

# Building the Soldier Athlete

Profile Physical Training Supplement Mobility Strength Endurance

# Building the Soldier Athlete: A Profile Physical Training Supplement

#### Contributions

Over the years, many outstanding leaders from across the Army have contributed to this body of work. While it is impossible to list all of the names individually, we would like to extend a special thanks to CPT Christine Iverson and LTC Jean Anderson who spent countless time researching, developing and formatting this product. We would also like to thank the Soldiers and Civilians in the US Army Medical Specialist Corps, The Office of The Surgeon General's Proponency Office for Rehabilitation and Reintegration, US Army Research Institute of Environmental Medicine, the Center for Health Promotion and Preventive Medicine, the US Army Physical Fitness School, US Army Medical Department Center & School, US Army Training and Doctrine Command, the Infantry Branch and US Special Operation Command.

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# Profile PT: The Basics

The focus of physical fitness training for Soldiers on a temporary profile is to maintain fitness and recover from injury as quickly as possible. Soldiers on a permanent profile focus on maintaining fitness while keeping the injured body part as functional as possible. A balance between executing a challenging exercise program and protecting the Soldier's healing process is required to achieve these fitness goals.

This booklet is a supplement to the handbook "Building the Soldier Athlete" and is designed to be a guide for leaders to use to develop challenging fitness programs that not only maintain fitness but also speed recovery.

Consult with the case manager or medical provider caring for the Soldier if there are any questions. The local physical therapist or occupational therapist is another great resource for information on appropriate fitness programs for injured Soldiers.

This supplemental guide breaks profiled Soldiers into groups to facilitate organized PT. It is still important to read the profile and apply any specific limitations.

This is particularly important for patients with traumatic brain injuries, spinal cord injuries, and polytrauma. These patients may experience memory problems, headaches, irritability, confusion, and dizziness. They may also need to start out at a lower level of cardiovascular training for a shorter amount of time.

# Idea Book: Profile Groups

- Break profiled Soldiers into the 6 groups listed below. It may be best in your unit to do this at the battalion level.
- Your unit may already have initiated a standardized profile system to make this
  easier by placing the group name directly on the profile. If not, the chart below
  will help for group placement.
- The group program charts on the next few pages outline the daily exercise plan for each group. Follow these plans.
- Reference the appendices for details such as pictures, sets, repetitions, and duration of exercises.

GROUP	GROUP DESCRIPTION
RED: LOWER BODY	Most restrictive profile  - Lower body severe injury  - NO IMPACT allowed (must bike or swim ONLY for cardio)  - Examples include fractures, acute sprains or strains
RED: LOW BACK	Most restrictive back profile - Moderate to severe low back pain - NO IMPACT allowed (must bike or Stairmaster ONLY for cardio) - Examples include severe sprains and strains or disc herniations
AMBER: LOWER	Less restrictive profile - Lower body mild - moderate injury - Mild - moderate low back pain - SOME IMPACT allowed (OK to walk, Stairmaster, or elliptical)
AMBER: UPPER	<ul> <li>Upper body, upper back, or neck injury</li> <li>Generally these individuals are on a run at own pace profile, but often running is painful because of the jarring and arm swing.</li> <li>If running is painful but the profile is marked "run at own pace," running will not only aggravate the injury, but it will waste time the Soldier could be using to get a beneficial cardiovascular workout.</li> <li>If so, this Soldier should do some other form of cardiovascular training.</li> </ul>
GREEN: SELF PACED	Upper or lower body SELF PACED - SOME IMPACT allowed (i.e. walk, run, swim, and bike at own pace; sit ups and push ups at own pace)
GREEN: RECOVERY	Recovery phase of an injury - Requires 2x length of profile, up to 90 days

# **RED-LOWER EXTREMITY**

Continuously alternate week A and week B for duration of profile

	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
Week A	Upper body push & pull	Core strength	Upper body push & pull	Core strength	Upper body push & pull
Wook /	Circuit/high-intensity cycle	Pool or long cycle	Circuit/high-intensity cycle	Pool or long cycle	Circuit/high-intensity cycle
	Injury specific exercises & stretches	Injury specific exercises & stretches			
	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
Week B	Core strength	Upper body push & pull	Core strength	Upper body push & pull	Core strength
	Pool or long cycle	Circuit/high-intensity cycle	Pool or long cycle	Circuit/high-intensity cycle	Pool or long cycle
	Injury specific exercises & stretches				

Preparation	Upper body push & pull	Core strength	
(Appendix A)	(Appendix B)	(Appendix C)	
5 Minutes warm up*: -1 minute rapid air boxing -1 minute front clapper -1 minute front clapper -30 seconds rapid air boxing -30 seconds front clapper "Use light hand weights or boxing gloves to make this harder  Followed by preparation drills: -Prone row -Push up or modified push up -Modified rower with limited range of motion -Body Twist	Examples include (but are not limited to):  Push: -Push ups -Triceps press -Dips -Bench press (including incline/decline) -Medicine ball throws (chest pass, lateral toss, overhead/underhand)  Pull: -Pull ups -Bicep curls -Rows -Upright row -Flys -Prone row	Choose 4 exercises, one Front: -Forward plank -Crunches -Double crunch -Bent leg hold  Side: -Side plank -Side sit ups -Bent leg body twist	from each group:  Back: -Shoulder bridge -Quadruplex -Prone row -Superman  Shoulder: -Y's -T's -L's -W's

Circuit/ high intensity cycle	Pool or long cycle	Injury specific exercises & stretches (Appendix D)
Break into groups of 3. Use a stationary bike for	Pool or cycle for 30-60 minutes.	If enrolled in Physical Therapy:
cardio. You may need to do these workouts with no or	•	-Do prescribed Physical Therapy exercises and
very little resistance, depending on your limitations.	Pool options include:	stretches.
While one Soldier is cycling, the other 2 are strength	-Lap swim	-If another medical provider gave you an exercise
training. Rotate cycle use every 5-10 min.	-Deep water running	handout, do the exercises on that handout.
	-Shallow end walking	
Here are some high intensity options:	-Swimming with float between knees	If not yet enrolled in Physical Therapy:
30 Second Blocks:		-Do the exercises outlined in this booklet for the
-30 sec moderate, 30 sec hard x 5 minutes	Cycling options include:	injured body part. If an exercise results in an increase
-Repeat 4 times per Soldier with active rest (strength	-Stationary cycle (you may need to begin with little or	in pain, back down the range of movement or the
training) between blocks		force of movement until it is no longer painful. If still painful, avoid the painful exercise.
3-2-1 Blocks:	*If you are unable to cycle or swim, repeat the	
-3 min warm up, 3 min hard	following upper-body-only sequence 10 times (total:	
-2 min moderate, 2 min hard	30 min):	
-1 min moderate, 1 min hard	-1 min rapid air boxing	
-Repeat 3 times per Soldier with active rest (strength	-1 min front clap	
training) between blocks	-1 min crunches	
	-To add difficulty, do these exercises with weighted	
*If you are unable to cycle, make your strength routine	boxing gloves or small hand weights.	
part of a cardio circuit by doing 1 min of air boxing, 1		
min of front clapper twice (total of 4 min) between	**Other options (if available at your gym) include using	
each strength set. Add boxing gloves or small hand	a hand bike, seated elliptical, or rowing machine	
weights to progress.	(using arms only).	

