



***Special  
Olympics***  
*British Columbia*

**Aquatics Sport Drill Book**  
**Updated August 2012**

## STEPS IN TEACHING A DRILL

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1. Introduce
2. Demonstrate
3. Explain
4. Organize
5. Execute
6. Correct
7. Practice

## GENERAL PRINCIPLES

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- Drills should relate specifically to what you are teaching.
- Athletes should be made aware of how drills relate to the sport.
- Drills should only be a part of your practice.
- Drills should be introduced at a slow pace and then gradually increased
- Drills should be accommodated for fitness, age and abilities.
- Drills should move from simple to complex. First perform drills that will help keep the interest of athletes.
- Drills should relate to the system of play that the athletes will use.
- Perform a variety of drills to prevent monotony.
- As fatigue sets in, technique deteriorates so provide frequent rest periods.

## EXECUTION PRINCIPLES

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- Review the drill procedure before practice so you know how it works.
- When introducing a new drill, walk a group of athletes through it so others can see how it is performed.
- Avoid talking too much, get the athletes performing, they will learn by doing.
- When errors occur, the drill should be stopped momentarily to correct errors.
- Praise those athletes doing the drill well and encourage those having difficulty.
- If equipment is necessary, ensure it is set up before so that progression from one drill to the next can progress smoothly.

# Warm Up

**Making warm ups a regular part of practice is important to warm up athletes' bodies and muscles before beginning to train. Follow up these water exercises with 5-10 minutes of stretching before moving into the basic motor skills.**

## **Walking:**

- Athletes walk in place or from one end of the pool to the other.

## **Jogging:**

- Athletes jog in place or from one end of the pool to the other.

## **Jumping Jacks and Knees Up:**

- Do 10 jumping jacks. Feel the arms and legs pushing against the water.
- Do 10 knee up jumps. Try to maintain a straight back and lift knees up.

## **Wall Kicks:**

- Athletes hold onto the side of the pool and kick for:
  - 30 sec with best technique
  - 30 sec as slow as possible
  - 30 sec as fast as possible
  - 30 sec with the splash
  - 30 sec with no splash

## **Breathing:**

- Swimmers hold on to the side of the pool with face in the water and practice side breathing.
- Turn head to the side keeping ear in the water
- Inhale
- Turn face flat into the water, exhale blowing into the water.
- Turn head to the other side, keeping ear in the water and inhale.
- Repeat 10 times.

## **Warm up Laps:**

- Swimmers may swim laps doing whichever stroke they want.

# Developmental Swimming Drills

## Floating Drills:

- Use a supporting device such as a pool noodle under their arms while they swimmer lays on their back in a star formation.
- Encourage swimmer to tilt chin up towards the ceiling instead of to their chest which will decrease their floating abilities.
- Also swimmers should lift their chest upwards which will provide more buoyancy.
- Swimmers should be able to recover into the standing position from a floating position.

## Glides:

- Glides are a really good progression from floats.
- Swimmers push off the wall and glide on their backs across the water, staying at the surface for a total of 5 sec.
- Rotate and perform a front glide on stomach with arms stretched out in front.
- Glide with and without kicks, glide with recovery to standing position, glide using a kickboard.

## Floating Flips:

- Once the swimmer is able to float on their backs, try to have them turn themselves over, like a pancake being flipped.
- On their stomach, athletes should have their faces in the water.
- Flip back and forth from front to back to increase the comfort level in the water and to help focus on breathing.
- Swimmers should be able to recover from a floating position to a standing position with no assistance.

## Wall Workouts:

- For beginner swimmers, have them hold on to the side of the wall and practice kicking. Encourage straight legs, no bent knees.
- Extend the arms holding onto the wall and practice blowing bubbles into the water while kicking.
- Next, practice turning head from side to side in the water to practice proper breathing technique.

# Developmental Swimming Drills

## **Breathing:**

- Progression for putting face in the water: chin, ears, nose, forehead.
- At each step practice inhaling and exhaling.
- Continue to submerge more of the face until the entire face is in the water.
- Practice inhale and exhaling the air in the water.

## **Object Diving:**

- Place objects such as rings, hockey pucks etc... at the bottom of the pool and have athletes retrieve them.
- Start by placing the objects in very shallow water and continue to increase the depth.

