until unable to maintain top speed)
- Generous recovery between reps
- Use Change of Direction (COD): cut left or right, 45 or 90°; do 5-10-5yds (start left or start right; touch hand to ground when changing direction)
- Variations: start from prone position; sprint forward then backward; sprint forward then lateral shuffle or carioca left or right



## Russian Twist

- **Category:** torso rotation
- Lie back about 45° with knees bent
- Hold a weight (a plate or med ball) for extra resistance
- Rotate torso to one side and touch the ground; rotate to other side and touch the ground; alternate
- Keep hands directly in front of chest. Torso must rotate to bring hands to ground. Do not swing the arms from side to side without rotating torso



## Wood Chopper

- **Category:** torso rotation
- Stand next to a cable weight machine; grab handle with arms extended
- Keep legs, hips, arms still
- Rotate torso through full range of motion (approx. 180°); return to starting position
- Complete desired number of reps, then reverse position to rotate in the opposite direction
- Variations: move hands across, down, or up



## Med Ball Toss

- **Category:** torso rotation
- Stand with back to wall, holding a medicine ball
- Throw forcefully to one side; catch ball as it bounces back
- Complete desired reps before throwing to other side; or, alternate throws to each side





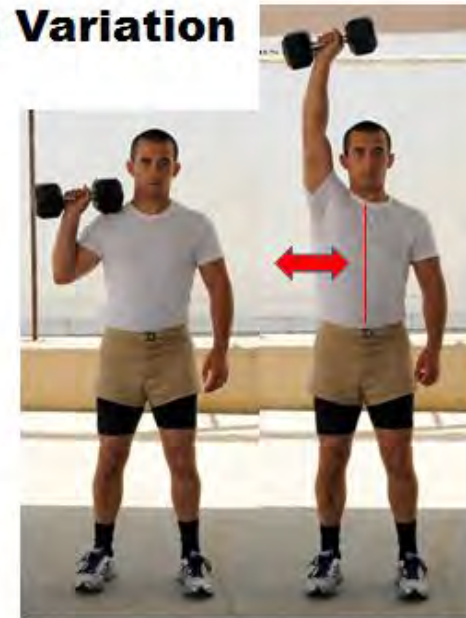
## Shoulder Press

- **Category:** overhead push
- Keep back stable (with support if necessary)
- Begin with dumbbells at shoulder level; push dumbbells directly overhead until arms are fully extended
- Pause briefly at top; with control, lower dumbbells back to shoulder level
- May perform while seated, kneeling, or standing – but keep back stable, without collapse of lumbar spine
- May use other resistance (such as barbell or kettle bells)



## Shoulder Press Variation

- **Category:** overhead push; torso lateral stability
- Use one dumbbell, one arm
- Stand with dumbbell at shoulder level
- Press dumbbell overhead until arm is fully extended; pause briefly before lowering with control back to shoulder level
- Keep torso erect and spine stable as weight is lifted; resist forces creating a lateral pull
- Keep opposite hand empty (no counter-weight)
- Complete reps with one arm; shift weight to other side and complete the same number of reps



## Biceps Curl

- **Category:** upward pull
- Keep torso stable in seated or standing position
- Begin with arms fully extended and curl dumbbell through full range of motion
- With control, lower dumbbell to full extension
- Do both arms together, or one arm at a time (maintain lateral stability of torso)
- May use other resistance (such as barbell or cable machine)



## Upright Row

- **Category:** upward pull
- Stand with arms straight, weights resting against thighs, and palms inward
- Draw weights up in a straight line, stopping just below chin
- Bring elbows just above shoulders
- Keep torso upright (don't lean forward)





## Shoulder External Rotation

- **Category:** rotator cuff
- Lie on side (on a bench or on the floor)
- Upper arm against torso and elbow at 90°
- Rotate forearm outward through full Range of Motion, pause briefly, return to starting position
- Do not let upper arm move away from torso; axis of rotation is through the humerus



