



**COMMON TRAINING
GREEN STAR
INSTRUCTIONAL GUIDE**



**SECTION 2
EO C111.02 – RUN WIND SPRINTS**

Total Time:	30 min
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PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-701/PG-001, *Green Star Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Ensure a first aid station is set up during the practical activities.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1 and 2 to introduce cadets to the methods of preparing for a biathlon activity and running techniques.

A practical activity was chosen for TPs 3–5 as it is an interactive way to introduce the cadets to running skills in a safe and controlled environment. This activity contributes to the development of running skills and knowledge in a fun and challenging setting.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to have run wind sprints.

IMPORTANCE

It is important for cadets to run wind sprints because it is a method of increasing endurance, which will be useful when participating in summer biathlon activities.

Teaching Point 1**Explain how to prepare for summer biathlon activities.**

Time: 5 min

Method: Interactive Lecture

CLOTHING

Clothing worn while running is important for keeping the body temperature regulated as well as providing freedom of movement. Layering clothing is important because it maintains body heat and ensures comfort while outdoors.



Show examples of the clothing used for the different layers as they are described.

The Base / Core Layer

The layer next to the skin is called the base layer. It may consist of a synthetic undershirt that is close fitting but not tight. It should be made of a material that will absorb perspiration and move it away from the skin, such as polyester.



Damp clothes draw heat from the body, even in conditions above freezing. This rapid heat loss can cause a dangerous drop in body temperature.

The Mid-Layer

The second layer, called the mid-layer, provides insulation and moves moisture away from the base layer. This layer should be snug, but not constricting. It may consist of a zip-up shirt with a high neck or a shirt with a collar. In hot weather, this layer may be used as an outside layer.

The Outer Layer

The final layer, called the outer layer, provides protection from the elements. It should allow air to circulate and excess moisture to escape. It may consist of a wind shell or a waterproof rain jacket.

It is easier to stay warm rather than trying to warm up after getting cold. Additional insulating layers may be required to keep warm when sitting still in cold temperatures. Most of the heat from a person's body is lost through the head and face. It is always best to wear something on the head regardless of the weather conditions. In the summer, a hat protects the head from the sun and provides shade, while in the winter, a hat helps stop the heat from escaping.

FOOTWEAR

Running shoes should fit comfortably when laced up. Always wear clean, dry socks when wearing running shoes.

HYDRATION

The body is made up of over 60 percent water therefore hydration is crucial, particularly when participating in physical activity. The body continuously loses water through breathing, sweating, and urinating. It is recommended that water be drunk approximately two hours before exercise, often during exercise, and after exercise. Sports drinks are an alternative to water for those who run more than 4 km at one time, or who participate in more than an hour of moderate physical activity.

NUTRITION

It is important to follow the guidelines for healthy eating outlined in *Canada's Food Guide*, particularly for those who are physically active. Meals should be eaten at least 30 minutes prior to physical activity to allow time for the food to digest.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

- Q1. Why is it important to layer your clothing?
- Q2. What percentage of the body is made up of water?
- Q3. Where can the guidelines for healthy eating be found?

ANTICIPATED ANSWERS:

- A1. It is important to layer clothing to maintain body heat and ensure comfort while outdoors.
- A2. Over 60 percent of the body is made up of water.
- A3. They can be found in *Canada's Food Guide*.

Teaching Point 2

Describe running techniques.

Time: 5 min

Method: Interactive Lecture

PACING

Pacing is the speed that should be run in order to cover the distance. It is essential to every runner and is important for maintaining energy and endurance. Individuals should pace themselves based on the signs felt from the body and the environmental conditions. An individual who cannot speak as they are running is considered to be running too fast or too long. This will prevent an individual from being able to run as long as runners who pace themselves accordingly.

In the beginning, the pace should be the anticipated average speed for the run. The pace may be increased at the halfway point, if this pace can be maintained for the remainder of the run. Towards the end of the run, energy should be gauged to determine if speed could be increased for the final portion of the run.



A good method for determining a comfortable pace is to use the “talk test”. A runner should be able to talk comfortably while running, if not, the pace should be adjusted.

