



## The Dynamic Warm-Up

Most people's idea of stretching is technically known as "static stretching", where a stretch is held in a fixed position for 10 seconds or more. This is the kind of stretching that was taught in gym class many years ago. Hundreds of studies have proven that static stretching before an activity actually weakens muscles, decreases performance, and can actually increase the likelihood of injury. It has also been shown that static stretching puts the central nervous system to sleep. That is why static yoga moves are so effective for relaxation, but why static stretches are such a poor way to start before any kind of activity. At best, static stretching has no effect at all. At worst, it can actually be dangerous.

Dynamic stretching, on the other hand, is a useful way to improve pre-activity flexibility and prepare for work. Often called *mobility drills*, pre-activity dynamic stretching avoids many of the negative aspects associated with static stretching. By having people move through the range of motion specific to their job while still engaging the muscles, muscle and tendon temperature are increased preparing the elastic connective tissue for physical stress.

The following ten warm-up exercises have been selected to help you prepare for your daily activities. These exercises will help avoid injury and improve your flexibility. For best results, perform them in sequence. Your overall warm-up should take no longer than 10 minutes.

## Functional Strength Training

By definition "functional training" is training with a purpose, or having a positive effect on the activity or sport one is participating in. Functional strength training takes a multi-faceted and integrated approach to improving the strength and overall conditioning of those using it.

Originally, this functional approach was exclusive to the rehabilitation and sports medicine fields. Sports rehabilitation, performed by Certified Athletic Trainers and Physical Therapists, by nature had to not only return the patient to everyday living but also had to return him or her to the rigors of competitive sports.

Functional training must integrate all aspects of human movement. To get a better understanding of the approach needed, one must first become a student of human movement. Observing children at play, adults at work, and athletes in competition is a good place to start. Since life, like sport, is basically a chaotic, unpredictable event, one's training should reflect this reality to some extent.

In functional training, it is as critical to train the specific movement as it is to train the muscles involved in the movement. The brain, which controls muscular movement, thinks in terms of whole motions, not individual muscles.

Exercises that isolate joints and muscles are training muscles, not movements, which results in less functional improvement. For example, squats will have a greater "transfer effect" on improving an individual's ability to rise from a seated position than knee extensions.

**Questions on any of the exercises in this pamphlet can be directed to Public Safety Medical, fitness services department at 317.972.1180.**



## Dynamic Warm-Up

### Knee Hug

**REPETITIONS**  
10 each leg

**HOLD**  
3 seconds

**AFFECTED MUSCLE GROUPS**  
Hamstrings, Glutes  
(*back of leg and hip*)

### ACTION

Lift your knee to your chest and grab below the knee with your hands.

Pull your knee as close to your chest as you can while contracting your left glute. Return to the starting position and repeat on the other side.

### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Toes pulled up
- + Weighted leg extended



### Quad Stretch

**REPETITIONS**  
10 each leg

**HOLD**  
3 seconds

**AFFECTED MUSCLE GROUPS**  
Quadriceps, Hip Flexor  
(*front of leg*)

### ACTION

Bring your foot back and grab it with your hand. Pull your foot with your hand toward your buttocks. Hold an object or wall for support if needed.

### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Toes pulled up
- + Keep knee under hip



### Tin Soldier

**REPETITIONS**  
10 each leg

**AFFECTED MUSCLE GROUPS**  
Hamstrings (*back of leg*)

### ACTION

Swing your foot up to your hand. Alternate legs swinging across to opposite hand and then to same side. Hold an object or wall for support if needed.

### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Foot to hand
- + Across and same side





## Dynamic Warm-Up

### Leg Cradle

#### REPETITIONS

10 each leg

#### HOLD

3 seconds

#### AFFECTED MUSCLE GROUPS

Piriforms  
(*back of hip*)

### ACTION

Lift your leg and grab your foot and knee with your hands. With the hand outside the knee pull the knee toward the opposite shoulder until a comfortable stretch is felt.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Place hand outside knee
- + Pull knee across to opposite shoulder
- + Contract the buttocks



### IT Walking

#### REPETITIONS

10 each leg

#### AFFECTED MUSCLE GROUPS

Hamstrings, Gastrocnemius,  
Transverse Abdominis  
(*back of leg, calves, abs*)