## Chest Press

- **Category:** outward push
- Begin with back on bench, dumbbells against body at shoulder/upper chest level
- Feet on floor or end of bench; do not arch back during lift
- Press dumbbells away from chest in a natural path until arms are fully extended
- Pause briefly before lowering dumbbells with control to starting position
- Variation: incline or decline bench



## Y Exercise

- **Category:** scapular
- Stand with arms at sides and dumbbells in each hand
- Raise arms approx. 45° to the sides till hands are slightly above shoulders, thumbs downward in “empty can” position
- Pause briefly and lower hands with control



## Bent Over Row

- **Category:** pull towards
- May use bench for support
- Grab weight with arm fully extended
- Pull weight directly to armpit; pause briefly, then lower with control
- Weight may touch ground, but not rest there
- Complete desired reps, then switch to other arm
- May lift two weights together (or use barbell) if lower back is strong enough to keep torso stable, parallel to ground





## Hip Abduction

- **Category:** lateral hip
- Use an elastic band to provide resistance, by isolating one leg or doing a monster walk
- Use a cable machine to provide resistance
- Move smoothly through a complete ROM, with resistance in concentric as well as eccentric phases



## Dorsiflexion

- **Category:** ankle flexion
- Use an elastic band to provide resistance
- Use your own hands to provide resistance
- Move smoothly through a complete ROM, with resistance in concentric as well as eccentric phases
- Can also perform in/out (adduction/abduction) movements for foot



The Naval Special Warfare Physical Training Guide is designed to assist anyone who wants to improve his fitness in order to take and pass the Physical Screening Test (PST) and succeed at Basic Underwater Demolition/SEAL (BUD/S).

This guide provides information about the type of training required to properly prepare for the rigors of BUD/S, and it offers a tailorable 26-week training plan that should help a person with average fitness prepare for training and avoid injury.

sit-ups as they are necessary for success at BUD/S. Cross-training such as cycling, rowing and hiking is useful to rehabilitate an injury, to add variety or to supplement your basic training.

Work to improve your weakest areas. If you are a solid runner but a weak swimmer, don't spend all your time running just because you are good at it. Move out of your comfort zone, and spend enough time in the water to become a solid swimmer as well. ■

Most of your cardiovascular exercise should focus on running and swimming, and your strength and calisthenics training should be done to develop the necessary muscular strength and endurance for maximum pull-ups, push-ups and

### General Training Guidelines

Your workouts should be

- Planned and organized
- Gradual, steady and continual
- Consistent
- Specific
- Balanced

## WEEKLY WORKOUT SUMMARY

- 1 Long Slow Distance workout for both running and swimming
- 1 Continuous High Intensity workout for both running and swimming
- 1 Interval workout for both running and swimming
- 4-5 Calisthenics Routines
- 4-6 Strength Training Sessions – 2-3 each for upper and lower body
- 4-5 Core Exercise Routines
- Daily Flexibility Routines
- Specific injury prevention exercises as needed

### Long Slow Distance (LSD)

The intensity of LSD work is low to moderate, so your pace should feel relatively easy and relaxed. These workouts build endurance and provide relative recovery between more intense sessions. To determine the appropriate intensity, use the Talk Test. You should be able to talk comfortably in short sentences or phrases while training, drawing breath be-

tween phrases. If you can't speak, you are working too hard, and if you can speak continually, you are not working hard enough. For LSD workouts, focus more on duration than intensity. If you are exceptionally fit, you might perform 40-90 minutes of continuous movement in one session. A practical goal to prepare for BUD/S is to build up to comfortably running 5-6 miles or swimming 1-1.25 miles without stopping. ■

### Continuous High Intensity (CHI)

These sessions typically involve moving for 15-20 minutes without stopping at a pace approximately 90-95% of the maximal pace

you could hold for that duration. The workout should be very demanding but not totally exhausting. On a scale of 1-10, with 10 being the greatest effort possible, the workout



should feel like 8-9. If you are at a low fitness level, one repetition of 15-20 minutes is sufficient. As your fitness improves, 2-3 repetitions may be required. When performing more than one repetition, allow sufficient recovery between repetitions so you can maintain the

desired intensity of 90-95% of maximal pace. A reasonable recovery period is approximately half of the work time. During this time, keep moving at a low intensity – slow jog, brisk walk or easy stroke. Do not come to a complete stop. ■