## **Kicking Drills:**

- Swimmers grip the kickboard over the front end and rest their arms on the board while kicking.
- Practice doing lengths with only one leg, the other and then together.

## **Strokes:**

- Swimmers grip edge of board and extend the board straight out in front.
- Begin doing a full stroke in the water and return to holding the board. Alternate arms and concentrate on performing the “S” formation in the water.
- Begin by doing one full lap with the right arm, then one full lap with the left arm and then one full lap with both arms.

## Frontcrawl:

### Body position:

- The body should remain streamlined throughout the stroke at all times.
- It is either rolled to its right side or rolled to its left side.
- A tilted, streamlined body = less friction and drag in the water.
- Alternate between right and left by rolling torso and hips from side to side.

### Head Position:

- Eyes should look forward 1-2 meters ahead in the pool.
- Head should be submerged so that face is flat in the water.
- Head is still except when turning to breathe from side to side.

### Leg Action:

- Flutterkick action serves to stabilize the body and set the tempo for the stroke.
- Leg action comes from the hip and not from the knees, there should be little knee bend.
- Ankles should be loose, but generally pointed.
- Leg action is continuous and rhythmic.

### Arm Action:

- The arm enters the water in line with the shoulder and almost fully extended in front.
- Fingers enter first, then the rest of the arm.
- Hand is at an angle, with the thumb pointing 45 degrees down.
- Hand should trace an “S” pattern in the water sculling outwards, inwards and the outwards again.
- Think of hand as a paddle, not cupped.
- During the inwards sculling, rotate the baby finger downwards so that the palm pushes the water.
- Continue this insweep until the hand is under midline of body.
- Change hand pitch back to outwards sculling position.
  
- Arm brushes past thigh (thumb almost touches)
- Elbow is raised, wrist relaxes and hand comes out of the water.
- Upper arm swings forward and prepares for next entry.

# Swimming Technique

## **Breathing:**

- Head should turn only enough to breathe.
- Breathing is coordinated with body roll.
- Exhale through the mouth and nose, inhale through the mouth.

## **Stroke Timing:**

- The entering arm is at its entry phase while the other is finishing the propulsive phase.

## **Front Crawl Drills:**

### **Single Arm Front Crawl:**

- Hold a flutter board with one arm or simply stretch the arm out in the water.
- Perform perfect strokes with the other arm.
- Change arms after each length or after certain amount of strokes.



### **Catch-Up:**

- Athletes hold a flutter board.
- Perform a complete arm cycle with one arm until it “catches” up to the other hand and touches it the board.
- Then complete an arm cycle with the other arm.
- Repeat.

### **Fist Swimming:**

- Swim the stroke with clenched fists.
- This is a tough arm workout and helps swimmers realize the arm’s contributions.

### **Side Breathing:**

- Practice alternating breathing from side to side, switching every 3 strokes.

## Breaststroke:

### Body position:

- Body is mostly streamlined and submerged during extension.
- Shoulders rise slightly above the surface during the arm recovery.
- Hips stay close to the surface of the water.
- The back should have a very little arch.

### Head Position:

- The head follows the natural movement of the shoulders going up and down.
- Coming down, the head sort of dives into the water and stretches out with the rest of the body into the streamline position.

### Leg Action:

- This action is mostly called the WHIPKICK.
- There are 3 phases of the kick.

#### *Recovery phase:*

- As shoulders rise, the knees naturally bend with the thighs and hips sinking.
- Draw the heels up towards the buttocks with the soles of the feet parallel to the surface.
- Knees slightly apart.
- This position should feel natural and relaxed.

#### *Catch phase:*

- Once feet are close to buttocks, rotate feet outwards.
- Separate the knees shoulder width apart.

#### *Propulsive phase:*

- Feet trace a semi circle backwards as legs thrust back to a fully extended position.
- During this propulsion, the knees are shoulder width apart and then the legs come together.
- This leg position is now ready to move back into the recovery phase.



# Swimming Technique

## **Arm Action:**

There are 3 phases to the arm action.

### *Catch:*

- Starts with arms spreading the water apart, palms mostly out.
- Outward-sculling action provides forward propulsion as arms form a Y.

