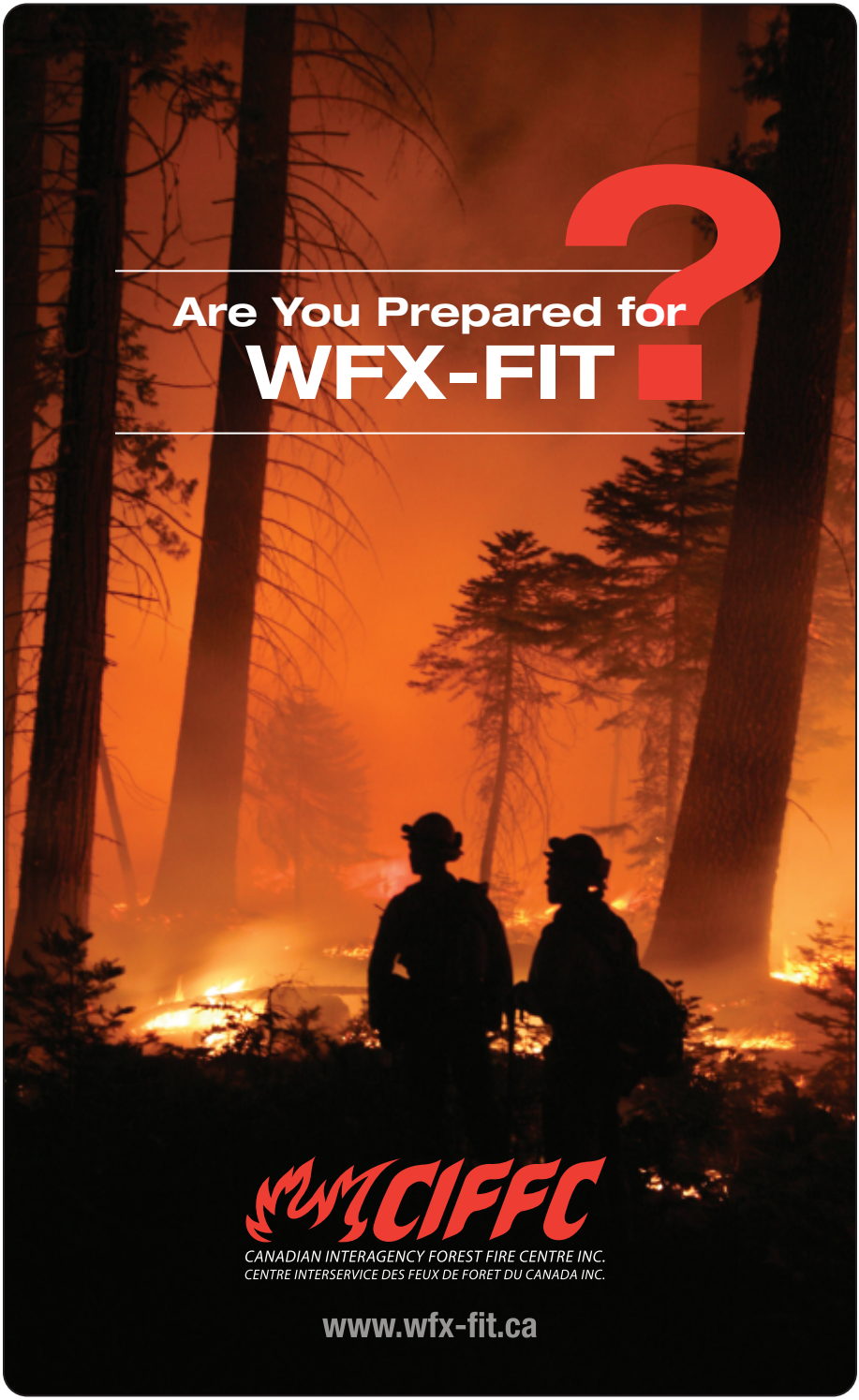
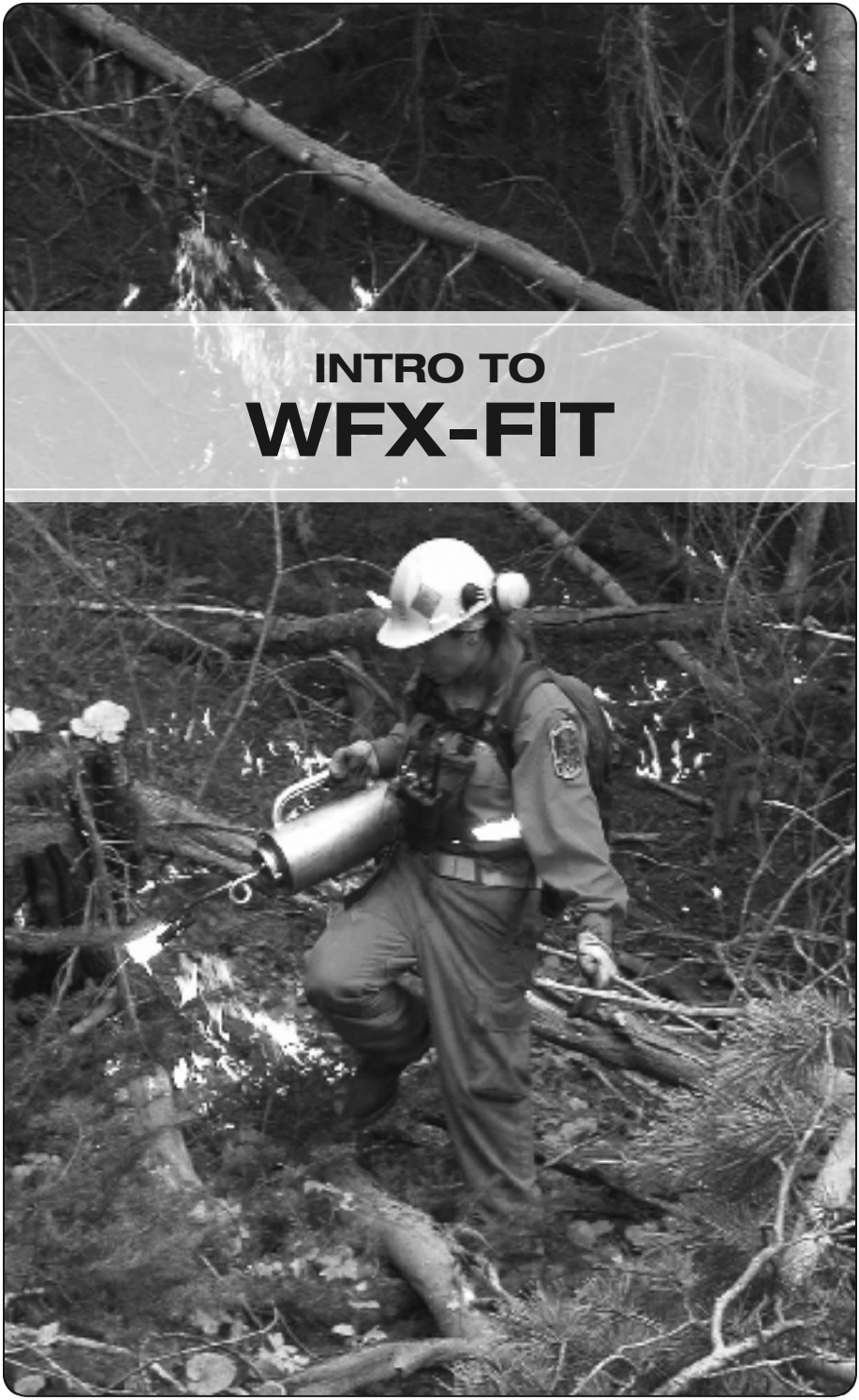