### Interval (INT)

These sessions alternate short, intense work intervals with periods of recovery. The format consists of running 1/4-mile intervals or swimming 100-yard intervals, allowing a recovery period of 2-2 1/2 times the amount of time it takes to perform the work interval. Your intensity or pace should be slightly faster than the pace of your most recent 1.5-mile run or 500-yard swim. For running, your 1/4-mile interval pace should initially be about 4 seconds faster than your base pace, and for swimming, your 100-yard interval pace should initially be 2 seconds faster than your base. For example, if you recently completed

a 1.5-mile run in 10:30 – 1/4 mile base pace of 1:45 – your interval training pace should be about 1:41. If you completed a 500-yard swim in 10:30 – 100-yard base pace of 2:06 – intervals should be approximately 2:04.

Begin your interval workouts with 4 intervals per session, and build progressively toward completing 10 intervals. Do not run or swim more than 10 intervals during an interval session. When you can complete 10 intervals in the prescribed times, work on gradually performing the intervals a little faster each week. Work on consistency, trying to keep little variation between your fastest and slowest interval and pacing

RUN			SWIM		
If your current pace is	Then your workout is		If your current pace is	Then your workout is	
	1/4-mile repeat time	recovery time		100-yard repeat time	recovery time
8:00-8:30	1:16-1:21	2:32-3:23	8:00-8:30	1:34-1:40	3:08-4:10
8:30-9:00	1:21-1:26	2:42-3:35	8:30-9:00	1:40-1:46	3:20-4:25
9:00-9:30	1:26-1:31	2:52-3:48	9:00-9:30	1:46-1:52	3:32-4:40
9:30-10:00	1:31-1:36	3:02-4:00	9:30-10:00	1:52-1:58	3:44-4:55
10:00-10:30	1:36-1:41	3:12-4:13	10:00-10:30	1:58-2:04	3:56-5:10
10:30-11:00	1:41-1:46	3:22-4:25	10:30-11:00	2:04-2:10	4:08-5:25
11:00-11:30	1:46-1:51	3:32-4:38	11:00-11:30	2:10-2:16	4:20-5:40
11:30-12:00	1:51-1:56	3:42-4:50	11:30-12:00	2:16-2:22	4:32-5:55
12:00-12:30	1:56-2:01	3:52-5:03	12:00-12:30	2:22-2:28	4:44-6:10
12:30-13:00	2:01-2:06	4:02-5:15	12:30-13:00	2:28-2:34	4:56-6:25
13:00-13:30	2:06-2:11	4:12-5:28	13:00-13:30	2:34-2:40	5:08-6:40
13:30-14:00	2:11-2:16	4:22-5:40	13:30-14:00	2:40-2:46	5:20-6:55
14:00-14:30	2:16-2:21	4:32-5:53	14:00-14:30	2:46-2:52	5:32-7:10
14:30-15:00	2:21-2:26	4:42-6:05	14:30-15:00	2:52-2:58	5:44-7:25
15:00-15:30	2:26-2:31	4:52-6:18	15:00-15:30	2:58-3:04	5:56-7:40
15:30-16:00	2:31-2:36	5:02-6:30	15:30-16:00	3:04-3:10	6:08-7:55

Table 1 Interval Paces

Table 1 provides appropriate paces and recovery times for interval workouts.

yourself to be fastest at the end of the workout. Every 4th or 5th week, it may be beneficial to increase your intensity using shorter, more frequent intervals. For example, 16-20 x 220-yard running intervals or 16-20 x 50-yard swimming intervals.

## Calisthenics

During BUD/S and for the PST, you will be required to perform numerous push-ups, sit-ups and pull-ups. You should prepare specifically for these exercises. Using proper technique, perform sets of push-ups, sit-ups and pull-ups 4-5 times per week, resting 1-2 minutes between sets. Though the PST requires the exercises to be performed as rapidly as possible, you should perform most of your training exercises in a slow and controlled manner. The negative or downward portion should take at least twice as long as the positive or upward portion. Approximately once per week, perform a max set (maximal number of consecutive repetitions) to assess your progress.