### *Propulsive:*

- The catch blends into the propulsion.
- Hands tilt down and scull downwards, inward and backwards.
- This forces the shoulders to rise.
- The arm action is continuous until fully extended back.

### *Recovery:*

- Arms continue to scull.
- Shoulders descend as arms thrust forward.
- Elbows should be kept inside the width of shoulders.
- Palms face each other with thumbs facing up.
- Arms move into full extension forwards.

## **Breathing:**

- Take a breath at every stroke.
- Inhale through mouth during the insweep. (shoulders rise and arms scull in)
- Exhale through nose and mouth under water.

## **Timing:**

- When the feet are closest to the buttocks, the shoulders are highest out of the water.
- The legs are recovering as the arms are in the propulsive phase.
- Legs then complete propulsive phase as arms are recovering.

## **Teaching Tips:**

- Have swimmers practice the stroke while lying flat on the side of the pool.
- Start streamlines with feet flexed towards ceiling.
- In water, hold a kick board and practice the leg movement.
- Encourage swimmers to breathe out during the arm extension.
- Imagine trying to rise above a wave during the arm insweep.
  
- Stand in waist deep water, bend forward and practice going through the full arm action. Practice inhaling and exhaling in time with head movements.
- Lie prone in water supported by pull buoy.
- Practice the sculling movements- **down, in and back.**

## Backstroke:

### Body Position:

- Hips are just below the surface, high in the water.
- Head is slightly raised with shoulders rounded.
- Chest is above the surface.
- Body rolls on its axis.

### Head Position:

- Head is held in a tilted position.
- Face is clear out of the water with line of sight gazing past the feet.
- Ear lobes skim surface.

### Leg Action:

- A steady, continuous kick.
- Kicking action comes from the hips, knees DO NOT rise above surface.
- Ankles and feet relaxed causing a small water splash at surface.

### Arm Action:

There are 3 phases to the arm action which should each lead into each other.

#### *Entry phase:*

- Arm enters at approx. 11 and 1 o'clock.
- Little finger enters water first, fingers all kept together.
- Arm is almost fully extended.

#### *Propulsive phase:*

- Torso begins to roll towards the arm.
- As swimmer rolls, arm sinks and bends exerting pressure on water with hand.
- Arm continues to bend with elbow towards bottom of the pool and reaches 90 degrees at the shoulder. This is the most powerful point.
- Arm should feel like pushing a bucket of water towards feet.
- Arm continues until hand reaches thigh, fingers pointing down.

#### *Recovery phase:*

- Shoulder exits the water followed by the wrist.
- This is initiated by the natural body roll.
- As one shoulder raises out the other submerges.
- Hand is carried right over the shoulder, as it comes up and past the cheek.
- Focus on leading with the shoulder up through the water and over the body.

# Swimming Technique

## **Breathing:**

- Inhale through the nose.
- Exhale through the nose and mouth keeping both clear of water.
- Inhale with one arm recovery, exhale with the other arm recovery.

## **Timing:**

- As one arm finishes, the other arm is ready to start the next propulsion phase.

## **Teaching Tips:**

- Keep chest elevated and look at upwards.
- Practice kicking with both arm stretched out on behind and on either side of the head, one hand on top of the other.
- Lay on a bench to practice the entire arm movement.

## **Drills:**

### **Kicking:**

- Lay on back, with arm fully extended holding a kickboard.
- Practice proper kicking form.

### **Single arm backstroke:**

- Establish proper body position.
- Swim one length using only one arm.
- Focus on the propulsive action. Switch arms.

### **Countdown:**

- Do 3 right arm strokes, then 3 left arms strokes.
- Then do 2 right arm strokes, then 2 left arm strokes, etc.

## Butterfly:

### Body Position:

- Action is like a dolphin and is continuous- a wavelike action.
- Hips should stay close to the surface at all times.
- Back will arch when head comes up to breathe.

### Head Position:

- Forehead remains at waterline, except when breathing.
- Head tilts up, with chin moving towards surface, as swimmer takes breath.
- Head always enters and exits before the hands.