Are You Prepared for
WFX-FIT?
CIFFC
CANADIAN INTERAGENCY FOREST FIRE CENTRE INC.
CENTRE INTERSERVICE DES FEUX DE FORET DU CANADA INC.
www.wfx-fit.ca

TABLE OF CONTENTS



INTRO TO
WFX-FIT

OVERVIEW OF THE WFX-FIT

Type 1 Wildland Fire Fighters (WFF) must be physically fit in order to fight wildland fires safely and effectively, as well as to avoid injuries and recover rapidly. In particular, they must have suitable levels of aerobic fitness, muscular strength and muscular endurance. *The Canadian Physical Performance Exchange Standard for Type 1 Wildland Fire Fighters (WFX-FIT)* is a valid job-related physical performance standard used to determine whether an individual possesses the physical capabilities necessary to meet the rigorous demands encountered while fighting wildland fires.

The WFX-FIT was implemented by the CIFFC member agencies on April 1, 2012 following an extensive investigation of wildland fire fighting involving experienced WFF. All important physically demanding tasks encountered on the job by WFF were catalogued and then the physical demands associated with performing each task were measured.

It was confirmed that performing the WFX-FIT test protocol involves the same physical demands as performing the related on-the-job tasks. Standards of acceptability were then established for the WFX-FIT test, based on the performance scores of experienced WFF. This research methodology validated the WFX-FIT to conform with the Supreme Court's Meiorin Decision.

1. that the employer adopted the standard for a purpose rationally connected to the performance of the job;
2. that the employer adopted the particular standard in an honest and good faith belief that it was necessary to the fulfilment of that legitimate work-related purpose; and
3. that the standard is reasonably necessary to the accomplishment of that legitimate work-related purpose. To show that the standard is reasonably necessary, it must be demonstrated that it is impossible to accommodate individual employees sharing the characteristic of the claimant without imposing undue hardship on the employer.