POSTURE / BODY ALIGNMENT

Having proper posture / body alignment can make running easier on the body and can increase an individual's performance. Basic techniques for posture / body alignment include keeping the hands at waist level to prevent tension in the arms and shoulders; remaining straight and erect, with head up, back straight, and shoulders level, to prevent shin splints and lower-back pain; and landing softly on the feet to avoid bouncing and to prevent wasting energy and to prevent injuries to the feet and legs.

WIND SPRINTS

Wind sprints are short bursts of high intensity movement conducted during regular aerobic activity, meant to make a person momentarily winded. For optimal benefits, physical activity must be continued after the wind

sprint is completed. Wind sprints can be conducted during any type of aerobic activity (eg, running, cycling, or swimming). Regular training with wind sprints may increase overall athletic performance.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

- Q1. Why is pacing important for running?
- Q2. What is a good method of determining a comfortable pace for running?
- Q3. Describe one technique for posture / body alignment while running.

ANTICIPATED ANSWERS:

- A1. Pacing is important for runners to maintain energy and endurance.
- A2. The talk test is a good method of determining a comfortable pace for running.
- A3. Basic techniques for posture / body alignment include:
- keeping the hands at waist level, to prevent tension in the arms and shoulders;
 - remaining straight and erect, with head up, back straight, and shoulders level, to prevent shin splints and lower-back pain; and
 - landing softly on the feet to avoid bouncing and to prevent wasting energy and to prevent injuries to the feet and legs.

Teaching Point 3

Conduct a warm-up activity consisting of light cardiovascular exercises.

Time: 5 min

Method: Practical Activity



The following information will be explained to the cadets during the warm-up activity.

PURPOSE OF A WARM-UP

A warm-up is composed of stretches and light cardiovascular exercises designed to:

- stretch the muscles;
- gradually increase respiratory action and heart rate;
- expand the muscles' capillaries to accommodate the increase in blood circulation which occurs during physical activity; and
- raise the muscle temperature to facilitate reactions in muscle tissue.

GUIDELINES FOR STRETCHING

The following guidelines should be followed while stretching to prepare for physical activity and to help prevent injury:

- Stretch all major muscle groups, including the back, chest, legs, and shoulders.
- Never bounce while stretching.
- Hold each stretch for 10–30 seconds to let the muscles release fully.
- Repeat each stretch two to three times.
- When holding a stretch, support the limb at the joint.
- Static stretching, which is stretching a muscle and holding it in position without discomfort for 10–30 seconds, is considered the safest method.
- Stretching helps to relax the muscles and improve flexibility, which is the range of motion in the joints.
- As a guide, allow 10 minutes to warm up for every hour of physical activity.



The stretches chosen should focus on the areas of the body that will be used the most during the sports activity.

ACTIVITY

OBJECTIVE

The objective of this warm-up activity is to stretch the muscles and perform light cardiovascular exercises to prepare the body for physical activity and to help prevent injuries.

RESOURCES

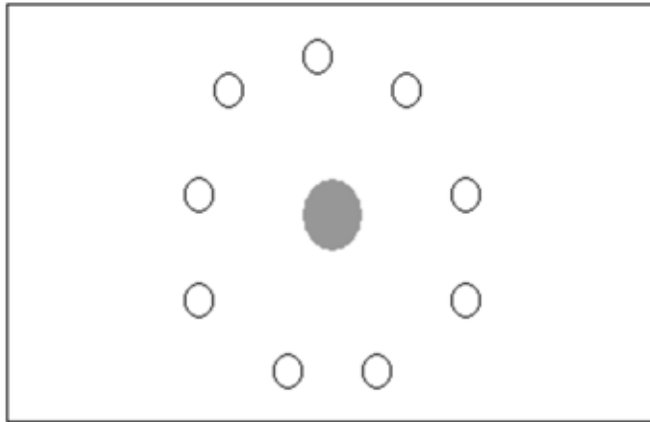
Nil.

ACTIVITY LAYOUT

Nil.