### ACTION

Start with your arms straight up in the air to form an "I". Lean forward from the hip and stay square to the floor creating a "T". Hold "T" for 3 seconds.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Move same arm and leg together
- + Stay square to ground





## Dynamic Warm-Up

### Inchworm

#### REPETITIONS

10

#### AFFECTED MUSCLE GROUPS

Hamstrings, Gastrocnemius,  
Transverse Abdominis  
(*back of leg, calves, abs*)

#### ACTION

Start in a push-up position. Walk your feet towards your hands until you feel a stretch in the back of your legs. Hold 3 seconds. Slowly walk hands back to the push-up position.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Legs stay straight
- + Walk toes to hands



### Lunge and Twist

#### REPETITIONS

10 each leg

#### AFFECTED MUSCLE GROUPS

Hamstrings, Gastrocnemius,  
Quadriceps, Hip Flexor  
(*back & front of leg, calves*)

#### ACTION

Stand with your feet together, then step forward with one leg and bend your back knee to 90 degrees. Twist your torso to the left then right, extending your arms horizontally. Repeat with your other leg.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Knees face forward
- + Twist to both sides





## Dynamic Warm-Up

### Lateral Step with Band

**REPETITIONS**  
20 each direction

**AFFECTED MUSCLE GROUPS**  
Gluteus Medius  
(side of hip)

#### **ACTION**

Place loop band around both ankles. Start with feet shoulder-width apart. Keeping legs extended and toes straight ahead, step laterally. Return to shoulder width and repeat.

#### **TECHNIQUE COACHING POINTS**

- + Good posture
- + Abdominals tight
- + Toes straight ahead
- + Feet no closer than shoulder width
- + Legs straight



### Monster Walk

**SETS**  
2

**REPETITIONS**  
20 each leg forward and backwards

**AFFECTED MUSCLE GROUPS**  
Gluteus Maximus  
(back of hip)

#### **ACTION**

Keeping feet outside the shoulders and toes straight ahead. Keep legs extended take small, lateral steps moving forward.

#### **TECHNIQUE COACHING POINTS**

- + Good posture
- + Abdominals tight
- + Toes straight ahead
- + Feet outside shoulders
- + Legs straight





## Functional Strength Training

### Prone Plank

#### SETS

3

#### HOLD

30 to 60 seconds

#### AFFECTED MUSCLE GROUPS

Transverse Abdominis, Gluteus Maximus (*back of hip & abs*)

#### ACTION

Keep good body posture and a straight line from heels to head. Inhale and exhale in a controlled manner.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Butt squeezed
- + Shoulders over elbows
- + Legs straight



### Side Plank

#### SETS

3 each side

#### HOLD

30 to 60 seconds

#### AFFECTED MUSCLE GROUPS

Gluteus Medius, Quadratus (*side of hip*)

#### ACTION

With elbow underneath armpit, lie on your side with your legs straight. Rest your left hand on your hip. Brace your core lift and hold.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Elbow underneath armpit
- + Legs straight
- + Edge of shoe



### Glute Bridge (double or single leg)

#### SETS

3 each side

#### HOLD

30 to 60 seconds

#### AFFECTED MUSCLE GROUPS

Gluteus Maximus (*back of hips*)

#### ACTION

Dig heels into the ground. Squeeze glutes and raise hips. Extend leg without rotating hips.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Heels dug in & toes pulled up
- + Knees bent
- + Squeeze butt





## Functional Strength Training

### Push-Ups

#### SETS

3

#### REPS

20 to 30

#### AFFECTED MUSCLE GROUPS

Pectoralis Major  
(chest)

#### ACTION

Lay face down on the floor with your feet together. Place your hands directly below your shoulders. Raise yourself up using your arms while simultaneously breathing out.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Legs stay straight
- + Shoulders over hands



### Standing Chest Press with Band

#### SETS

3

#### REPS

20 to 30

#### AFFECTED MUSCLE GROUPS

Pectoralis Major  
(chest)

#### ACTION

Tighten your core press your hands forward until your arms are fully extended in front of you. Keep your arms straight and parallel to the floor.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Stagger stance
- + Back muscles relaxed



### Standing High Row with Band

#### SETS

3

#### REPS

20 to 30

#### AFFECTED MUSCLE GROUPS

Rhomboids  
(upper back)