INTRODUCTION

The safety and wellness of fire fighters is a high priority for the Canadian Interagency Forest Fire Centre (CIFFC) and its' member agencies.

The WFX-FIT is an unbiased, valid and reliable assessment of the ability of WFF to meet the rigorous demands required to safely and efficiently complete the critical emergency tasks involved in wildland fire fighting in Canada.

The WFX-FIT circuit is also based on the importance of working in various types of terrain as identified by the WFF. The circuit components are identical for WFF in all agencies because they simulate the physically demanding tasks all WFF face. The time it takes WFF to complete the tasks simulates the increasing difficulty of working in challenging terrains such as mountains and muskeg.

The four (4) performance components of the circuit simulate the tasks carried out on a fire and the physical demands necessary to carry out the fire fighting tasks.

WFX-FIT is completed as a timed circuit. All four (4) performance components must be tested together. In order to qualify for national export, WFF shall be required to meet the **national exchange standard of 14 minutes and 30 seconds**.

Agency standards have been set at 14 minutes and 30 seconds, 17 minutes and 15 seconds, 17 minutes and 45 seconds and 20 minutes 15 seconds. **Check with the Agency to find out which standard applies for you**.

Test Components

There are **five (5)** components to the WFX-FIT: a screening component and four (4) performance components.

1. Pre-Participation Screening
2. Carry Medium Pump on Back
3. Hand Carry Medium Pump
4. Hose Pack Lift and Carry on Back
5. Charged Hose Advance

WFX-FIT is completed as a timed circuit. All performance components must be tested together.

For additional information, please refer to the WFX-FIT website at **www.wfx-fit.ca**

BEFORE YOU BEGIN

Photo Identification	When you as a participant arrive for the WFX-FIT testing, you must provide proper photo identification. This will be documented on the test recording form.
Exercise Attire	Wear running shoes or work boots (if required by your agency) and exercise clothing.
Smoking	Do not smoke or use tobacco products for two hours prior to the test.
Food & Beverages	Do not eat a heavy meal during the two hours prior to the test and refrain from drinking caffeine, energy drinks or alcoholic beverages prior to the test.
Exercise	Do not exercise vigorously in the 24 hours prior to the test.
Clearance to Participate	Prior to undergoing the WFX-FIT test, participants must complete the PAR-Q+ form. • A positive (YES) answer to one or more questions requires follow-up and clearance of the candidate for participation in the WFX-FIT testing. In some cases clearance can be provided by a Canadian Society of Exercise Physiology (CSEP) Certified Exercise Physiologist (CEP), but it may require a health care professional using the ePARmed-X +. The candidate must provide the completed clearance forms(s) to the WFX-FIT Appraiser.

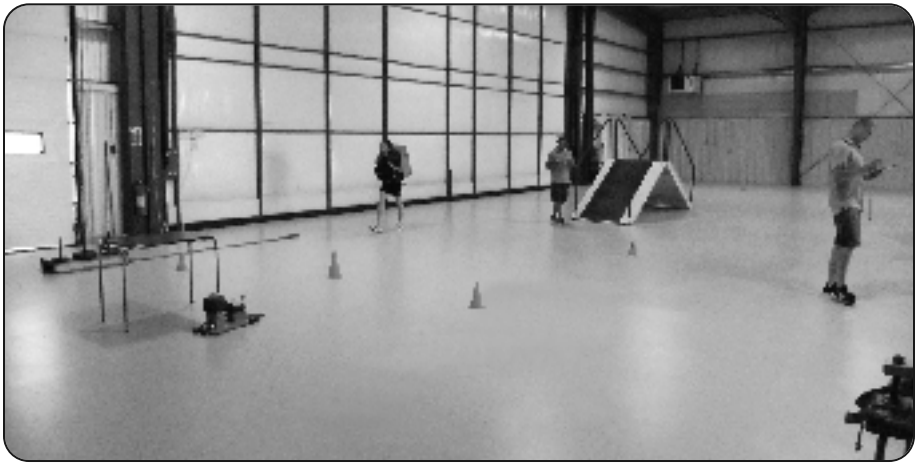
WFX-FIT CIRCUIT

Throughout the WFX-FIT circuit, the participant wears:

- Workout clothing
- Running shoes or work boots (if agency requirement)
- A weighted belt (4.2 kg) which encumbers the participant with the weight of normal wildland fire line work wear