## **RED-LOW BACK**

Continuously alternate week A and week B for duration of profile

	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
Week A	Push strength/ Pull strength	Core strength	Push strength/ Pull strength	Core strength	Push strength/ Pull strength
WOOK AT	Circuit/high-intensity cycle or Stairmaster	Pool or long cycle/ Stairmaster	Circuit/high-intensity cycle or Stairmaster	Pool or long cycle/ Stairmaster	Circuit/high-intensity cycle or Stairmaster
	Injury specific exercises & stretches				
	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
Week B	Core strength	Push strength/ Pull strength	Core strength	Push strength/ Pull strength	Core strength
	Pool or long cycle/ Stairmaster	Circuit/high-intensity cycle or Stairmaster	Pool or long cycle/ Stairmaster	Circuit/high-intensity cycle or Stairmaster	Pool or long cycle/ Stairmaster
	Injury specific exercises & stretches				

Preparation (Appendix A)	Push strength / Pull strength (Appendix B)	Core strength (Appendix C)
5 Minutes warm up*:  -1 minute rapid air boxing -1 minute front clapper -1 minute front clapper -30 seconds rapid air boxing -30 seconds front clapper *Use light hand weights or boxing gloves to make this harder.  Followed by preparation drills: -Prone row with use of arms -Modified push up -Modified rear lunge -Modified squat bender	Do 2 upper and 2 lower body exercises each strength session ONLY if not painful.  -Before each exercise, brace abdominal muscle preparing for a punch to the stomach (be sure y still move and breathe easily):	-Forward plank -Shoulder bridge -Crunches -Quadruplex -Double crunch -Prone row -Bent leg hold -Superman  /):  weight -Side: Shoulder: -Side plank -Y's -Side sit ups -T's -Bent leg body twist -L's -W's -W's

Circuit/ high intensity cycle or Stairmaster	Pool or long cycle / Stairmaster	Injury specific exercises & stretches (Appendix D)
Break into groups of 3. Use a stationary bike or Stairmaster for cardio. While one Soldier is using the machine, the other 2 strength train. After every 5-10 minutes, the Soldiers rotate for use of the machine.  Here are some example high intensity options: 30 Second Blocks: -30 sec moderate, 30 sec hard x 5 minutes -Repeat 4 times per Soldier with active rest (strength training) between blocks  3-2-1 Blocks: -3 min warm up, 3 min hard -2 min moderate, 2 min hard -1 min moderate, 1 min hard -Repeat 3 times per Soldier with active rest (strength training) between blocks  *If you are unable to cycle or Stairmaster, make your strength routine part of a cardio circuit by doing 1 min of air boxing, 1 min of front clapper twice (for a total of 4 min) between each strength set.	Pool, Stairmaster, or cycle for 30-60 minutes.  Pool options include: -Lap swim -Deep water running -Shallow end walking -Kickboard Cycling on the recumbent (sit-back) bike may be more comfortable at first. Stairmaster training using short rapid steps may be the most comfortable.  *If you are unable to cycle or swim, repeat the following arms-only sequence 10 times (total: 30 min): -1 min rapid air boxing -1 min fornt clap -1 min of running in place seated or standing with ONLY arms moving -To add difficulty, do these exercises with weighted boxing gloves or small hand weights.  **Other options (if available at your gym) include using a hand bike, seated elliptical, or rower.	If enrolled in Physical Therapy: -Do prescribed Physical Therapy exercises and stretchesIf unit PA provided an exercise handout, do the exercises on that handout.  If not yet enrolled in Physical Therapy: -Do the exercises outlined in this booklet for the injured body part. If an exercise results in an increase in pain, back down the range of movement or the force of movement until it is no longer painful. If still painful, avoid the painful exercise.
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## **AMBER-LOWER**

Continuously alternate week A and week B for duration of profile

	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
	Upper body push & pull	Core strength	Upper body push & pull	Core strength	Upper body push & pull
Week A	Circuit/high-intensity cycle, elliptical, or Stairmaster	Pool, walk, or long cycle, elliptical, or Stairmaster	Circuit/high-intensity cycle, elliptical, or Stairmaster	Pool, walk, or long cycle, elliptical, or Stairmaster	Circuit/high-intensity cycle, elliptical, or Stairmaster
	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches
	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
	Core strength	Upper body push & pull	Core strength	Upper body push & pull	Core strength
Week B	Pool, walk, or long cycle, elliptical, or Stairmaster	Circuit/high-intensity cycle, elliptical, or Stairmaster	Pool, walk, or long cycle, elliptical, or Stairmaster	Circuit/high-intensity cycle, elliptical, or Stairmaster	Pool, walk, or long cycle, elliptical, or Stairmaster
	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches

Preparation (Appendix A)	Upper body push & pull (Appendix B)	Core strength (Appendix C)	
5 Minutes warm up: -1 minute rapid air boxing -1 minute front clapper -3 min brisk walking*  Followed by preparation drills: -Prone row -Push up -Modified rower with limited range of motion -Modified bend and reach -Modified high jumper  *If brisk walking causes any pain, replace with: -1 minute rapid air boxing -1 minute front clapper -30 seconds rapid air boxing -30 seconds front clapper	Examples include (but are not limited to):  Push: -Push ups -Triceps press -Dips -Bench press (including incline/decline) -Medicine ball throws (chest pass, lateral toss, overhead/underhand)  Pull: -Pull ups -Biceps curl -Rows -Upright row -Flys -Prone row	Choose 4 exercises, one for Front: -Forward plank -Crunches -Double crunch -Bent leg hold Side: -Side plank -Side sit ups -Bent leg body twist	om each group:  Back: -Shoulder bridge -Quadruplex -Prone row -Superman  Shoulder: -Y's -T's -L's -U's

Circuit/ high intensity cycle, elliptical, or Stairmaster	Pool, walk, or long cycle/elliptical/Stairmaster	Injury specific exercises & stretches (Appendix D)
Break into groups of 3. Use a stationary bike,	Pool, walk, elliptical, Stairmaster, or cycle for 30-60	If enrolled in Physical Therapy:
Stairmaster, or elliptical for cardio. While one Soldier is using the machine, the other 2 are strength training.	minutes.	-Do prescribed Physical Therapy exercises and stretches.
After every 5-10 minutes, the Soldiers rotate for use of	Pool options include:	-If unit PA provided an exercise handout, do the
the machine.	-Lap swim -Deep water running	exercises on that handout.
Here are some example high intensity options:	-Shallow end walking	If not yet enrolled in Physical Therapy:
30 Second Blocks:	-Swimming with float between knees	-Do the exercises outlined in this booklet for the
-30 sec moderate, 30 sec hard x 5 minutes		injured body part. If an exercise results in an increase
-Repeat 4 times per Soldier with active rest (strength	Cycling options include:	in pain, back down the range of movement or the
training) between blocks	-Renting from MWR or using owned bike	force of movement until it is no longer painful. If still
	-Stationary cycle	painful, avoid the painful exercise.
3-2-1 Blocks:		
-3 min warm up, 3 min hard		
-2 min moderate, 2 min hard		
-1 min moderate, 1 min hard		
-Repeat 3 times per Soldier with active rest (strength		
training) between blocks		
Spinning:		
-MWR often offers spinning classes		

# **AMBER-UPPER**

Continuously alternate week A and week B for duration of profile

	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
	Lower body push & pull	Core strength	Lower body push & pull	Core strength	Foot March (use
Week A	Run at own pace, pool, bike, elliptical, or Stairmaster	Circuit/high-intensity cycle, elliptical, or Stairmaster	Run at own pace, pool, bike, elliptical, or Stairmaster	Circuit/high-intensity cycle, elliptical, or Stairmaster	progression Appendix F) ONLY if not painful. If painful, do elliptical, Stairmaster or bike for 30-
	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	60 min
	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
	Core strength	Lower body push & pull	Core strength	Lower body push & pull	Foot March (use progression Appendix F)
Week B	Run at own pace, pool, bike, elliptical, or Stairmaster	Circuit/high-intensity cycle, elliptical, or Stairmaster	Run at own pace, pool, bike, elliptical, or Stairmaster	Circuit/high-intensity cycle, elliptical, or Stairmaster	ONLY if not painful. If painful, do elliptical, Stairmaster, or bike for 30
	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	60 min

Lower body push & pull (Appendix B)	Core strength (Appendix C)
ush: quats quats gpress gpress alf raises gg extension ull: amstring curl	Choose 3 exercises, one from each group: Front: -Crunches -Double crunch -Bent leg hold  Side: -Side sit ups -Bent leg body twist  Back: -Shoulder bridge
ar egip	(Appendix B)  mples include (but are not limited to):  sh: uats ages apress f raises g extension  Li mstring curl e raise (work shins) adduction

Circuit/ high intensity cycle, Stairmaster, or elliptical	Run own pace, Pool, Bike, Stairmaster, or Elliptical	Injury specific exercises & stretches (Appendix D)
Break into groups of 3. Use a stationary bike, Stairmaster, or elliptical for cardio. While one Soldier is using the machine, the other 2 are strength training. After every 5-10 minutes, the Soldiers rotate for use of the machine.  Here are some example high intensity options: 30 Second Blocks:  30 Sec moderate, 30 sec hard x 5 minutes  -Repeat 4 times per Soldier with active rest (strength training) between blocks  3-2-1 Blocks:  -3 min warm up, 3 min hard -2 min moderate, 2 min hard -1 min moderate, 1 min hard -Repeat 3 times per Soldier with active rest (strength training) between blocks  Spinning:  -MWR often offers spinning classes	If running is painful, do pool, walk, elliptical, or cycle for 30-60 minutes.  Pool options include: -Deep water running -Shallow end walking  Cycling options include: -Renting from MWR or using owned bike -Stationary cycle  On the elliptical, place hands on the stationary hand grips.	If enrolled in Physical Therapy: -Do prescribed Physical Therapy exercises and stretchesIf unit PA provided an exercise handout, do the exercises on that handout.  If not yet enrolled in Physical Therapy: -Do the exercises outlined in this booklet for the injured body part. If an exercise results in an increase in pain, back down the range of movement or the force of movement until it is no longer painful. If still painful, avoid the painful exercise.