#### ACTION

With your elbows 90 degrees and arms parallel to the floor. Keep back muscles relaxed. Squeeze shoulder blades. Pull back in a rowing motion.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Squeeze shoulder blades together
- + Back muscles relaxed





## Functional Strength Training

### Prisoner Squats

#### SETS

3

#### REPS

20 to 30

#### AFFECTED MUSCLE GROUPS

Gluteus Maximus, Quadriceps  
(back of hip, front of leg)

#### ACTION

Stand with your feet about shoulder width apart and arms straight out. Sit back like you are sitting into a chair. Drive back up through your heels and return to your starting position.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Knees over ankles
- + Arms straight out
- + Weight on heels
- + Sit butt back



### Forward Lunge

#### SETS

3

#### REPS

10 to 15 per leg

#### AFFECTED MUSCLE GROUPS

Hamstrings, Gastrocnemius,  
Quadriceps, Hip Flexor  
(back & front of leg, calves)

#### ACTION

Stand with your feet together, then step forward with one leg and bend your back knee to 90 degrees. Repeat with your other leg.

#### TECHNIQUE COACHING POINTS

- + Good posture
- + Abdominals tight
- + Knees over ankles
- + Toes and knees straight ahead





## 10 Mile Run Progression

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	10 min run	Functional Strength	10 min run	Rest/Stretch	10 min run	Rest/Stretch	10 mins run
2	11 min run	Functional Strength	11 min run	Rest/Stretch	11 min run	5 min run	Rest/Stretch
3	12 min run	Functional Strength	12 min run	Rest/Stretch	12 min run	Rest/Stretch	12 min run
4	13 min run	Functional Strength	13 min run	Rest/Stretch	13 min run	Rest/Stretch	13 min run
5	15 min run	Functional Strength	15 min run	Rest/Stretch	15 min run	Rest/Stretch	15 min run
6	18 min run	Functional Strength	18 min run	Rest/Stretch	18 min run	Rest/Stretch	18 min run
7	20 min run	Functional Strength	20 min run	Rest/Stretch	25 min run	Rest/Stretch	Rest/Stretch
8	30 min run	Functional Strength	30 min run	Rest/Stretch	35 min run	Rest/Stretch	Rest/Stretch
9	35 min run	Functional Strength	40 min run	Rest/Stretch	40 min run	Rest/Stretch	Rest/Stretch
10	45 min run	Functional Strength	45 min run	Rest/Stretch	50 min run	Rest/Stretch	Rest/Stretch
11	50 min run	Functional Strength	50 min run	Rest/Stretch	60 min run	Rest/Stretch	Rest/Stretch
12	60 min run	Functional Strength	60 min run	Rest/Stretch	65 min run	Rest/Stretch	Rest/Stretch
13	65 min run	Functional Strength	70 min run	Rest/Stretch	75 min run	Rest/Stretch	Rest/Stretch
14	80 min run	Functional Strength	80 min run	Rest/Stretch	80 min run	Rest/Stretch	Rest/Stretch
15	60 min run	Functional Strength	45 min run	Rest/Stretch	Rest/Stretch	85 min run	Rest/Stretch
16	60 min run	Functional Strength	60 min run	Rest/Stretch	Rest/Stretch	90 min run	Rest/Stretch
17	60 min run	Functional Strength	60 min run	Rest/Stretch	Rest/Stretch	90 min run	Rest/Stretch
18	70 min run	Functional Strength	70 min run	Rest/Stretch	Rest/Stretch	100 min run	Rest/Stretch
19	70 min run	Functional Strength	70 min run	Rest/Stretch	Rest/Stretch	110 min run	Rest/Stretch
20	70 min run	Functional Strength	70 min run	Rest/Stretch	Rest/Stretch	120 min run	Rest/Stretch



## **1-Mile Swim Progression**

- 1 mile=1650 meters
- Most pools are 25 meters, 1 length = 25 meters
- Warm ups- 50 meters slow
- Cool downs- 50 meters slow

### **Week #1**

#### **3 days of the following:**

- 4 lengths of pool kicking
- 10 x 100 (4 lengths)- resting after every 2 length for 2 minutes
- 4 lengths of pool kicking
- Cool down-50 meters (2 lengths)

### **Week #2**

#### **3 days of the following:**

- 6 lengths of pool kicking
- 10 x 100 (4 lengths)- resting after every 4 lengths for 1 minute
- 6 lengths of pool kicking
- Cool down-50 meters (2 lengths)