1. The timed circuit involves 4 separate performance components performed in a continuous sequence over 40 m laps with pylons markers at each 20 m end line.
2. Timing of the circuit begins when the participant crosses the starting line while carrying the simulation pump (28.5 kg) from a 1m platform on their back. For safety purposes, the participant is assisted with the lifting and lowering of the pump onto and off their back. The simulation pump is carried on the back for a total of 160 m (4 laps over the 40 m course) traversing a ramp (35 degree pitch, 1.22 m) every 20 m, then the simulation pump is returned to the platform.
3. Next, the participant picks up the simulation pump from the platform in his/her hands and carries it for 80 m (2 laps of the 40 m course) without traversing the ramp.
4. The participant then places the simulation pump back onto the platform, picks up the WFX-FIT hose pack containing 4 lengths of hose (25kg) from the ground and hoists it onto his/her back, then carries the hose pack 1 km (3281 ft) (25 laps of the 40 m course) traversing the ramp every 20 m.
5. In the final component of the circuit, the participant drags a weighted sled 80 m (2 laps of the 40 m course) on level ground to simulate advancing a charged hose (pull force required to move sled = 18.5 kg). Turn lines are also marked 3 m beyond the end line so the participant knows when the sled has crossed the end line without looking behind.

Item	Distance; # of times over ramp
1) Carry Medium Pump on Back	160 m; 4 X 40 m over ramp 8 times
2) Hand Carry Medium Pump	80 m; 2 X 40 m over no ramps
3) Hose Pack Lift & Carry on Back	1 km; 25 X 40 m over ramp 50 times
4) Charged Hose Advance	80 m; 2 X 40 m over no ramps moderate

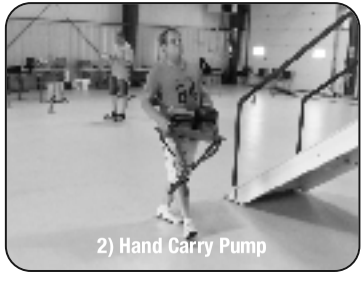


The expiry period for the validity of WFX-FIT results for WFFs who are not currently on full duty is 3 months (90 days).

	Carry Pump on Back				Hand Carry Pump		Hose Pack Lift & Carry on Back																							Advance Charged Hose	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
14:30	0:24	0:48	1:12	1:36	2:10	2:44	3:18	3:42	4:06	4:30	4:54	5:18	5:42	6:06	6:30	6:54	7:08	7:02	8:06	8:00	8:04	9:08	9:02	10:06	10:30	10:54	11:18	11:42	12:06	12:30	13:00	13:45	14:30
17:15	0:29	0:58	1:27	1:56	2:35	3:14	3:53	4:22	4:51	5:20	5:49	6:18	6:47	7:16	7:45	8:14	8:03	9:02	9:02	10:10	10:39	11:08	11:37	12:06	12:35	13:04	13:33	14:02	14:31	15:00	15:29	16:23	17:15
17:45	0:30	1:00	1:30	2:00	2:40	3:20	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	16:30	16:00	16:23	17:45
20:15	0:34	1:08	1:42	2:16	3:10	3:54	4:38	5:12	5:46	6:20	6:54	7:28	8:02	8:36	9:10	9:44	10:18	11:02	11:36	12:10	12:44	13:18	13:52	14:26	15:00	15:34	16:08	16:42	17:26	18:00	18:34	19:23	20:15

WFF must be physically fit in order to protect their health, to work safely, to avoid injuries, and to manage work and fatigue effectively over long periods of hard work. The implementation of this fitness standard across Canada is a significant step forward in our efforts to look out for the safety and welfare of WFF.