# **GREEN-SELF PACED**

Continuously alternate week A and week B for duration of profile

	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
	Push strength	Core strength	Pull strength	Core strength	Push strength
Week A	Circuit/high-intensity cycle, Stairmaster, or elliptical	Run own pace	Circuit/high-intensity cycle, Stairmaster, or elliptical	Run own pace	Circuit/high-intensity cycle, Stairmaster, or elliptical
	Injury specific exercises & stretches	Injury specific exercises & stretches			
	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
	Pull strength	Core strength	Push strength	Core Strength	Pull Strength
Week B	Run own pace	Circuit/high-intensity cycle, Stairmaster, or elliptical	Run own pace	Circuit/high-intensity cycle, Stairmaster, or elliptical	Run own pace
	Injury specific exercises & stretches	Injury specific exercises & stretches			

Preparation (Appendix A)	Push strength / Pull Strength (Appendix B)		Core strength (Appendix C)	
5 Minutes warm up: -5 Minutes of brisk walking or jogging	Do 2 upper and 2 lower be session ONLY if not painf Examples include (but are		Choose 4 exercises, one f Front: -Forward plank	from each group: <u>Back:</u> -Shoulder bridge
Followed by preparation drills: -Prone row -Push up -Modified rower with limited range of motion	Push (upper body): -Push ups -Triceps press -Dips	Push (lower body): -Squats -Lunges -Leg press	-Crunches -Double crunch -Bent leg hold	-Quadruplex -Prone row -Superman
-Modified bend and reach -Rear lunge	-Bench press -Medicine ball toss	-Calf raises -Leg extension	Side: -Side plank -Side sit ups	<u>Shoulder:</u> -Y's -T's
	Pull (upper body): -Pull ups -Biceps curl -Rows -Prone row -Flys -Upright row	Pull (lower body): -Hamstring curl -Toe raise (work shins) -Hip adduction -Hip extension (glutes)	-Bent leg body twist	-L's -W's

Circuit/ high intensity cycle, Stairmaster, or elliptical	Run own pace	Injury specific exercises & stretches (Appendix D)
Break into groups of 3. Use a stationary bike,	Run at own pace and distance; if you experience pain,	If enrolled in Physical Therapy:
Stairmaster, or elliptical for cardio. While one Soldier	stop to walk.	-Do prescribed Physical Therapy exercises and
is using the machine, the other 2 are strength training.		stretches.
After every 5-10 minutes, the Soldiers rotate for use of	You can also use the run progression outlined in	-If unit PA provided an exercise handout, do the
the machine.	Appendix E.	exercises on that handout.
-If doing this alone, do the blocks of exercise below		If not yet enrolled in Physical Therapy:
with 2-5 min active rest (strength training) between		-Do the exercises outlined in this booklet for the
blocks.		injured body part. If an exercise results in an increase
		in pain, back down the range of movement or the
-Here are some high intensity options:		force of movement until it is no longer painful. If still
30 Second Blocks:		painful, avoid the painful exercise.
-30 sec moderate, 30 sec hard x 5 minutes		
-Repeat 4 times per Soldier with active rest (strength		
training) between blocks		
3-2-1 Blocks:		
-3 min warm up, 3 min hard		
-2 min moderate, 2 min hard		
-1 min moderate, 1 min hard		
-Repeat 3 times per Soldier with active rest (strength		
training) between blocks		
Spinning:		
-MWR often offers spinning classes		
g diacoco		

# **GREEN-RECOVERY**

Continuously alternate week A and week B for duration of profile

	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
	Push strength	Core strength	Pull strength	Core strength	
Week A	Return to run progression	Circuit/high-intensity cycle, Stairmaster, or elliptical	Return to run progression	Circuit/high-intensity cycle, Stairmaster, or elliptical	Foot March Progression
	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	
	Monday	Tuesday	Wednesday	Thursday	Friday
	Preparation	Preparation	Preparation	Preparation	Preparation
	Pull strength	Core strength	Push strength	Core Strength	
Week B	Return to run progression	Circuit/high-intensity cycle, Stairmaster, or elliptical	Return to run progression	Circuit/high-intensity cycle, Stairmaster, or elliptical	Foot March Progression
	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	Injury specific exercises & stretches	

Examples include (but are not limited to): -Forward plank -S	ix C)
-5 Minutes of brisk walking or jogging if not painful. Front: Barren et limited to): Front: Barren et limited to): Front: Front et limited to): Front et limited to et limited to): Front et limited to et limited to et limited to et limited to): Front et limited to et l	ack:
-Prone row -Push up -Triceps press -Lunges -Bent leg hold -S -Modified rower with limited range of motion -Modified bend and reach -Rear lunge -Rear lunge -Push up -Triceps press -Lunges -Leg press -Leg press -Calf raises -Side: -Side plank -Y -Side sit ups -T -Bent leg body twist -L' -Bent leg body twist -L'	Quadruplex Prone row Superman Shoulder: Y's L's L's V's

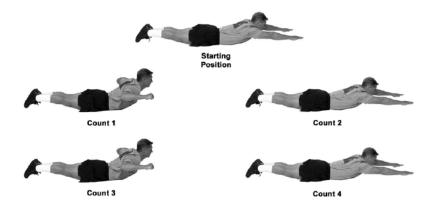
Circuit/ high intensity cycle, Stairmaster, or elliptical	Run progression (Appendix E) Foot March progression (Appendix F)	Injury specific exercises & stretches (Appendix D)
Break into groups of 3. Use a stationary bike, Stairmaster, or elliptical for cardio. While one Soldier is using the machine, the other 2 are strength training After every 5-10 minutes, the Soldiers rotate for use of the machine.  -If doing this alone, do the blocks of exercise below with 2-5 min active rest (strength training) between blocks.  -Here are some high intensity options:  30 Second Blocks:  -30 sec moderate, 30 sec hard x 5 minutes  -Repeat 4 times per Soldier with active rest (strength training) between blocks  3-2-1 Blocks:  -3 min warm up, 3 min hard  -1 min moderate, 2 min hard  -1 min moderate, 1 min hard  -1 min moderate, 1 min hard  -Repeat 3 times per Soldier with active rest (strength training) between blocks  Spinning:  -MWR often offers spinning classes	-Follow the Return to Run Progression outlined in the booklet.  Foot March Progression: -Only on FridaysFollow the Foot March Progression outlined in the booklet.	If enrolled in Physical Therapy: -Do prescribed Physical Therapy exercises and stretchesIf unit PA provided an exercise handout, do the exercises on that handout.  If not yet enrolled in Physical Therapy: -Do the exercises outlined in this booklet for the injured body part. If an exercise results in an increase in pain, back down the range of movement or the force of movement until it is no longer painful. If still painful, avoid the painful exercise.

# APPENDIX A: PREPARATION

The preparation starts with 5 minutes of activity to get the muscles warm. This is followed by preparation drill exercises. Each group has 4-5 of these exercises assigned (listed in the group's chart).

#### **Prone Row**

(RED-LOWER EXTREMITY, AMBER-LOWER, GREEN-SELF PACED, GREEN-RECOVERY only)



Cadence: Slow

Start position: Prone position with the arms overhead, palms down 1-2 inches off the

ground and toes pointed to the rear.

Count:

1. Using arms for help

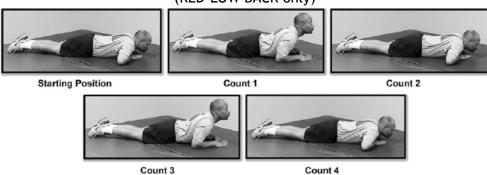
1. Using arms for help, raise chest off ground.