### **Week # 3**

#### **2 days of the following:**

- 6 lengths of pool kicking
- 10 x 100 (4 lengths)- resting after every 8 lengths for 1 minute
- Rest 5 minutes
- 4 x 25 meters-(1 length)- resting after each one for 30-seconds- 1 minute
- Cool down-50 meters (2 lengths)

#### **1 day of the following:**

- 10 lengths of the pool
- Rest 5 minutes
- 10 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 4**

### **2 days of the following:**

- 6 lengths of pool kicking
- 10 x 100 (4 lengths)- resting after every 12 lengths for 1 minute
- Rest 5 minutes
- 4 x 25 meters-(1 length)- resting after every 2
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 15 lengths of the pool
- Rest 5 minutes
- 15 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 5**

### **2 days of the following:**

- 6 lengths of pool kicking
- 10 x 100 (4 lengths)- resting after every 15 lengths for 1 minute
- Rest 5 minutes
- 4 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 20 lengths of the pool
- Rest 5 minutes
- 20 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 6**

### **2 days of the following:**

- 6 lengths of pool kicking
- 10 x 100 (4 lengths)- resting after every 18 lengths for 1 minute
- Rest 5 minutes
- 6 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 22 lengths of the pool
- Rest 5 minutes
- 20 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 7**

### **2 days of the following:**

- 8 lengths of pool kicking
- 10 x 100 (4 lengths)- resting after every 20 lengths for 1 minute
- Rest 5 minutes
- 6 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 25 lengths of the pool
- Rest 5 minutes
- 20 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 8**

### **2 days of the following:**

- 8 lengths of pool kicking
- 10 x 100 (4 lengths)- resting after every 30 lengths for 1 minute
- Rest 5 minutes
- 8 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 35 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 9**

### **2 days of the following:**

- 8 lengths of pool kicking
- 10 x 100 (4 lengths)
- Rest 5 minutes
- 8 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 40 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 10**

### **2 days of the following:**

- 8 lengths of pool kicking
- 10 x 100 (4 lengths)
- Rest 5 minutes
- 10 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 45 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week #11**

### **2 days of the following:**

- 8 lengths of pool kicking
- 10 x 100 (4 lengths)
- Rest 5 minutes
- 10 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 50 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 12**

### **2 days of the following:**

- 8 lengths of pool kicking
- 12 x 100 (4 lengths)
- Rest 5 minutes
- 10 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 55 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 13**

### **2 days of the following:**

- 8 lengths of pool kicking
- 12 x 100 (4 lengths)
- Rest 5 minutes
- 12 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 60 lengths of the pool
- Cool down- 50 meters (2 lengths)

## **Week # 14**

### **2 days of the following:**

- 8 lengths of pool kicking
- 12 x 100 (4 lengths)
- Rest 5 minutes
- 12 x 25 meters-(1 length)- no resting
- Cool down-50 meters (2 lengths)

### **1 day of the following:**

- 66 lengths of the pool
- Cool down- 50 meters (2 lengths)



## Treading Water Workout Plan

- The ideal kick is the breaststroke/frog kick (legs go up-out-together)
- Sculling is the best thing to do with your hands (cup your hand and move them back and forth)
- This workout is to be done once a week after swim workout.

### Week #1

- :30 seconds treading 1:00 minute rest
- :30 seconds treading 1:00 minute rest
- :30 treading

### Week #2

- 1:00 minute treading
- 1:00 minute rest
- 1:00 minute treading

### Week # 3

- 1:30 minute treading
- 1:00 minute rest
- 1:30 minute treading

### Week # 4

- 2:00 minute treading
- 1:00 minute rest
- 2:00 minute treading

### Week # 5

- 3:00 minute treading
- 1:00 minute rest
- 3:00 minute treading

## **Week # 6**

- 4:00 minute treading
- 1:00 minute rest
- 3:00 minute treading

## **Week # 7**

- 5:00 minute treading
- 4:00 minute rest

## **Week # 8**

- 6:00 minute treading
- 4:00 minute rest

## **Week # 9**

- 7:00 minute treading
- 3:00 minute rest

## **Week # 10**

- 8:00 minute treading
- 2:00 minute rest

## **Week # 11**

- 9:00 minute treading
- 1:00 minute rest

## **Week # 12**

- 10:00 minute treading