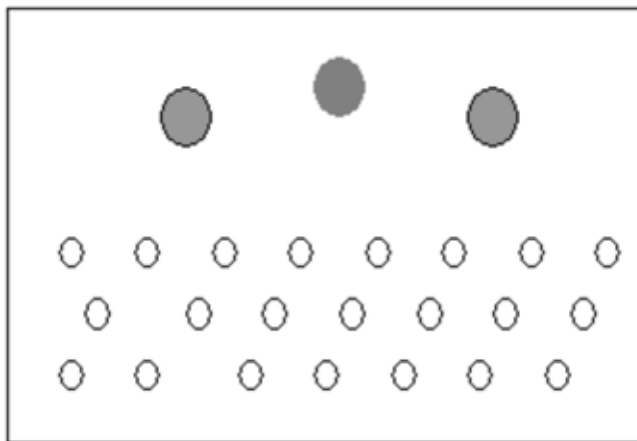
ACTIVITY INSTRUCTIONS

- Arrange the cadets in either a warm-up circle or in rows (as illustrated in Figures 1 and 2).



Note. Created by D Cdts 3, 2006, Ottawa, ON: Department of National Defence.

Figure 1 Instructor in the Centre of a Warm-Up Circle



Note. Created by D Cdts 3, 2006, Ottawa, ON: Department of National Defence.

Figure 2 Instructor at the Front with Two Assistant Instructors

- Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.
- Assistant instructors can help demonstrate the exercises and ensure the cadets are performing them correctly.
- Have cadets perform each stretch / light cardiovascular exercise.



Light cardiovascular activities should be done to warm up the muscles prior to stretching to avoid injury to or tearing of the muscles. For example, running on the spot for 30 seconds or performing jumping jacks should be performed prior to conducting the stretching activities located at Attachment A.

SAFETY

- Ensure there are at least two arm lengths between the cadets so they can move freely.
- Ensure the cadets perform the stretches and light cardiovascular exercises in a safe manner, following the guidelines for stretching listed in this TP.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in the warm-up will serve as the confirmation of this TP.

Teaching Point 4**Supervise while the cadets run wind sprints.**

Time: 5 min

Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets practice running short wind sprints.

RESOURCES

- Area with level terrain that is large enough to conduct a run, and
- A whistle.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Have the cadets run at a comfortable pace.
- During the run, have the cadets complete a minimum of two wind sprints. To do a wind sprint:
 - give the cadets a warning before they start the wind sprint;
 - sound the start;
 - have the cadets run as fast as they can for approximately 30 seconds;
 - sound the finish of the sprint; and
 - instruct the cadets to return to their normal pace.

SAFETY

- Ensure a designated first aider and first aid kit are available.
- Ensure water is available for the cadets after they complete the run.

CONFIRMATION OF TEACHING POINT 4

The cadets' participation in running wind sprints will serve as the confirmation of this TP.

Teaching Point 5**Conduct a cool-down session composed of light cardiovascular exercises.**

Time: 5 min

Method: Practical Activity



The following information will be explained to the cadets during the cool-down activity.

PURPOSE OF A COOL-DOWN

A cool-down is composed of stretches and light cardiovascular exercises designed to:

- allow the body time to slowly recover from physical activity and to help prevent injury;
- prepare the respiratory system to return to its normal state; and
- stretch the muscles to help relax and restore them to their resting length.



The stretches chosen should focus on the areas of the body that were used the most during the sports activity.

ACTIVITY**OBJECTIVE**

The objective of the cool-down is to stretch the muscles and perform light cardiovascular exercises that allow the body time to recover from physical activity, and to prevent injury.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

- Arrange the cadets in either a warm-up circle or in rows (as illustrated in Figures 1 and 2 of TP 3).
- Demonstrate before having the cadets attempt each stretch / light cardiovascular exercise.
- Assistant instructors can help demonstrate the movements and ensure the cadets are performing them correctly.
- Have cadets perform each stretch / light cardiovascular exercise.

SAFETY

- Ensure there are at least two arm lengths between the cadets so they can move freely.
- Ensure the cadets perform the stretches and light cardiovascular exercises in a safe manner, following the guidelines for stretching listed in TP 3.

CONFIRMATION OF TEACHING POINT 5

The cadets' participation in the cool-down will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in running wind sprints will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Wind sprints are a fun and challenging activity that may increase the overall athletic performance of an individual, which will be valuable when participating in summer biathlon activities.