1) Carry Pump on Back


2) Hand Carry Pump


3) Hose Pack Lift & Carry on Back


4) Advance Charged Hose

1) CARRY MEDIUM PUMP ON BACK

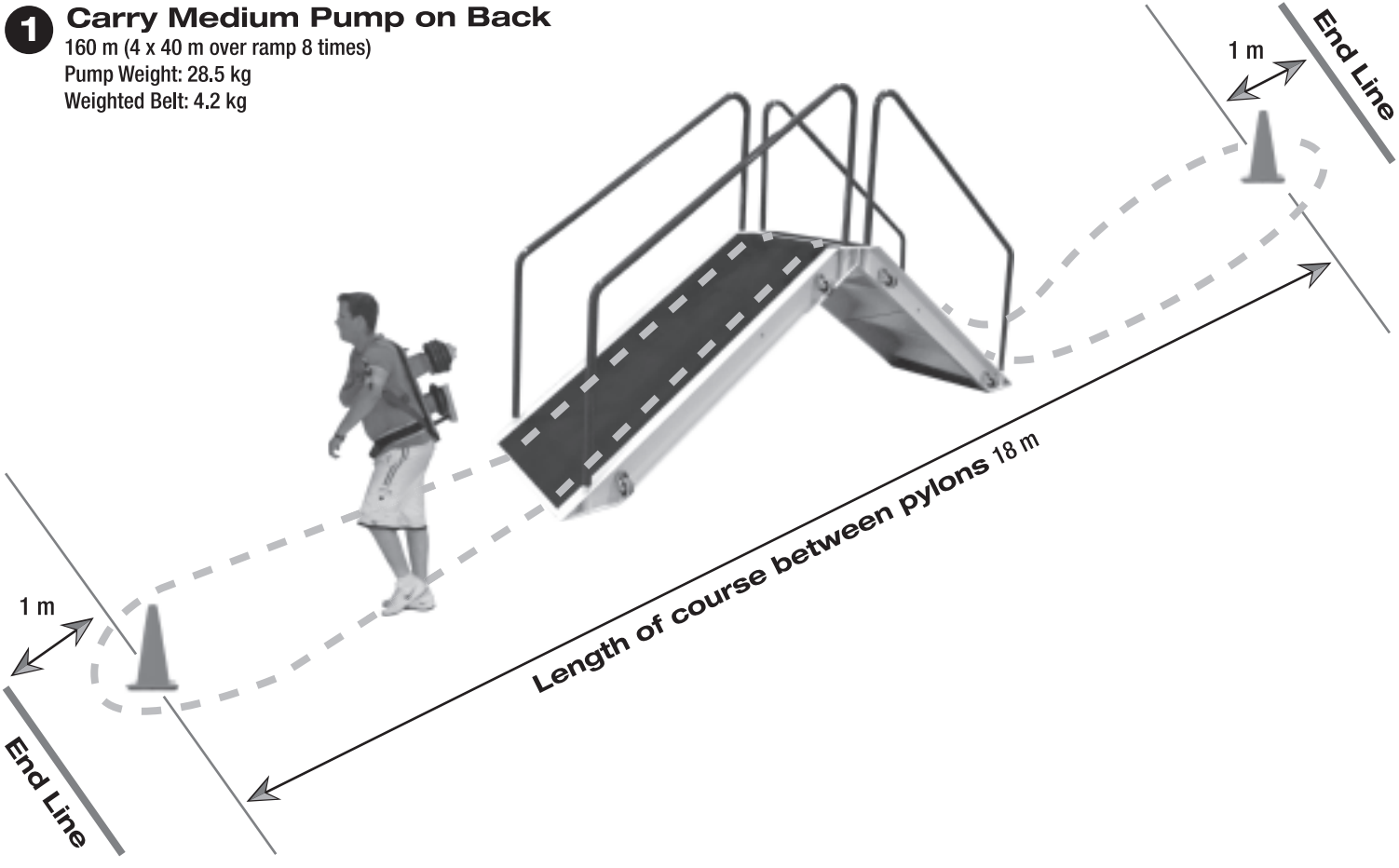
LIFT SIMULATION PUMP ON BACK

WALK COURSE WITH INSTRUCTOR

COMPLETE 4 LAPS OF THE COURSE
(Over ramp 8 times)