### Leg Action:

- Leg action is similar to a dolphin kick.
- Legs stay together and the kick originates at the hips.
- Each kick consists of the downwards and upwards.
- Knees lead the legs on the downward of the kick.
- The upkick lowers the hips and prepares the legs for the next downkick.
- During the upkick, legs should be fully extended with feet relaxed.
- Both kicks should feel almost the same.
- There are 2 leg kick to every 1 arm pull.

### Arm Action:

The arm action has 3 phases which lead into each other.

#### *Entry phase:*

- Arms enter shoulder width apart.
- Elbows are slightly flexed outwards
- Hands are rotated inwards with thumbs pointing down.
- Shoulders submerge first followed by the hands.

#### *Propulsive phase:*

- Hands scull outwards to catch the water.
- Elbows stay high and then the inwards sculling starts.
- Elbows angle down and scull inward, under, backwards and outwards.
- Think of this sculling action as the shape of an S.

# Swimming Technique

## *Recovery phase:*

- Hands end up down by thighs, wide and relaxed.
- Elbows lift out of the water first, followed by hands.
- Arms swing forward in semi circle formation.
- Hands are relaxed.
- Arms extend fully once hands enter the water again.

## **Timing:**

- The head movement must be in time with the arm action.
- The arm action must be coordinated with the leg action.
- Head lifts as arms move through the propulsion.
- First down kick occurs just after the arm entry and the second downward kick is as the propulsive phase ends.

## **Teaching Tips:**

- Have swimmers learn the hips movement.
- Push off the wall with hands by side and practice the dolphin legs.
- Next move to having arms extended up by head and do the dolphin kick.
- Perform the arm movement in waist deep water  
Bend over so torso is water and work through the arm action.

## Single arm action:

- Using a pull buoy or while doing the dolphin kick.
- Have one arm straight out in front, while the other performs the stroke.
- Have swimmer tilt to one side to breathe, it is easier.

# Swimming Skills

## **Kicking:**

- Torpedo kicking: Swimmers kick while lying prone with their arms stretched out and in front.
- Kickboard kicking: Swimmers grip the kickboard over the front end and rest the arms on the board while kicking. Concentrate on full leg action and body movement.
- One legged kick:: Again gripping the kickboard but only using one leg.
- Timing: Swimmers performs laps and think about increasing the speed of kicking during last 5-8 meters.

## **Sculling:**

- Keep all fingers clued together and create a small cup with the hand.
- Practice pushing and pulling the hands through the water to get a sense of water movement.
- Move onto doing figure 8's in the water with hands to propel the body in the water.
- Lay flat on back and practice figure 8's across the pool.

## **Diving:**

Learning to dive is a progression. At each stage, look for arms up at the ears, keep the head down (don't look up), clasp hands together creating a shield for your head.

- Perform a sitting dive from the side of the pool
- Perform a kneeling front dive with assistance
- Perform a kneeling front dive without assistance
- Demonstrates a standing one leg front dive
- Demonstrates a standing front dive with no assistance.

# Swimming Skills

## **Diving Starts:**

- Place feet shoulder width apart at the edge of the starting platform.
- Have toes grip the edge.
- Bend forward and grasp the front- balance should be over balls of feet.
- Bring shoulder and ears in near the knees.
- At the starting signal, hands come forward and legs flex and then spring forward off the block.
- At the top of the flight, the arms are pointing downwards and slightly forwards.
- Head is dropped between arms.
- Curve the body to enter the body into the water.
- As swimmer hits the water, angle hands to direct the body in a streamline position.
- Focus on being streamline and gliding.

# Practice Plan

## **Unstructured Free Play (10 min)**

Prior to the practice athletes who have arrived early should be encouraged to participate in free play activities.

## **Warm Up (10-12 min)**

Warm up should start with a light jog to get the athletes' heart pumping. Athletes should then gather to stretch, starting slowly and gradually involving all the muscles and body parts to be utilized in the exercise related instruction phase of the practice.

## **Basic Motor Skills (15-20 min)**

Basic Motor Skills are defined as the very simplest movement skills (i.e. running, kicking, jumping, throwing, catching, etc). This phase starts with known content and progresses to the application of skill(s) resembling the game/competition, allowing athletes to fine-tune these basic skills to enhance the acquisition of sport skills. It should focus on one specific skill at a time. The combination of 2 or more skills will be encompassed in the next section.