2. Return to the starting position.

3. Using arms for help, raise chest off ground.

4. Return to the starting position. Repeat 10 times.

# Prone Row Using the Arms (RED-LOW BACK only)



Cadence: Slow

Start position: Lay prone with hands palm down under neck and elbows out 45°

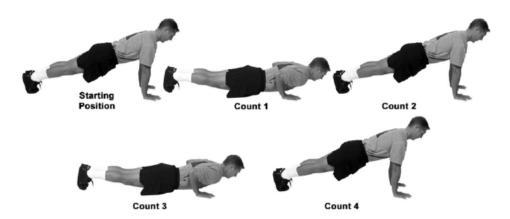
Count: 1. Using arms for help, raise chest off ground.

2. Return to the starting position.

3. Using arms for help, raise chest off ground.

4. Return to the starting position. Repeat 10 times.

Push Up (RED-LOWER EXTREMITY, AMBER-LOWER, GREEN-SELF PACED, GREEN-RECOVERY only)

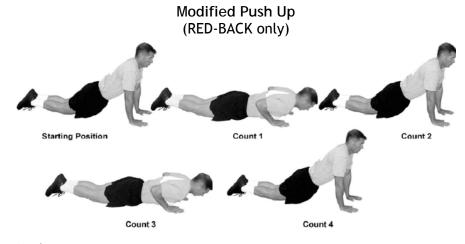


Cadence: Moderate

Start position: Front leaning rest

Count:

- 1. Bend the elbows, lowering the body until the upper arms are parallel with the ground.
- 2. Return to the starting position.
- 3. Repeat count 1.
- 4. Return to the starting position. Repeat 10 times.



Cadence: Moderate

Start position: Front leaning rest on knees

- 1. Bend the elbows, lowering the body until the upper arms are parallel with the ground.
- 2. Return to the starting position.
- 3. Repeat count 1.
- 4. Return to the starting position. Repeat 10 times.

# Modified Rower with Limited Range of Movement (RED-LOWER EXTREMITY, AMBER-LOWER, GREEN-SELF PACED, GREEN-RECOVERY only)





Count 1



Count 2

Starting Position



Count 3

Count 4

Cadence: Slow

Start position: Supine position, knees bent with feet flat on ground, hands on thighs and head off ground

Count:

- 1. Slide hands forward to knees as you sit up, keeping feet on ground.
- 2. Return to the starting position.
- 3. Repeat count 1.
- 4. Return to the starting position. Repeat 10 times.

# Modified Rower Without Use of Arms (AMBER-UPPER only)







Starting Position

Count 1

Count 2





Count 3

Count 4

Cadence: Moderate

Start position: Supine position, knees straight, arms across chest and head off ground Count:

1. Sit up, keeping arms close to the body and keeping feet on ground.

- 2. Return to the starting position.
- 3. Repeat count 1.
- 4. Return to the starting position. Repeat 10 times.

#### **Body Twist** (RED-LOWER EXTREMITY only)











Starting Position

Count 1

Count 2

Count 3

Count 4

Cadence: Slow

Start position: Straddle stance with arms sideward, palms facing down

Count:

- 1. Rotate trunk to the left ONLY so far that it does not increase pain. 2. Return to the starting position.
- 3. Rotate trunk to the right ONLY so far that it does not increase pain.
- 4. Return to the starting position. Repeat 10 times.

#### Modified Bend and Reach (AMBER-LOWER, AMBER-UPPER, GREEN-SELF PACED, GREEN-RECOVERY only)







Count 1



Count 2



Count 3



Cadence: Slow

Start position: Straddle stance with hands on hips

- 1. Keep back STRAIGHT, bend at the knees to reach arms straight down to shins (stop before this exercise causes pain)
- 2. Return to the starting position.
- 3. Repeat count 1.
- 4. Return to the starting position. Repeat 10 times.

# Modified High Jumper: Remaining on the Ground (AMBER-LOWER only)











Count

Count 4

Cadence: Moderate

Start position: Forward leaning stance, knees bent, arms straight, palms facing body Count:

1. Swing arms forward, come up on toes, but do not lift off ground.

- 2. Return to the starting position.
  - 3. Swing arms forward and up, come up on toes, do not lift off ground.
  - 4. Return to the starting position. Repeat 10 times.

Modified High Jumper: Remaining on the Ground with Arms Low (AMBER-UPPER only)











Count 2

Count 3

Count 4

Cadence: Moderate

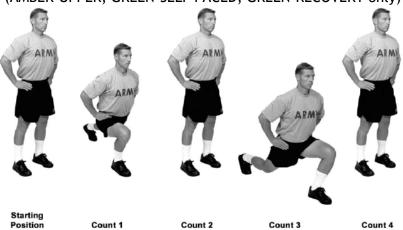
Position

Start position: Forward leaning stance, knees bent, arms straight, palms facing body Count:

1. Swing arms forward, come up on toes, but do not lift off ground.

- 2. Return to the starting position.
- 3. Repeat count 1.
- 4. Return to the starting position. Repeat 10 times.

# Rear Lunge (AMBER-UPPER, GREEN-SELF PACED, GREEN-RECOVERY only)



Cadence: Moderate

Start position: Straddle stance, hands on hips

Count:

- 1. Take a big step backward with the right leg and touch down with the ball of the foot. Do not let your left knee move in front of your toes.
- 2. Return to the starting position.
- 3. Repeat count 1 on the opposite side.
- 4. Return to the starting position. Repeat 10 times.

# Modified Rear Lunge (RED-LOW BACK only)











Starting Position

Count 1

Count 2

Count 3

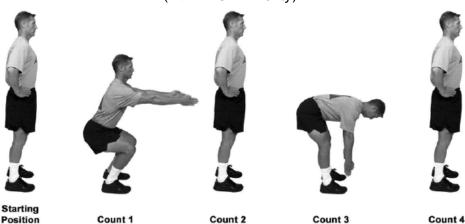
Count 4

Cadence: Moderate

Start position: Straddle stance, hands on hips, abdominal muscles braced

- 1. Take a short step backward with the right leg and touch down with the ball of the foot. Only go down as far as you can without any pain.
- 2. Return to the starting position.
- 3. Repeat count 1 on the opposite side.
- 4. Return to the starting position. Repeat 10 times.

#### **Squat Bender** (AMBER-UPPER only)



Cadence: Slow

Start position: Straddle stance, hands on hips

1. Squat down, keeping the back straight and knees behind the toes. Count:

2. Return to the starting position.

3. Keeping the back straight, knees slightly bent, reach for your shins.

4. Return to the starting position. Repeat 10 times.

#### **Modified Squat Bender** (RED-LOW BACK only)







Count 1



Count 2



Count 3



Count 4

Cadence: Slow

Start position: Straddle stance, hands on hips, abdominal muscles braced

- 1. Squat down, keeping the back straight and knees behind the toes.
- 2. Return to the starting position.
- 3. Keeping the back straight, knees slightly bent, reach for your shins.
- 4. Return to the starting position.

# Appendix B: Strength Training Exercises (Push / Pull)

During the strength training portion, it is important to understand the concept of a repetition maximum (RM).

- One RM (1RM) is the amount of weight that can be moved if only one repetition is done (AKA "maxing out").
- 3RM is the amount of weight per repetition that can be moved if 3 repetitions are done to complete the set. If you are doing 3RM, the 3<sup>rd</sup> repetition should feel like you cannot do one more repetition without modifying your form or lowering the weight.
- 8RM is the amount of weight per repetition that can be moved if 8 repetitions are done to complete the set, 12RM is the amount of weight per repetition that can be moved if 12 repetitions are done to complete the set, and so on.

The American College of Sports Medicine (ACSM) recommends 3 sets of 10-12 repetitions as a basic standard for strength training. That is, 3 sets with the amount of weight of 10RM-12RM for 10-12 repetitions per set. You should rest 30-60 seconds between sets. You can use this time to do another exercise.

- Those numbers are useful if you are at the gym and able to manipulate the amount of weight you are using, but not as useful for body-weight exercises such as push ups and pull ups.
  - For these exercises, if the weight moved is greater than 10-12RM (ie pull ups), do more sets and fewer repetitions (ie 6 sets of 5 pull ups), or start with the maximum number of repetitions you can do at one time with perfect form, rest for 1 minute, then complete another set with the maximum possible number you can perform correctly. Repeat 3-4 sets.
  - If the weight moved is lower than 10-12RM (ie push ups), do more repetitions per set (ie 3 sets of 30 push ups), or start with the maximum number of repetitions you can do at one time with perfect form, rest for 1 minute, then complete another set with the maximum possible number you can perform correctly. Repeat 3-4 sets.