1 Carry Medium Pump on Back

160 m (4 x 40 m over ramp 8 times)
Pump Weight: 28.5 kg
Weighted Belt: 4.2 kg



2) HAND CARRY MEDIUM PUMP

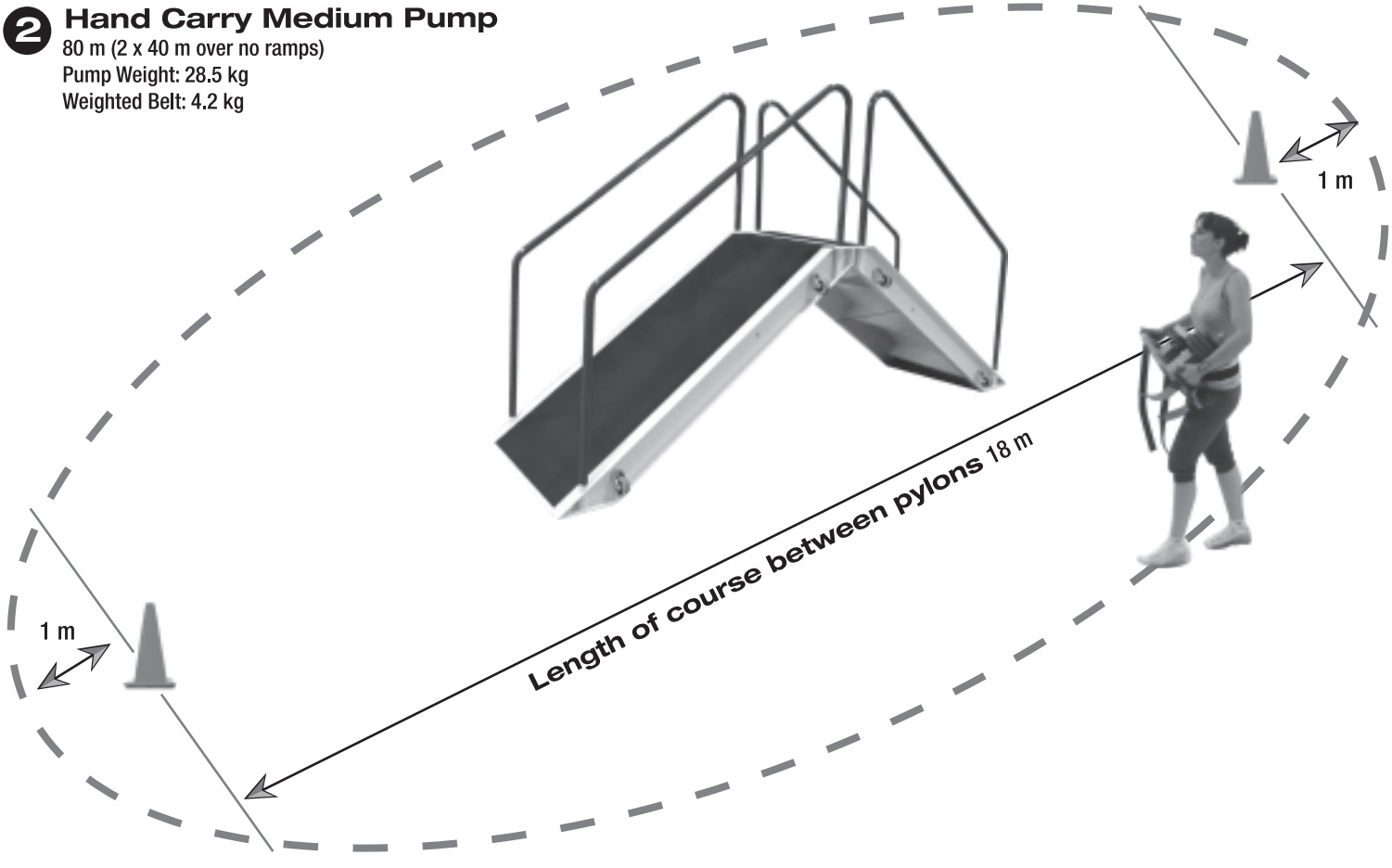
CARRY MEDIUM PUMP IN HANDS

WALK COURSE WITH INSTRUCTOR

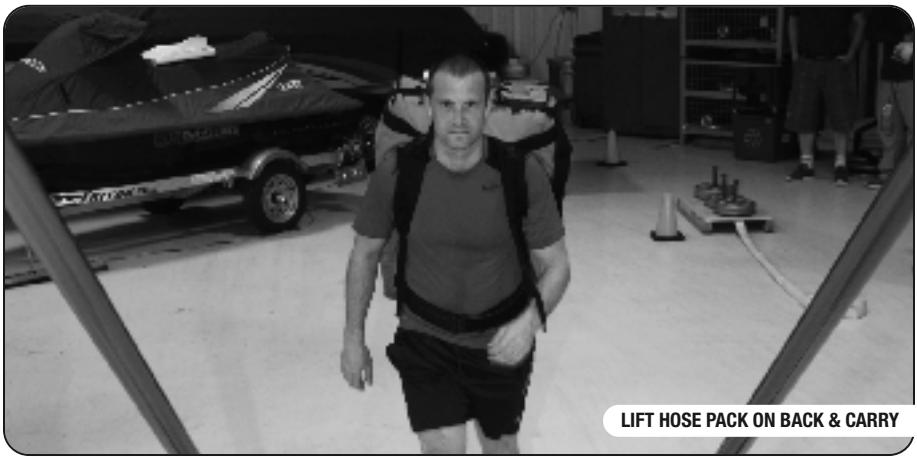
COMPLETE 2 LAPS OF THE COURSE
(No ramps)