## **Sport Specific Skills (15-20 min)**

During this phase the athletes will combine several basic motor skills and practice the skills as demonstrated during the instruction. Emphasis should be placed on creating competition-like conditions (through game-like drills) during this phase.

## **Fitness (12-20 min)**

This phase involved physical conditioning activities that are specific to the fitness needs of your sport. This is done by setting continual work/pause ratios (through circuits) for your athletes that stress the correct energy system(s). Fitness encompasses cardio, muscular strength, muscular endurance and flexibility.

## **Simulated Game (10-15 min; for team sports only)**

During this phase athletes will compete in a competition-like setting to incorporate all the skills they have learned as well as the rules of the sport. Infractions should be called so that the athletes learn all aspects of the sport.

## **Cool Down (5-8 min)**

Don't forget this portion. Cool downs are a vital part of a practice as they allow the heart rate to return to normal. Stretching should also be included at this time to prevent sore muscles the next day.

## **Evaluation/Tips (5-10 min)**

Evaluation is used to assess the effectiveness of specific activities or the total practice. It is helpful to spend a few minutes with your athletes at the end of a practice to get some feedback on the practice session. It can take the form of a 5 minute rap session about things that went well and things that the athletes and/or coaches need to work on. The topics discussed can be built into the next week's practice. All around training should also encompass nutrition and/or mental training so it is important to discuss these items with your athletes as well.

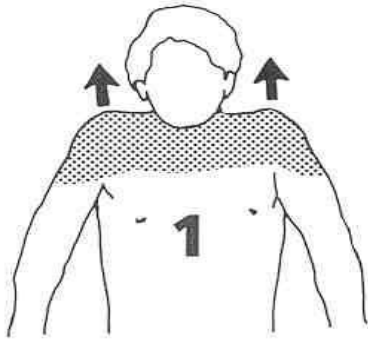
\*\*NOTE: for additional resources, go to [www.specialolympics.bc.ca](http://www.specialolympics.bc.ca) and click on Resources\*\*



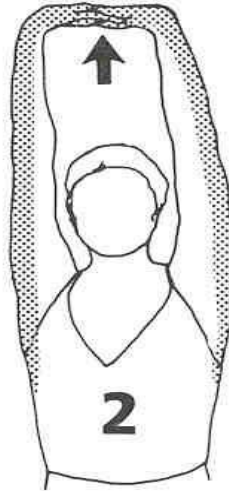
# Before and After Swimming

Approximately 5 Minutes

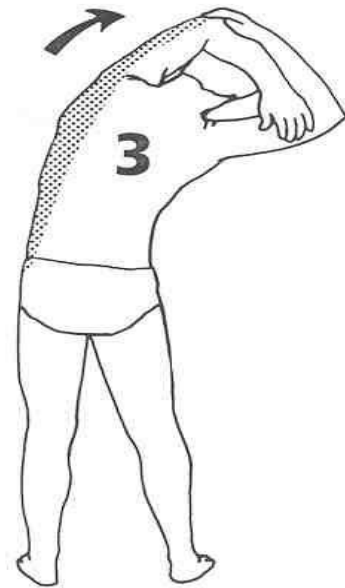
Walk with a big arm swing for 2-3 minutes before stretching.