If any exercise increases the Soldier's pain, he/she should decrease the amount of weight, range of movement, or number of repetitions until the exercise does not increase pain. If the exercise still increases pain, skip that exercise.

# Appendix C: Core Strengthening

Abdominal Bracing: During all core exercises you should contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.

The core muscles should be considered with a 360° concept in mind. The abdominal and back muscles form a supportive ring around your spine and they all must be trained. The shoulder blade, pelvic, and buttock muscles also serve to stabilize the trunk to assist in effective movements of the arms and legs.

When performing core strength training, exercises should be selected that provide a workout for the front, sides, back, and shoulders. This will include the abdominals, lower spine muscles, pelvic and buttock muscles, and shoulder blade stabilizers.

If any exercise increases their pain, the Soldier should reduce the range of movement, duration, or repetitions until the exercise is no longer painful. If the exercise is still painful, skip that exercise.

## Forward Plank (FRONT)







Cadence: None. This exercise is done for time. Start Position: Start by lying on your stomach and propped on elbows with forearms resting on the ground. Contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.

Count: NA

- Raise body up on elbows and toes so that it forms a straight line from the shoulders to the ankles. Hold for a goal of 15 seconds working up to 3 minutes.
- Don't sag in the middle; either keep your back straight or push your hips upward.
- A harder variation is to move your arms forward. Another variation is to lift one foot barely off the ground. Switch legs halfway through the time.
- Choose the most difficult variety of the plank that you can maintain for the standard time listed.

## Crunches (FRONT)



**Start Position** 



Count 1



Count 2



Count 3



Count 4

Start Position: On your back with your knees bent and your feet flat on the ground, arms crossed over your chest. Contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.

Count:

Cadence: Slow

- 1. Lift your shoulder blades off the ground just until the tips of your shoulder blades come off the ground.
- 2. Return to the start position.
- 3. Repeat count one.
- 4. Repeat count two.

## **Double Crunches (FRONT)**







**Start Position** 

Count 1

Count 2





Count 3

Count 4

Cadence: Moderate

Start Position: On your back with your knees bent and your feet flat on the ground, arms crossed over your chest. Contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.

Count:

- 1. Lift your feet slightly off the ground and your shoulder blades off the ground just until the tips of your shoulder blades come off the ground.
- 2. Tuck your legs so that your hips and knees are at right angles. Bring your torso up higher so that your elbows touch your thighs.
- 3. Return to count one position.
- 4. Return to the start position.

## Bent Leg Hold (FRONT)







Cadence: None. This exercise is done for time.

Start Position: Lying on the back, knees bent, feet on the ground, and placing both hands underneath the small of your back, not your pelvis. Contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.

Count: NA

- o Raise your feet off the ground until both hips and knees are flexed to 90°.
- o Flatten your lower back toward the ground.
- Keep the same amount of pressure from your back on your hands and slowly lower and straighten your legs.
- As soon as you feel less pressure on your hands, bring the legs slightly back and hold for 15 seconds working up to 60 seconds.

## Side Plank Progression (SIDE)



Cadence: None. This exercise is done for time. Start position: Make your body into a perfect L shape with your knees, hips, and shoulders making a perfect line and your feet behind you.

Count: NA



- Come up on your elbow and contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.
- o Hold for a goal of 15 seconds to 90 seconds, each side.
- To add challenge, perform the same exercise with your legs straight.



 To add more challenge, perform the same exercise with your legs straight and your elbow straight.



 To add even more challenge, cross the lower foot over the top foot. Perform the same exercise keeping the top leg straight and your elbow straight.



 Another challenging variation is to perform the same exercise with your legs straight and your elbow straight, then raise one leg <u>or</u> straighten the other arm out above you.



For the greatest challenge, perform the star position.
 Lift the top leg and straighten the other arm out above you.



 Choose the most difficult variety of the side plank that you can maintain correctly for 15 seconds working up to 90 seconds.

## Side Sit-Ups (SIDE)







Start Position

Count 1

Count 2





Count 3

Count 4

Cadence: Slow.

Start Position: Lying on your back with knees bent, lower knees to left side (go to right side on second set of the exercise). Arms can be supporting your neck/head or crossed over your chest.

Count:

- 1. Lift your head and shoulder blades off the ground, just until the tip of your right shoulder blade comes off the ground (left shoulder blade for the second set of the exercise).
- 2. Return to the start position.
- 3. Repeat count one.
- 4. Repeat count two.

Bent-Leg Body Twist (SIDE)





**Start Position** 

Count 1

Count 2





Cadence: Slow.

Count 3

Count 4

Start Position: On your back with your arms outstretched and your knees and hips bent at right angles (feet off the ground). Contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath. Keep your knees close together throughout the exercise.

- 1. Rotate the legs to the left.
- 2. Return to the start position.
- 3. Repeat count one to the right.
- 4. Return to the start position.

**Shoulder Bridge Progression (BACK)** 





Cadence: None. This is an exercise done for time.

Start Position: Lying on your back with your knees bent. Contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.

Count: NA

- Bring your hips up until the trunk and thighs form a generally straight line. Try
  to hold for 15 seconds to 3 minutes. Additional challenge can be achieved by
  lifting either your toes or heels from the ground.
- To add challenge, start in the same position as above, bring your hips up, and straighten one leg. Keep your hips level (don't let one hip dip down lower).
   Try to hold for 15 seconds to 90 seconds. Repeat by lifting the other leg.







 To add more challenge, start in the same position as above, bring your hips up, and extend your arms above your head and hold them 3-6 inches from the ground. You can also straighten one leg. Try to hold for 15 seconds to 90 seconds. Repeat by lifting the other leg.

## Quadruplex (BACK)









Cadence: None. This is an exercise done for time.

Start Position: The starting position is on the hands and knees with the back flat. Contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.

Count: NA

- Straighten the left leg to the rear and the right arm to the front.
- o Do not let trunk rotate or sag. Hold for 5 seconds.
- Alternate the arm and leg movements on subsequent repetitions, repeat exercise for one minute.
- The key to this exercise is controlled lowering and raising of the opposite arm/leg while keeping the rest of the body still. This can be done as a partner exercise to give feedback on core stability.

Prone Row (BACK)



Start Position



Count 1



Count 2



Count 3



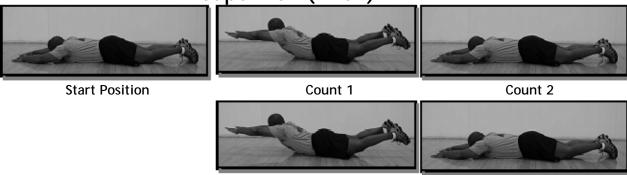
Count 4

Cadence: Moderate

Start Position: Prone position with the arms overhead, palms face down, 1-2 inches off the ground. Contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.

- 1. Raise the head and chest slightly while lifting the arms and pulling them rearward. Hands make fists as they move toward shoulders. Ensure that the toes remain on the ground.
- 2. Return to the starting position.
- 3. Repeat count one.
- 4. Return to the starting position.

## Superman (BACK)



Count 3

Count 4

Cadence: Slow to moderate.

Start Position: Prone position with the arms overhead, palms face down.

Contract/tighten the abdominal and lower back muscles as if you were bracing to take a punch. Avoid holding your breath.

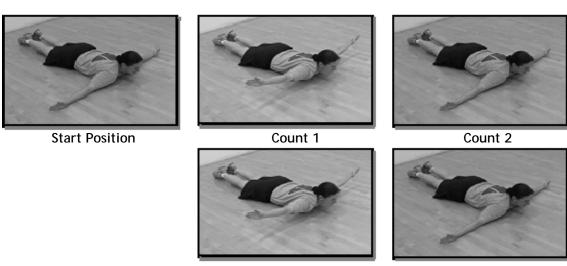
Count: 1. Raise the head, arms, and legs about six inches off the ground.

2. Return to the starting position.

3. Repeat count one.

4. Return to the starting position.

## T's (SHOULDER)



Count 3

Count 4

Cadence: Slow to moderate.

Start Position: Prone position with the arms out to the sides, chin off the ground, palms forward, thumbs up, toes in contact with the ground.

- 1. Raise the arms 3-6 inches off the ground.
- 2. Return to the starting position.
- 3. Repeat count one.
- 4. Return to the starting position.