INSTRUCTOR NOTES / REMARKS

Pictures of the clothing, hydration, and nutrition choices may be used in place of the actual items, if these items are not available.

REFERENCES

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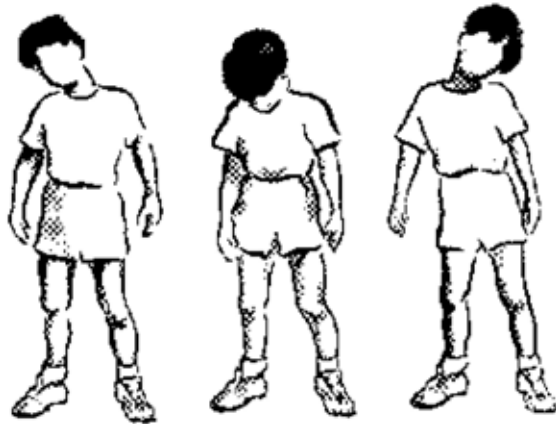
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SAMPLE STRETCHES

a. Neck:







Note. From Moving on the Spot: A Collection of 5 Minute Stretch and Movement Sessions, by B. Hanson, (1999), Toronto, Ontario: Toronto Public Health. Retrieved October 26, 2006, from <http://www.lin.ca/resource/html/dn3.htm#1>

Figure A-1 Neck Stretch

Slowly roll your head across your chest from shoulder to shoulder. Do not roll your head backwards.

b. Shoulders:

 <p><i>Note. From Moving on the Spot: A Collection of 5 minute Stretch and Movement Sessions, by B. Hanson, (1999), Toronto, Ontario: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#1</i></p> <p>Figure A-2 Shoulder Push</p>	<p>Stand and extend your arms behind you, interlocking your fingers. Push up and back with your shoulders.</p> <p>Hold this position for a minimum of 10 seconds.</p>
 <p><i>Note. From Moving on the Spot: A Collection of 5 minute Stretch and Movement Sessions, by B. Hanson, (1999), Toronto, Ontario: Toronto Public Health. Retrieved October 26, 2006, from http://www.lin.ca/resource/html/dn3.htm#1</i></p> <p>Figure A-3 Shoulder Shrug</p>	<p>Stand and raise your shoulders as high as possible and then lower your shoulders, stretching your neck up.</p> <p>Pull your shoulders back as far as possible and then round your shoulders forward by pushing your shoulders forward as far as possible.</p> <p>Hold each position for a minimum of 10 seconds.</p>
 <p><i>Note. From Warm Ups, by Martha Jefferson Hospital, Copyright 2001 by Martha Jefferson Hospital. Retrieved October 26, 2006, from http://www.marthajefferson.org/warmup.php</i></p> <p>Figure A-4 Arm Circles</p>	<p>Hold your arms straight out, palms up. Make small circles with your arms, gradually increasing the size.</p> <p>Reverse the direction of your circles.</p>
 <p><i>Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/</i></p> <p>Figure A-5 Shoulder Stretch</p>	<p>Either standing or sitting, take your right arm in your left hand and bring it across your chest, supporting the joint by holding it behind the elbow. Pull lightly on the elbow towards your chest. You should feel the stretch in your right shoulder.</p> <p>Hold this position for a minimum of 10 seconds and repeat on the opposite side.</p>

c. Arms:



Note. From Exercises. Copyright 1998 by Impacto Protective Products Inc. Retrieved October 26, 2006, from <http://www.2protect.com/home.htm>

Figure A-6 Wrist Rotations

Rotate your hands in circular motions at the wrist.
Change direction and repeat on both sides.



Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from <http://www.in-motion.ca/walkingworkout/plan/flexibility/>

Figure A-7 Triceps Stretch

Stand and bring your right arm over your head, bent at the elbow. Use your left hand to gently pull your arm down.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.



Note. From Exercise Programme for Squash, Tennis, Softball, Handball. Retrieved October 26, 2006, from <http://www.physionline.co.za/conditions/article.asp?id=49>

Figure A-8 Forearm Stretch

In a kneeling position, place your hands on the floor in front of you turned so that your fingers are pointing toward your knees, and your thumbs are pointing out. Keeping your hands flat on the floor, lean back.