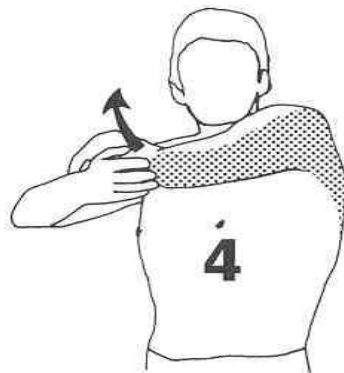
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10-15 seconds  
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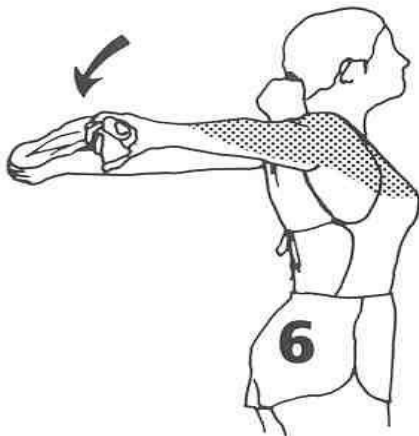
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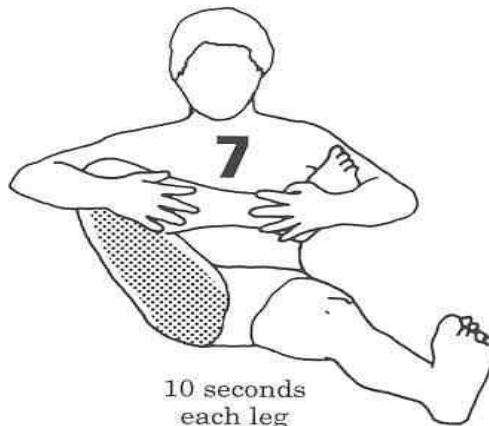
15 seconds  
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15 seconds  
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10 seconds  
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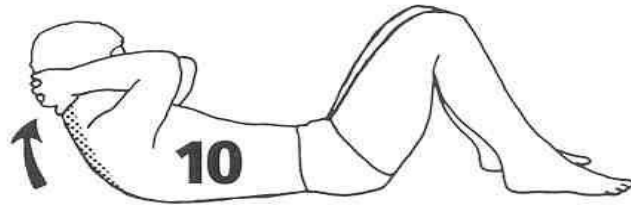
10 seconds  
each leg  
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15 seconds  
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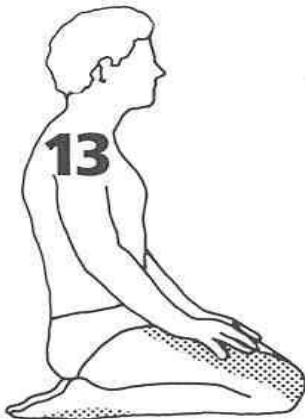
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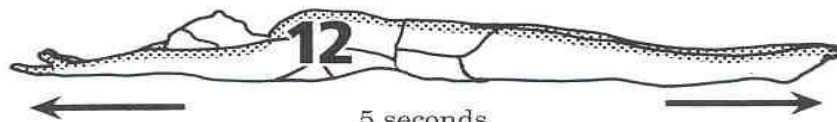
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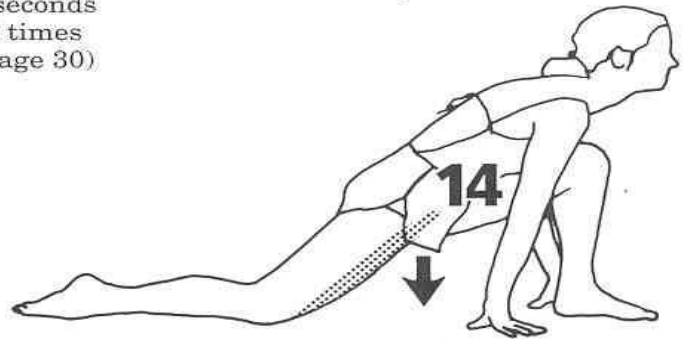
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15 seconds  
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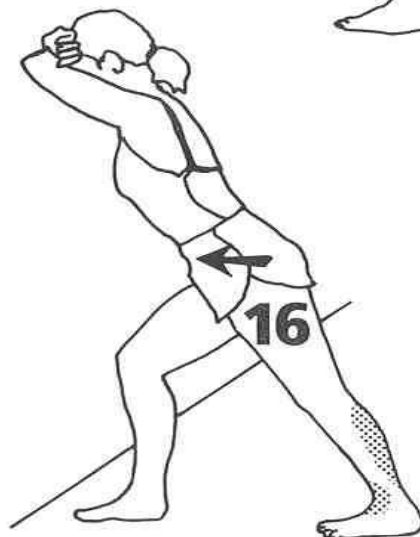
5 seconds  
2 times  
(page 30)



15 seconds  
each leg  
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15 seconds  
(page 65)



15 seconds  
each leg  
(page 71)

**Short on time?**  
Do this mini-routine:  
2, 4, 5, 13, 14, 15  
Approx. 2 minutes