## Y's (SHOULDER)



Start Position



Count 1



Count 2



Count 3



Count 4

Cadence: Slow to moderate.

Start Position: Prone position with the arms 45 degrees to the front, looking forward with chin off the ground, thumbs up, toes in contact with the ground.

Count:

- 1. Raise the arms 3-6 inches off the ground.
- 2. Return to the starting position.
- 3. Repeat count one.
- 4. Return to the starting position.





Start Position



Count 1



Count 2



Count 3



Count 4

Cadence: Slow to moderate.

Start Position: Prone position with the arms bent 90 degrees at the shoulders and elbows, looking forward with chin off the ground, thumbs up, toes in contact with the ground.

- 1. Raise both arms 3-6 inches off the ground so that the entire arm lifts as one unit.
- 2. Return to the starting position.
- 3. Repeat count one.
- 4. Return to the starting position.

# W's (SHOULDER)







Count 1



Count 2







Count 4

Cadence: Slow to moderate.

Start Position: Prone position with the arms bent 90 degrees at the shoulders and elbows, looking forward with chin off the ground, thumbs up, toes in contact with the ground.

- 1. Raise the arms up 3-6 inches off the ground and back 3-6 inches, pulling the elbows back towards the hips.
- 2. Return to the starting position.
- 3. Repeat count one.
- 4. Return to the starting position.

# Appendix D: Injury Specific Exercises

During Injury-Specific Exercise time, Soldiers should do exercises prescribed to them by a Physical Therapist or those on a handout provided by another medical provider such as physician, physician assistant, or nurse practitioner.\*

\*If the Soldier has NOT seen a Physical Therapist yet AND does NOT have a handout from another medical provider, the Soldier will do the exercises listed for their injury location on the hand-outs provided in the following pages. These are exercises to substitute until they are able to get an appointment for a personalized program from a medical provider.

If any exercise increases their pain, the Soldier should skip that exercise.

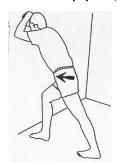
#### Heel Pain

\*Use these exercises ONLY if you do not have exercises from a medical care provider. If you have exercises from your care provider, do those instead.

Do all 5 exercises and stretches below (skip any that cause sharp pain):

1. Calf Stretch (Gastrocnemius):

Keeping back leg straight, with heel on the floor and turned slightly outward, lean into wall until a stretch is felt in the calf. Hold 15-30 seconds. Repeat 2 times, each leg.



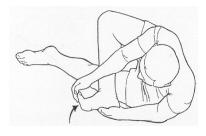
2. Calf Stretch (Soleus):

Standing with both knees bent and involved foot back, gently lean into the wall until a stretch is felt in the lower calf. Hold 15-30 seconds. Repeat 2 times, each leg.



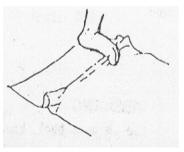
3. Plantar Foot Stretch:

Pull up all of your toes and bring your whole foot towards your face to feel a stretch on the bottom of your foot. Hold 15-30 seconds. Repeat 2 times, each foot.



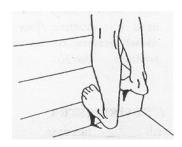
4. Towel Scrunching:

Use your toes to scrunch up a towel (brown towel works well). Repeat 3 x 30 seconds.



5. Advanced Heel Cord Stretch:

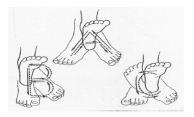
Stand with heel over the edge of a step lower your heel to get a moderate stretch. Try with knee straight and bent as before.



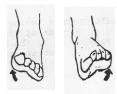
## Ankle Sprain

PHASE 1

Phase 1 is over when these exercises are easy. Do all 7 (skip any that cause pain):

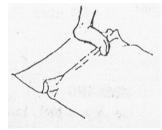












#### 1. Alphabet Writing:

Pretend there is a pen between your big toe and second toe. Use that imaginary pen to write the alphabet in large letters. Repeat 2 times.

#### 2. Ankle Circles:

Do clockwise and counterclockwise. Repeat 10 - 20 times each way.

#### 3. Ankle Pumps:

Bring foot up and point foot down. Repeat 10-15 times.

#### 4. Inversion/ Eversion:

Bring foot in and out to the side (most important out). Repeat 10-15 times, 3 sets.

#### 5. Heel Cord Stretch:

Using a towel around your foot, pull foot towards your body. Hold 15-30 seconds. Repeat 2 times each side.

#### 6. Towel Slide:

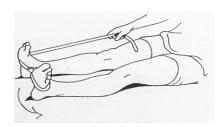
Bring the foot on the towel towards the outside. Hold 1 second. Repeat  $3 \times 10-15$ .

#### 7. Towel Scrunching:

Use your toes to scrunch up a towel (brown towel works well). Do 3 x 30 sec.

## **Ankle Sprain**

# PHASE 2 Do all 6 (skip any that cause pain):



#### 1. Eversion:

Put tubing around both ankles as pictured and push injured ankle out and slightly upward to the side (away from opposite ankle). Do 3 sets of 10-15 reps.



#### 2. Dorsiflexion:

Hook band to bottom of bed or have someone hold to provide resistance against bringing your foot up towards you. Do 3 sets of 10-15 reps.



#### 3. Inversion:

Cross uninvolved ankle over the involved one and with the tubing around both, bring foot inwards. Do 3 sets of 10-15 reps.



#### 4. Seated Heel Raise:

Raise the weight of your leg off of your heel while being seated. Do 3 sets of 10-15 reps.



#### 5. Calf Stretch (Gastrocnemius)

Keeping back leg straight, with heel on the floor and turned slightly outward, lean into wall until a stretch is felt in the calf. Hold 15-30 seconds. Repeat 2 times, each leg.



#### 6. Calf Stretch (Soleus)

Standing with both knees bent and involved foot back, gently lean into the wall until a stretch is felt in the lower calf. Hold 15-30 seconds. Repeat 2 times, each leg.

## Shin Splints

Do all 5 stretches and exercises (skip any that cause pain):

#### 1. Calf Stretch (Gastrocnemius):

Keeping back leg straight, with heel on the floor and turned slightly outward, lean into wall until a stretch is felt in the calf. Hold 15-30 seconds. Repeat 2 times, each leg.



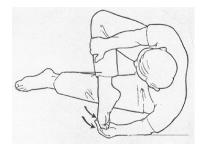
#### 2. Calf Stretch (Soleus):

Stand with both knees bent and involved foot back, gently lean into the wall until a stretch is felt in the lower calf. Hold 15-30 seconds. Repeat 2 times, each leg.



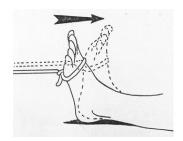
#### 3. Ankle Plantarflexion Stretch:

Gently grasp foot and bend ankle down, hold 15-30 seconds. Repeat 2 times, each leg.



#### 4. Resisted Dorsiflexion:

With tubing anchored to a door jam, pull your foot toward your face. Hold 2 seconds. Repeat 10-15 times, 3 sets each leg. If no tubing is available, lean back against a wall with your feet 1 ft. away from the wall. Raise your toes off the ground. Hold 2 seconds. Repeat 10-15 times, 3 sets.



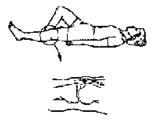
#### 5. Heel Raises Single Limb Stance:

Start by using a table or wall for balance initially for one leg or use both legs without holding on and progress as you become stronger to doing it on one foot without touching anything. Hold 1 second. Repeat 10 repetitions, 3 times. Then do the same thing with your knee bent. BE SAFE!



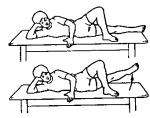
#### Knee Pain

Knee exercises: Choose 3 each day. Skip any that cause pain. It 's okay to do 3 different exercises each day or stick with your favorites.

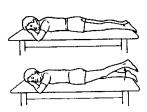


#### 1. Quad Set:

With leg straight, tighten the muscle on top of the thigh. Hold 5 seconds. Keep holding, and tighten even more. Hold 5 more seconds. Repeat 10 times. Do 3 sets each side.



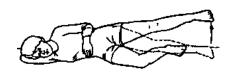
3. Side Lying Hip Adduction: Lying on side, tighten muscle on top of thigh, then lift leg 8-10 inches from floor. Hold 2 seconds. Repeat 10 times. As you get better, work up to 30 repetitions. Do 3 sets each leg.