2 Hand Carry Medium Pump

80 m (2 x 40 m over no ramps)
Pump Weight: 28.5 kg
Weighted Belt: 4.2 kg



3) HOSE PACK LIFT & CARRY ON BACK



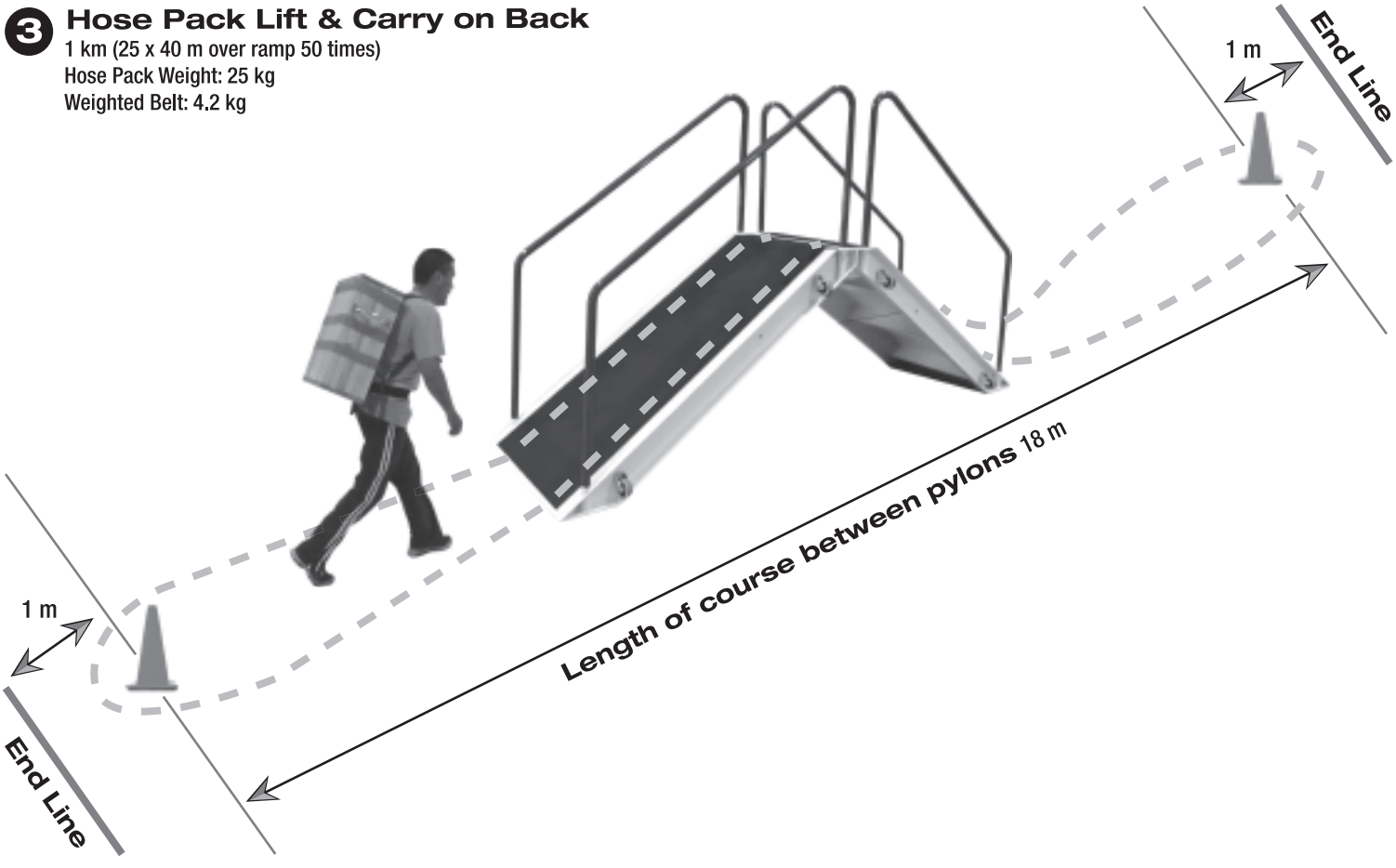
LIFT HOSE PACK ON BACK & CARRY

WALK COURSE WITH INSTRUCTOR

COMPLETE 25 LAPS OF THE COURSE
(Over ramp 50 times)

3 Hose Pack Lift & Carry on Back

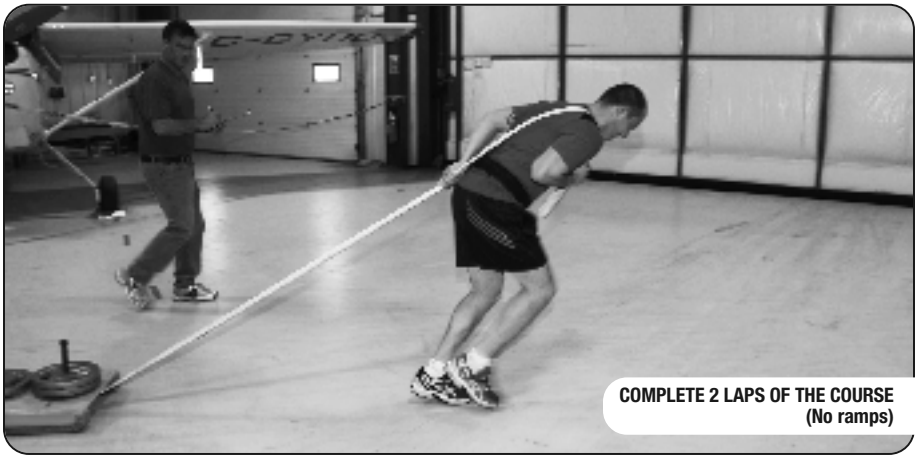
1 km (25 x 40 m over ramp 50 times)
Hose Pack Weight: 25 kg
Weighted Belt: 4.2 kg