Hold this position for a minimum of 10 seconds.

d. Chest and Abdominals:



Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from <http://www.in-motion.ca/walkingworkout/plan/flexibility/>

Figure A-9 Chest Stretch

Stand facing a wall. With your right arm bent and your elbow at shoulder height, place your palm against the wall. Turn your body away from your right arm. You should feel the stretch on the front side of your armpit and across the front of your chest.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.



Note. From Moving on the Spot: A Collection of 5 minute Stretch and Movement Sessions, by B. Hanson, (1999), Toronto, Ontario: Toronto Public Health. Retrieved October 26, 2006, from <http://www.lin.ca/resource/html/dn3.htm#1>

Figure A-10 Side Stretch

Stand with your left arm up over your head. Bend at your waist towards the right side of your body.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.

e. Back:



Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from <http://www.in-motion.ca/walkingworkout/plan/flexibility/>

Figure A-11 Lower Back Stretch

Lie on your back and bring your knees toward your chest. Grasp the back of your knees.
Hold this position for a minimum of 10 seconds.



Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from <http://www.in-motion.ca/walkingworkout/plan/flexibility/>

Figure A-12 Upper Back Stretch

Extend your arms straight in front of you at shoulder height crossing one arm over the other. With the palms facing each other, intertwine your fingers and press out through your arms. Let your chin fall to your chest as you exhale. You should feel the stretch in the upper back.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.

f. Legs:



Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from <http://www.in-motion.ca/walkingworkout/plan/flexibility/>

Figure A-13 Hamstring Stretch

Lie flat on the floor with your knees bent and your back flat on the floor. Slowly raise and straighten one leg, grasping it behind your thigh with both hands.

Hold this position for a minimum of 10 seconds.



Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from <http://www.in-motion.ca/walkingworkout/plan/flexibility/>

Figure A-14 Inner Thigh Stretch

Sit on the floor with your knees bent and the soles of your feet together. Grab your toes and pull yourself forward while keeping your back and neck straight.

Hold this position for a minimum of 10 seconds.

Grab your ankles and push your knees down toward the floor with your elbows.

Hold this position for a minimum of 10 seconds.






Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from <http://www.in-motion.ca/walkingworkout/plan/flexibility/>

Figure A-15 Hip Flexor

Kneel on your right knee. Position your left foot in front of you, bending your knee and placing your left hand on that leg for stability. Keep your back straight and abdominal muscles tight. Lean forward, shifting more body weight onto your front leg. You should feel the stretch in the front of your hip and the thigh of the leg you are kneeling on. Cushion your kneecap with a folded towel if necessary.

Hold this position for a minimum of 10 seconds and repeat on the opposite side.

f. Legs Continued:

 <p><i>Note. From Running Exercises. Retrieved October 26, 2006, http://www.physionline.co.za/conditions/article.asp?id=46</i></p> <p>Figure A-16 Ankle Rotations</p>	<p>From a sitting position, rotate your foot in a clockwise, and then a counter-clockwise, direction.</p> <p>Switch and repeat on the opposite side.</p>
 <p><i>Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/</i></p> <p>Figure A-17 Calf Stretch</p>	<p>Stand three steps away from and facing a wall. Step in towards the wall with your right leg, bending your right knee and keeping your left leg straight. Extending your arms with your palms forward, reach out to the wall and let your body fall toward the wall. Keep your toes forward and your heels down. Lean your body into the wall with your left leg straight behind your body. You should feel the stretch in your left calf.</p> <p>Hold this position for a minimum of 10 seconds and repeat on the opposite side.</p>
 <p><i>Note. From Smart Start: A Flexible Way to Get Fit. Retrieved October 26, 2006, from http://www.in-motion.ca/walkingworkout/plan/flexibility/</i></p> <p>Figure A-18 Quadriceps Stretch</p>	<p>Stand with your hand against a wall for balance. Lift your left foot off the ground, bending your knee as if you are trying to kick your bottom with your heel. Do not lean forward at the hips. Grab and hold your ankle with your left hand. You should feel the stretch in your left thigh.</p> <p>Hold this position for a minimum of 10 seconds and repeat on the opposite side.</p>