5. Prone Hip Extension: Lying on stomach, tighten the muscles on the top of thigh, lift leg 8-10 inches from floor. Hold 2 seconds. Repeat 10 times. As you get better, work up to 30 repetitions. Do 3 sets each leg.



2. Straight Leg Raise: Tighten the muscle on top of thigh, Raise the leg 8-10 inches from floor. Hold 2 seconds. Repeat 10 times. As you get better, work up to 30 repetitions.



Do 3 sets each leg.

4. Side Lying Hip Abduction: Lying on side, tighten the muscle on the top of thigh, then lift the leg 8-10 inches from floor. Hold 2 seconds. Repeat 10 times. As you get better, work up to 30 repetitions. Do 3 sets each leg.

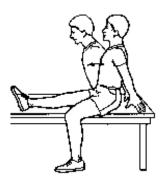


6. Wall Squat:

Place your back against the wall. Move your feet out f 2-3 feet from the wall. Slide down as far as you can without causing pain. Keep your hips higher than your knees. Make sure your knees never go forward of your toes. Adjust your foot placement as needed. Hold for 15 seconds working up to 2 minutes. Repeat 3 times.

### **Knee Pain**

Knee Stretches: Do all 4



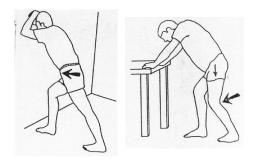
1. Hamstring Stretch: Sit with leg straight on the bench, lean forward, keeping back straight. Hold 15-30 seconds. Repeat 2 times, each side.



# 2. Quad Stretch: Stand straight. Grasp your same ankle with same hand. Pull ankle towards buttocks. Avoid letting your knee go out to the side, and try to bring the knee you're stretching behind the one you're standing on. Hold 15-30 seconds. Repeat 2 times, each side.



3. ITB Stretch: Stand with the side you're stretching facing the wall. Lean your hip towards the wall, leaning at the trunk. Avoid bending forward at the waist. Hold 15-30 seconds. Repeat 2 times, each side.



4. Calf Stretch:
Keeping back leg straight, with heel on
the floor and turned slightly outward,
lean into wall until a stretch is felt in the
calf. Hold 15 - 30 seconds. Do this
exercise again with your knee slightly
bent. Hold 15-30 seconds. Repeat each
stretch 2 times, both sides.

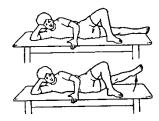
# Hip Pain

Hip exercises and stretches: Do all 7 (skip any that cause pain or popping)



1. Straight Leg Raise: Tighten the muscle on top of thigh, raise the leg 8-10 inches from floor. Hold 2 seconds. Repeat 10 times. As you get better, work up to 30 repetitions.

Do 3 sets each leg.



3. Side Lying Hip Adduction: Lying on side, tighten muscle on top of

thigh, then lift leg 8-10 inches from floor. Hold 2 seconds. Repeat 10 times. As you get better, work up to 30 repetitions. Do 3 sets each leg.

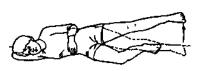


5. Hamstring Stretch:
Sit with leg straight on the bench,
lean forward, keeping back straight. Hold
15-30 seconds. Repeat 2 times, each side.

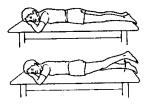


7. ITB Stretch:

Stand with the side you 're stretching facing the wall. Lean your hip towards the wall, leaning at the trunk. Avoid bending forward at the waist. Hold 15-30 seconds. Repeat 2 times, each side.



2. Side Lying Hip Abduction: Lying on side, tighten the muscle on the top of thigh, then lift the leg 8-10 inches from floor. Hold 2 seconds. Repeat 10 times. As you get better, work up to 30 repetitions. Do 3 sets each leg.



4. Prone Hip Extension:

Lying on stomach, tighten the muscles on the top of thigh, lift leg 8-10 inches from floor. Hold 2 seconds. Repeat 10 times. As you get better, work up to 30 repetitions. Do 3 sets each leg.

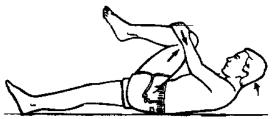


6. Quad Stretch:

Stand straight. Grasp your same ankle with same hand. Pull ankle towards buttocks. Avoid letting your knee go out to the side, and try to bring the knee you're stretching behind the one you 're standing on. Hold 15-30 seconds. Repeat 2 times, each side.

#### Back Pain

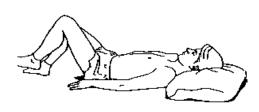
Back exercises and stretches: Choose 5 from the 10 listed below (skip any that cause an increase in your pain before or after the exercise. It's okay to do the same 5 each day or to choose a different 5 each day.



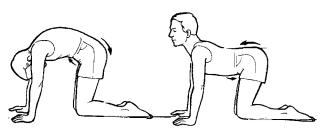
1. Single Knee to Chest: Pull one knee to your chest until a comfortable stretch is felt in the lower back and buttocks. Repeat with opposite knee. Hold 2 seconds. Repeat 10 times, each side.



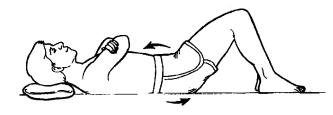
2. Double Knees to Chest: Pull one knee to the chest, then bring the other knee to the chest and pull until you feel a comfortable stretch in the lower back and buttocks. Hold 2 seconds. Repeat 10 times, each side.



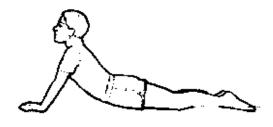
3. Hook Lying Leg Lifts: Tighten stomach muscles to keep trunk rigid and slowly raise one leg 1 to 2 inches from the floor. Hold 3 seconds then slowly lower, keeping trunk rigid. Repeat 15 times, alternating R and L leg. Do 3 sessions per day.



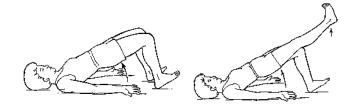
4. Cat / Camel Stretch: Tuck chin and tighten stomach rounding back. Let your stomach drop down and your back arch. Repeat 15 times, 3 sets.

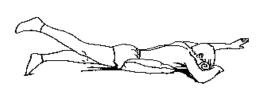


5. Pelvic Tilt: Flatten back by tightening stomach muscles and buttocks. Hold 10 seconds. Repeat 10 times.



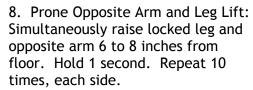
6. Press-up: Press upper body upward into position shown, keeping hips in contact with floor. Keep low back and buttocks relaxed. Hold 38 1 second, then return to the start position. Repeat 10 times.

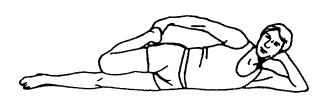


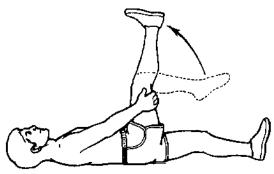


#### 7. Bridging:

Start in pelvic tilt position, lift your pelvis up and hold for 2-3 seconds, repeat. Progress to alternately extending your legs from the bent position while holding the pelvis level. This exercise focuses on the lower back and pelvis.







#### 9. Quadriceps Stretch: Lie on your side. Pull heel in toward buttocks until a comfortable stretch is felt in front of thigh. Hold 15-30 seconds. Do 3 times each side.

10. Active Hamstring Stretch Support back of thigh behind knee. Starting with knee bent, attempt to straighten knee until a comfortable stretch is felt in back of thigh. Hold 3 seconds. Repeat 10 times, each side.

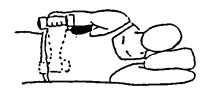
#### Shoulder Pain

Shoulder exercises: Choose 2 from the column on the right and 2 from the column on the left (skip any that cause pain):



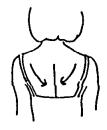
#### 1. Shoulder Blade Punch:

Attempt to push arms straight up towards ceiling while keeping back against floor and elbows straight. Repeat 15-30 times. Do 3 sets. Use weights (water bottles are a good option).



#### 2. External Rotation:

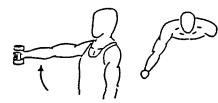
Lying on uninvolved side, place towel roll between upper arm and rib cage. Keep elbow bent to 90 degrees and tucked to side. Rotate arm upwards until horizontal.



3. Scapular Squeezes:

Slowly pinch shoulder blades down and back. Hold 3 seconds. Repeat

10 times. Do 3 sets.