Here are descriptions of each exercise as they must be performed during the PST. While training, you may occasionally do alternate versions for variety and additional fitness adaptations.

### Push-up

- Begin in the up or front-leaning rest position, with feet together and palms on floor directly beneath or slightly wider than shoulders.
- Back, buttocks and legs should remain straight from head to heels at all times. Palms and toes remain in contact with the floor.
- Lower the entire body as a single unit by bending the elbows until the arms form right angles, then return to the starting position by extending the elbows, raising the body as a single unit until the arms are straight.

Allow enough recovery time to maintain the proper work intensity, without taking excessive time or wasting time. To promote faster, more complete recovery, use some active recovery, such as brisk walking, easy stroking or slow jogging for part of the time between intervals. ■

**Variations** Use caution with any push-up variation, since placing the hands in any position other than beneath the shoulders may create painful stress on the elbows.

- Include wide, narrow (triceps) and dive bomber
- Lift one foot off the floor
- Place feet on a raised surface slightly higher than the hands

### Sit-up

- Begin by lying flat on floor with knees bent and heels approximately 10 inches from buttocks.
- Arms should be folded across the chest with hands touching the upper chest or shoulders. The feet may be stabilized if desired.
- Curl the body up, touching the elbows to the thighs just below the knees, keeping the hands in contact with the chest or shoulders.
- After touching elbows to thighs, lie back till the shoulder blades touch the floor.

### Variations

- With fingers placed loosely behind neck (don't pull on neck), curl the trunk up and rotate so the right elbow contacts the left knee; lower trunk to floor and bring left elbow up to right knee; continue alternating rotations from right to left.
- Keeping shoulders on the floor and knees bent, alternate drawing each knee up to the opposite elbow. Return each leg so the foot rests on the floor while the other knee is drawn up.
- With arms across chest or fingers behind neck, keeping the knees bent, lift the legs



and hips off the floor drawing the knees towards the shoulders. After the abdominals have been fully contracted, lower the hips and legs until the feet touch the floor.

*Note: for all abdominal exercises, keep the pelvis neutral and the lower back pressed to the floor to avoid putting stress on the lumbar spine.*

**Pull-up**

- Begin suspended from the bar in a dead hang with arms and shoulders fully extended, palms shoulder width apart and pronated (overhand grip, facing away).
- Pull body up until chin is even with or

above the top of the bar.

- Legs may be crossed or uncrossed as desired, but no kipping or jerking motions allowed.
- Lower the body in a controlled fashion until arms and shoulders are fully extended.

**Variations**

- Narrow or wide grip
- Supinated grip with palms toward the body to more completely isolate the biceps
- Hang from bar with hands adjacent and on opposite sides of the bar, palms facing inward in opposite directions, and alternately pull the right and left shoulders up to the bar (also called the mountain climber or commando pull-up) ■

<b>PUSH-UPS &amp; SIT-UPS</b>				<b>PULL-UPS</b>			
<b>If your max is</b>	<b>Then your workout is</b>			<b>If your max is</b>	<b>Then your workout is</b>		
	<b>Sets</b>	<b>Reps</b>	<b>Total</b>		<b>Sets</b>	<b>Reps</b>	<b>Total</b>
<40	5-6	10-15	50-90	<6	5-6	2-3	10-18
40-60	4-5	15-20	60-100	6-9	4-5	4-5	16-25
60-80	4-5	20-25	80-125	10-12	4-5	5-6	20-30
80-100	3-4	30-40	90-160	13-15	3-4	8-10	24-40
>100	3-4	40-50	120-200	>15	3-4	10-12	30-48

Table 2 Push-up, Sit-up, Pull-up Progression

*Table 2 provides specific training recommendations to improve your maximum number of push-ups, sit-ups and pull-ups.*

**Strength Training/Weight Lifting**

Muscular strength is necessary to enhance performance on the PST and increase the likelihood of success at BUD/S. It is important to gain strength properly to avoid injury.