#### 4. Shoulder Scaption:

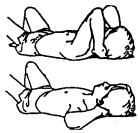
Hold weight with thumb pointing up at a 30 degree angle from forward. Lift arm to just below shoulder height (or lower if raising the arm higher causes pain). Use weights (water bottles are a good option). Do 3 sets of 10-15 repetitions.



5. Chair Push-Ups:

Seated in a chair with arms at side, slowly lift body weight off chair, keeping back straight. Repeat 10-15

times. Do 3 sets.



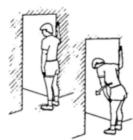
6. Retraction in External Rotation: With fingers clasped behind head, pull elbows back while pinching shoulder blades together. Repeat 10-15 times. Do 3 sets.

## Shoulder Pain

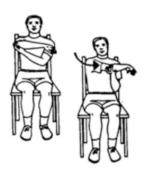
Shoulder stretches: Choose 2 (skip any that cause pain):



1. Horizontal Shoulder Doorway Stretch: Stand in front of doorway. Hands on doorframe at shoulder height. Tighten abdominal muscles keeping back straight. Step out and lean body forward, bending at ankles. Feel stretch in front of shoulders/chest. Hold 15-30 seconds. Repeat 2 times.



2. Medial Rotator/Horizontal Adductor Stretch: Stand in doorway. Bring arm to shoulder height, elbow bent to 90 degrees and forearm on doorframe. Tighten abdominal muscles, keeping back straight. Move trunk forward, bending at hips. Feel stretch in front of shoulder/chest. Hold 15-30 seconds. Repeat 2 times, each side.



3. Horizontal Shoulder Stretch: Hold onto elbow at shoulder height with opposite hand. Pull arm across chest. Keep trunk still. Feel stretch in back and side of shoulder. Hold 15-30 seconds. Repeat 2 times, each side.



4. Inferior Capsule Stretch: Gently pull elbow over head until a stretch is felt. Hold 15-30 seconds. Repeat 2 times, each side.

#### **Neck Pain**

Neck Stretches: Do all 3 (skip any that cause pain):

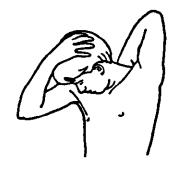


1. Lower Cervical/Upper Thoracic Stretch: Clasp hands together in front with arms extended. Gently pull shoulder blades apart and bend head forward. You should feel the stretch in your upper back. Hold 15-30 seconds. Repeat 3 times.



3. Chin Tuck:

Gently pull head straight back keeping jaw and eyes level. To intensify this exercise, put your hand on your chin and gently push back. You should feel a stretch in the back of the neck, under the base of the skull. Hold 3 seconds. Repeat 10 times.



2. Levator Scapulae Stretch:

Place hand on shoulder blade on one side. With your other hand gently stretch head down and away. You should feel the stretch at the base of your skull down to your shoulder blade. Hold 15-30 seconds. Repeat 3 times, each side.

### **Neck Pain**

Neck Exercises: Start with #1 and 2, and progress to #3 and 4 when these get easy (avoid if they cause pain):



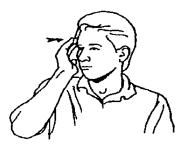
1. Isometric Lateral Bending (beginner: in neutral): Using light pressure from fingertips, press into side of head above ear. Resist bending sideways. Hold 3-5 seconds. Repeat 3-5 times, both directions.



2. Isometric Rotation (beginner: in neutral): Using light pressure from fingertips, press into temple/forehead area. Resist turning head. Hold 3-5 seconds. Repeat 3-5 times, both directions.



3. Isometric Lateral Bending (advanced: out of neutral): Tilt head toward shoulder. Apply light pressure to side of head just above ear and resist tilting head down further. Hold 3-5 seconds. Repeat 3-5 times, both directions.



4. Isometric Rotation (advanced: out of neutral): Turn head to side, apply light pressure to area just in front of temple, resist turning head further. Turn head to other side and repeat. Hold3-5 seconds. Repeat 3-5 times.

# Appendix E: Return to Run Progression

#### Guidelines:

- 1. Begin this program only if you are able to walk 30 minutes without symptoms at a moderately challenging pace.
- 2. Perform every other day only. Do not run two days in a row.
- 3. Perform at easy pace on <u>level surfaces</u> no hills. Treadmills are a good choice that allow easy monitoring of time/distance.
- 4. Use good jogging shoes that are not more than 6-9 months old (even if you were injured during that 6-9 months, that time still counts for the age of the shoe because the cushioning will break down with time alone).
- 5. Consider changing the kind of shoe you buy if your shoes may have contributed to your injury. Discuss with your medical provider if you are unsure of which shoes to wear.
- 6. Stop if you experience increased pain, swelling, or stiffness. Such symptoms might not arise until the day after running. Do not run again until these symptoms are gone, and then resuming running at the last phase in which running was pain- free. Discuss with your medical provider when in doubt.
- 7. Try each phase at least twice and progress if you experience no increased pain, swelling, or stiffness.
- 8. After phase 10, if greater running distance is desired, progress gradually by no more than 10 percent per week.

Begin each session with a 10 minute warm-up of walking or biking, followed by stretching if directed by your medical provider.

Phase	Walk (min)	Run (min)	Repetitions	Total Time (min)
THASE	waik (iiiii)	Run (IIIII)	Repetitions	
1	5	1	5	30
2	4	2	5	30
3	3	3	5	30
4	2	4	5	30
5	1	5	5	30
6	5	10	2	30
7	0	15	1	15
8	0	20	1	20
9	0	25	1	25
10	0	30	1	30

# Appendix F: Foot March Progression

New, unfit, or return from profile Soldier:

Week	Weight / Gear	Distance (mi)
1	IOTV no plates	2
2	IOTV with 1 plate	2.5
3	IOTV with 2 plates	3
4	IOTV with all 4 plates	3
5	IOTV with plates and assault pack with 10 lbs	3
6	IOTV with plates and assault pack with 10 lbs	4
7	IOTV with plates and assault pack with 15 lbs	4
8	IOTV with plates and assault pack with 15 lbs	5
9	IOTV with plates and assault pack with 20 lbs	5
10	IOTV with plates and assault pack with 20 lbs	6
11	IOTV with plates and assault pack with 20 lbs	7
12	IOTV with plates and assault pack with 20 lbs	8
13	IOTV with plates and assault pack with 20 lbs	9
14	IOTV with plates and assault pack with 20 lbs	10
15	IOTV with plates and assault pack with 20 lbs	11
16	IOTV with plates and assault pack with 20 lbs	12

#### For elite Soldiers and missions:

- o If your mission or MOS requires that you carry more weight, advance weight by no more than 5 lbs per week.
- o If your mission or MOS requires that you march a farther distance, do not increase both distance and weight at the same time.
- o Advance weight, then the next week advance distance.
- o Advance distance no more than 1 mile per week.

#### Reference weights:

Medium IOTV with all 4 plates (no ammunition): 30 lbs Large IOTV with all 4 plates (no ammunition): 35 lbs

# Appendix G: Understanding the Profile

#### Common questions:

- 1. What is the difference between a T and a P profile?
  - T stands for temporary and P stands for permanent
- 2. What makes a profile a 2 or 3 (ie T2, T3, P2, P3)?
  - Checking "NO" in any of the boxes listed under Section 5 (Functional Activities for Permanent and Temporary Profiles) means that it is a level 3. If all boxes are checked "YES," it is a level 2.
- 3. If APFT sit ups and APFT push ups are marked "NO," can I still practice them during physical training?
  - Yes, unless the text in section 10 says otherwise, this section (Section 6) is in reference to the APFT itself ONLY.
  - During the first 90 days of the profile for the same injury, any box checked "NO" in the column to the left means that this Soldier may not take a PT test; therefore all 3 must be checked "NO."
  - It is only after the first 90 days that an alternate event can be authorized and sit ups and push ups can again be marked "YES."
- 4. When can a profiled Soldier take an alternate PT test?
  - See question #3. Once a Soldier has been on a continuous profile for the same injury for 90 days, the medical care provider MAY authorize an alternate PT test event for the run. This applies for temporary profiles, not just permanent.
- 5. Is the short form sick slip (SF689) valid?
  - Yes. According to AR 40-501 section 7-8, the SF689 is a valid form a medical provider can use as a profile. It is only valid for up to 30 days.