There are many different training protocols for building strength and numerous methods of providing adequate resistance, including free weights, machines and body weight. For the purposes of this training, generally perform a single set of 8-12 repetitions (occasionally 4-6 reps or 15-20 reps) of various exercises that target major muscle groups.

You can occasionally perform a second

set to provide additional training stimulus, but in most cases one set is sufficient to produce significant increases in strength. Perform a single set using a weight that cannot be lifted more than 8-12 times giving maximal effort and using proper technique. Generally perform 8-12 exercises per session.

Move from one exercise to the next quickly, only resting the amount of time it takes to set up the proper weight at the next station. This promotes overall intensity and some cardio-respiratory adaptations. Use a split routine of upper body and lower body exercises on alternate days.

To the right is a list of exercises you might incorporate into your strength program. This list is not definitive, and individuals may create personalized routines based on equipment availability and individual preferences. Alternate a variety of exercises that involve pushing (extension) with pulling (flexion) and target several major muscle groups. Avoid exercises that require high levels of skill unless you are under the supervision of a qualified coach.

### Core Exercises

It is important to develop the strength **and endurance** of core muscles in the abdominal and spinal regions. This will improve overall body balance and alignment, improve stability and reduce injury. Sit-ups and push-ups, which should be performed regularly in preparation for BUD/S, are important core exercises. Additional core exercises include the bridge, plank, and bird dog.

#### Bridge

- Lie on back with knees bent and feet about ten inches from buttocks.
- Keep arms at sides or folded across the chest and keep the pelvis neutral.
- Raise the hips off the floor, creating a straight line between the knees, hips and shoulders.
- Lift the right foot off the floor and extend the leg until it is straight and creates a line from the shoulder through the hip, knee and foot.
- Meanwhile, support the body's weight by statically contracting the glutes and hamstring of the left leg. Make sure to keep the pelvis neutral and horizontal; don't let it dip toward the unsupported side.
- Hold the contraction for 3-4 seconds before lowering the pelvis to the floor with both feet near the buttocks in the original starting position.
- Lift the left foot off the floor and extend the leg while supporting the body's weight with the right leg in the same manner for 3-4 seconds.
- Continue to alternate between legs.

#### Upper Body Exercises

Lat pull-downs, shoulder (military) press, biceps curl, bench press or incline press, seated row pull, deltoid lateral raise (raise arms parallel to the ground but no higher), upright row, triceps extension or dips.

#### Lower Body Exercises

Lunges, leg curl, back hyperextension, dead lifts, leg press or squats, and heel raises. ■

#### Plank

- Lie face down on floor with legs straight and feet together, place forearms on floor with elbows directly below shoulders, then raise body off the floor so weight is supported by toes and forearms.
- Hold body in this position by statically contracting the core muscles, maintaining a straight line from heels to shoulders.

##### Variations

- Lift each arm and leg off the floor one at a time in turn, holding each position for several seconds before moving to the next position. Make sure the torso remains stable.
- Hold one arm and the opposite leg off the floor simultaneously.

#### Side Plank

- Lie on one side supporting body weight on one forearm with elbow below shoulder and resting the other arm along the side of the body.
- Don't let the hips sag towards the floor. Hold the spine and legs in a straight line by statically contracting the core muscles.
- Hold for desired length of time and switch to the other side.

##### Variations

- Maintain core contraction while lifting the top leg off the floor by abducting the hip.
- Raise the body higher off the floor by extending the support arm completely straight and supporting the weight with one hand, meanwhile extending the opposite arm



straight above the body.

### Bird Dog

- Begin on hands and knees, with hands directly below shoulders and head & neck aligned with back.
- Raise the right arm until it is fully extended and parallel to the floor. Simultaneously raise the left leg until it is fully extended. The arm, leg and back should all be in the same horizontal plane.
- Keep the torso stable; do not let the hip drop on the unsupported side.
- Hold for 3-4 seconds, then lower the upraised arm and leg to the starting position, and raise the opposite arm and leg to the same extended positions.

### Superman

- Lie face down on floor with legs straight, feet together and arms straight and extended overhead.
- Keeping arms and legs straight, lift both hands and both feet several inches off the floor and hold for 3-4 seconds.
- Relax for 1-2 seconds and repeat.

#### Variations

- Keeping arms and legs straight, lift one hand and the opposite foot several inches off the floor and hold for 3-4 seconds. Return to starting position and simultaneously lift the other

hand and foot. Continue to alternate lifting opposite hands and feet.

### Wipers

- Lie on your back with legs extended straight and together, and arms outstretched away from the body.
- Lift the legs together till they are perpendicular to the ground (hips flexed to 90 degrees). Keeping the hips flexed to 90 degrees, rotate the lower torso and pelvis to one side so the legs contact the ground.
- Rotate the lower torso and pelvis through a 180 degree arc till the legs contact the ground on the other side. Swing the legs back and forth through a 180 degree arc (like a windshield wiper). Each arc counts as one rep.
- Keep the upper back, both arms and shoulder blades in contact with the ground at all times.

*Note: Effective core training is as much about learning to activate the lesser-used muscles as it is about increasing their strength. You should activate the transverse abdominis during each session. You can feel this muscle when you cough, and one technique to activate it during core exercises is to cough before performing a core exercise and to make sure you feel this muscle contracting during the exercise. ■*

EXERCISE	WEEK				
	1-6	7-11	12-16	17-21	22-26
Bridge	2 x 20 reps (alternating)	2 x 25 reps (alternating)	3 x 20 reps (alternating)	3 x 25 reps (alternating)	3 x 30 reps (alternating)
Plank	2 x 30 sec	2 x 45 sec	3 x 40 sec	3 x 50 sec	3 x 60 sec
Side Plank (each side)	2 x 30 sec	2 x 40 sec	2 x 45 sec	2 x 50 sec	2 x 60 sec
Bird Dog	2 x 20 reps (alternating)	2 x 25 reps (alternating)	3 x 20 reps (alternating)	3 x 25 reps (alternating)	3 x 30 reps (alternating)
Superman	2 x 10 reps	3 x 8 reps	2 x 12 reps	3 x 10 reps	3 x 12 reps
Wipers	2 x 20 reps	2 x 25 reps	3 x 20 reps	3 x 25 reps	3 x 30 reps

Table 3 Core exercise Progression

**Table 3** is an example of how training might be structured. Work up to being able to complete the sets and reps listed in each time period.

## Flexibility

Flexibility requirements vary depending on the activity and the person, but you should devote some time to stretching to maintaining

or enhancing flexibility. Perform stretching exercises after running and swimming workouts, while muscle and connective tissue temperature is still elevated. ■

## 26-WEEK TRAINING PROGRAM

**Table 4** shows how to combine all the workouts contained in this guide into a 26-week training program. This schedule of cardio and strength activities and distance targets for running and swimming over a 26 week period will help prepare you for BUD/S and the PST.

Week	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
	Cardio	Strength	Cardio	Strength	Cardio	Strength	Cardio	Strength	Cardio	Strength	Cardio	Strength
	Run LSD (miles)	Upper/Core	Swim CHI (min)	Lower/Push-Sit-Pull	Run INT (reps)	Core/ Push-Sit-Pull	Swim LSD (yards)	Core/ Push-Sit-Pull	Run CHI (min)	Upper/Core	Swim INT (reps)	Lower/Push-Sit-Pull
1	3	X	15	X	4	X	1,000	X	15	X	4	X
2	3.25	X	15	X	4	X	1,100	X	15	X	4	X
3	3.5	X	16	X	5	X	1,200	X	16	X	5	X
4	3.75	X	16	X	5	X	1,300	X	16	X	5	X
5	4	X	17	X	6	X	1,400	X	17	X	6	X
6	4.25	X	17	X	6	X	1,500	X	17	X	6	X
7	4.5	X	18	X	7	X	1,600	X	18	X	7	X
8	4.75	X	18	X	7	X	1,700	X	18	X	7	X
9	5	X	19	X	8	X	1,800	X	19	X	8	X
10	5.25	X	19	X	8	X	1,900	X	19	X	8	X
11	5.5	X	20	X	9	X	2,000	X	20	X	9	X
12	5.75	X	20	X	9	X	2,100	X	20	X	9	X
13	6	X	2 x 12	X	10	X	2,200	X	2 x 12	X	10	X
14	6.25	X	2 x 12	X	10	X	2,300	X	2 x 12	X	10	X
15	6.5	X	2 x 12	X	10	X	2,400	X	2 x 12	X	10	X
16	6.75	X	2 x 14	X	10	X	2,500	X	2 x 14	X	10	X
17	7	X	2 x 14	X	10	X	2,600	X	2 x 14	X	10	X
18	7.25	X	2 x 14	X	10	X	2,700	X	2 x 14	X	10	X
19	7.5	X	2 x 16	X	10	X	2,800	X	2 x 16	X	10	X
20	7.75	X	2 x 16	X	10	X	2,900	X	2 x 16	X	10	X
21	8	X	2 x 16	X	10	X	3,000	X	2 x 16	X	10	X
22	8.25	X	2 x 18	X	10	X	3,100	X	2 x 18	X	10	X
23	8.5	X	2 x 18	X	10	X	3,200	X	2 x 18	X	10	X
24	8.75	X	2 x 18	X	10	X	3,300	X	2 x 18	X	10	X
25	9	X	2 x 20	X	10	X	3,400	X	2 x 20	X	10	X
26	9.25	X	2 x 20	X	10	X	3,500	X	2 x 20	X	10	X

Table 4 26-Week Training Program

Perform **daily** stretching/flexibility exercises following cardio training.



## Warm-up & Cool-Down

The more intense your training session is, the longer the warm-up and cool-down periods should be. Warm-ups for LSD sessions may involve 5-10 minutes of easy jogging or paddling while gradually building the intensity to a comfortable level for beginning the workout. As the workout begins, you may continue to build intensity so that you comfortably finish the workout at a faster pace than you started. For CHI and INT workouts, you should warm up for 10-15 minutes **or more**.

Gradually build intensity from an easy jog or stroke for several minutes. Then add 4-5 high-intensity bursts lasting from 15 to 30 seconds. The warm-up should elevate your heart rate substantially, increase your breathing rate and activate a sweat response. A proper cool-down following LSD workouts may involve 2-3 minutes of easy jogging or stroking followed by 2-3 minutes of brisk walking. Time periods for CHI or INT cool-downs should be extended until you are breathing easily and your heart rate is close to its normal resting value. ■

## BUILD YOUR OWN SCHEDULE

### Weekly Schedule

**Table 5** shows how a weekly workout schedule can be organized to prepare for the PST and BUD/S. An AM-PM training format such as lifting and core work in the morning and running or swimming plus stretching in the evening is best. It allows good recovery and a high quality of work for each session. However, if necessary, all training can be performed in one extended block of time. If performing several activities in one session, perform your weakest activity first while you are still fresh. Avoid over-exercising a body part with too many exercises or activities in the same day. Note that the schedule does not place upper body strength training and swimming or lower body strength training and running on the same days.

Since there is some overlap between the demands of weight lifting, calisthenics and core exercises, do not combine more than two of these routines on a given day. ■

**Y**ou can do some calisthenics and core training on the same day as strength training, but don't exhaust yourself with all routines on the same day. If you are already doing higher LSD mileage, you may begin at a later week in the program or add a second LSD session (see **Table 7**). You should always begin CHI and INT portions of the program at Week 1.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Run	LSD		INT		CHI	
Swim		CHI		LSD		INT
Lift	Upper	Lower			Upper	Lower
Calisthenics		X	X	X		X
Core	X		X	X	X	
Flexibility	X	X	X	X	X	X

Table 5 Weekly Training Schedule

## Progression

Gradually build up your workload from a safe, manageable level to the highest level of fitness possible in the time you have available before you take the PST or attend BUD/S.

**Table 6** shows how to increase your work-

load across the different training bands over 26 weeks. If you are at a high level of fitness, you may choose to begin with a higher training volume such as a 5-mile run (as indicated in Week 9) rather than a 3-mile run. ■

Week	LSD		CHI	INT
	Run (miles)	Swim (yards)	Run/Swim (mintutes)	Run/Swim (reps)
0	1.5 (timed)	500 (timed)		
1	3	1,000	15	4
2	3.25	1,100	15	4
3	3.5	1,200	16	5
4	3.75	1,300	16	5
5	4	1,400	17	6
6	4.25	1,500	17	6
7	4.5	1,600	18	7
8	4.75	1,700	18	7
9	5	1,800	19	8
10	5.2	1,900	19	8
11	5.5	2,000	20	9
12	5.75	2,100	20	9
13	6	2,200	2 x 12	10
14	6.25	2,300	2 x 12	10
15	6.5	2,400	2 x 12	10
16	6.75	2,500	2 x 14	10
17	7	2,600	2 x 14	10
18	7.25	2,700	2 x 14	10
19	7.5	2,800	2 x 16	10
20	7.75	2,900	2 x 16	10
21	8	3,000	2 x 16	10
22	8.25	3,100	2 x 18	10
23	8.5	3,200	2 x 18	10
24	8.75	3,300	2 x 18	10
25	9	3,400	2 x 20	10
26	9.25	3,500	2 x 20	10

Table 6 Workout Progression

## More Time to Prepare

Beyond 26 weeks, do not increase INT or CHI distances. Rather, focus on gradually and progressively increasing intensity for the set distances of these workouts. You can also increase your LSD work by performing longer sessions and/or increasing the number of ses-

sions per week as shown in **Table 7**. However, beyond 9-10 miles of running per week and 3,500-4,000 yards of swimming per week, the improvements in fitness become proportionately smaller relative to the time invested. If you perform large amounts of LSD work, be sure to keep the pace relatively relaxed.



As your fitness improves, occasionally incorporate a longer session of activity (2-3 hours) such as hiking, canoeing, road cycling or mountain biking at a comfortable but steady pace to improve physical and

mental endurance. Continue to progressively increase your muscular strength and endurance using the calisthenics, strength and core routines already established. ■

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Run	LSD 8 miles		INT 10 x 1/4 mile	LSD 4 miles	CHI 2 x 20 minutes	
Swim	LSD 1,500 yards	CHI 2 x 20 minutes		LSD 3,000 yards		INT 10 x 100 yards
Lift	Upper	Lower			Upper	Lower
Calisthenics		X	X	X		X
Core	X		X	X	X	
Flexibility	X	X	X	X	X	X

Table 7 Weekly Training Schedule (Increased LSD Sessions)

### Strong in one thing; weak in another

If you have unbalanced fitness – you are clearly slower in either running or swimming – you should devote a greater percentage of your training to improve the slower activity. SEAL candidates with a swim time slower than 10:35 or a run time slower than 10:38,

while performing moderately or well in the other activity, should focus more attention on the slower event. Table 8 is an example of a schedule weighted toward improving a slower swimmer. A strong swimmer with limited running ability would reverse the schedule. ■

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Run		INT			LSD	
Swim	LSD		CHI	LSD		INT
Lift		Upper	Lower		Upper	Lower
Calisthenics	X		X	X		X
Core	X	X		X	X	
Flexibility	X	X	X	X	X	X

Table 8 Weekly Training Schedule For A Slow Swimmer

**K**ee a record of your training. You will see your progress and have a history to show to a mentor or coach. A tangible record of your performances allows you to establish specific goals and can increase your motivation to train. Training records make it easier to avoid training mistakes or recognize potential problems before they become serious. Record basic information such as time and distance for running and swimming workouts (including individual times for each interval during interval workouts); number of reps of calisthenics and core exercises; and details of strength workouts (exercises, sets, reps, and amount of weight lifted). You may also choose to record more detailed information such as notes about your diet, the environment (temperature, humidity, wind), psychological state of mind (relaxed, anxious, energized, listless), amount of sleep, persistent soreness or any other variable that might affect your training. ■