4) CHARGED HOSE ADVANCE

ADVANCE A SIMULATED CHARGED HOSE

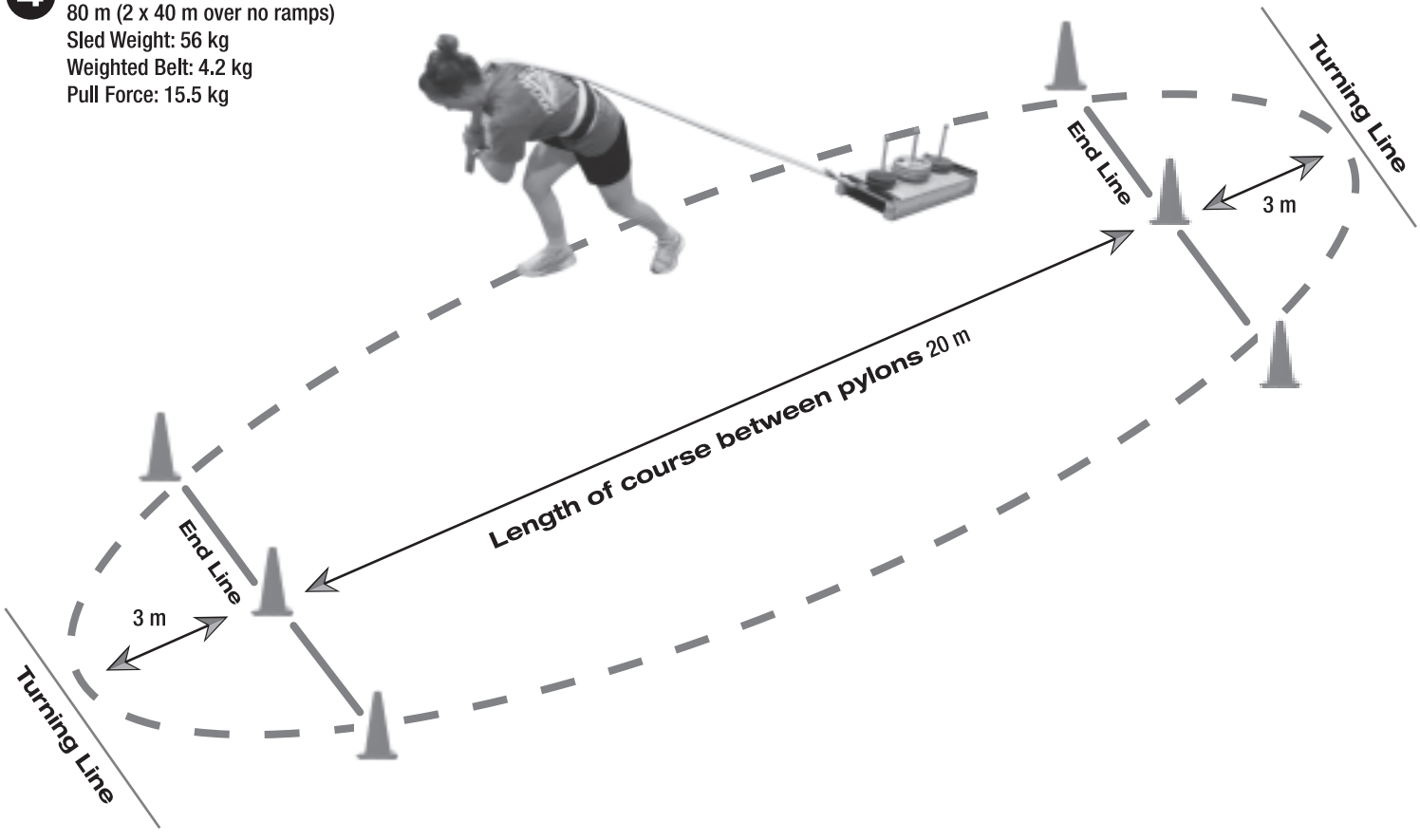
WALK COURSE WITH INSTRUCTOR



COMPLETE 2 LAPS OF THE COURSE
(No ramps)

4 Charged Hose Advance

80 m (2 x 40 m over no ramps)
Sled Weight: 56 kg
Weighted Belt: 4.2 kg
Pull Force: 15.5 kg



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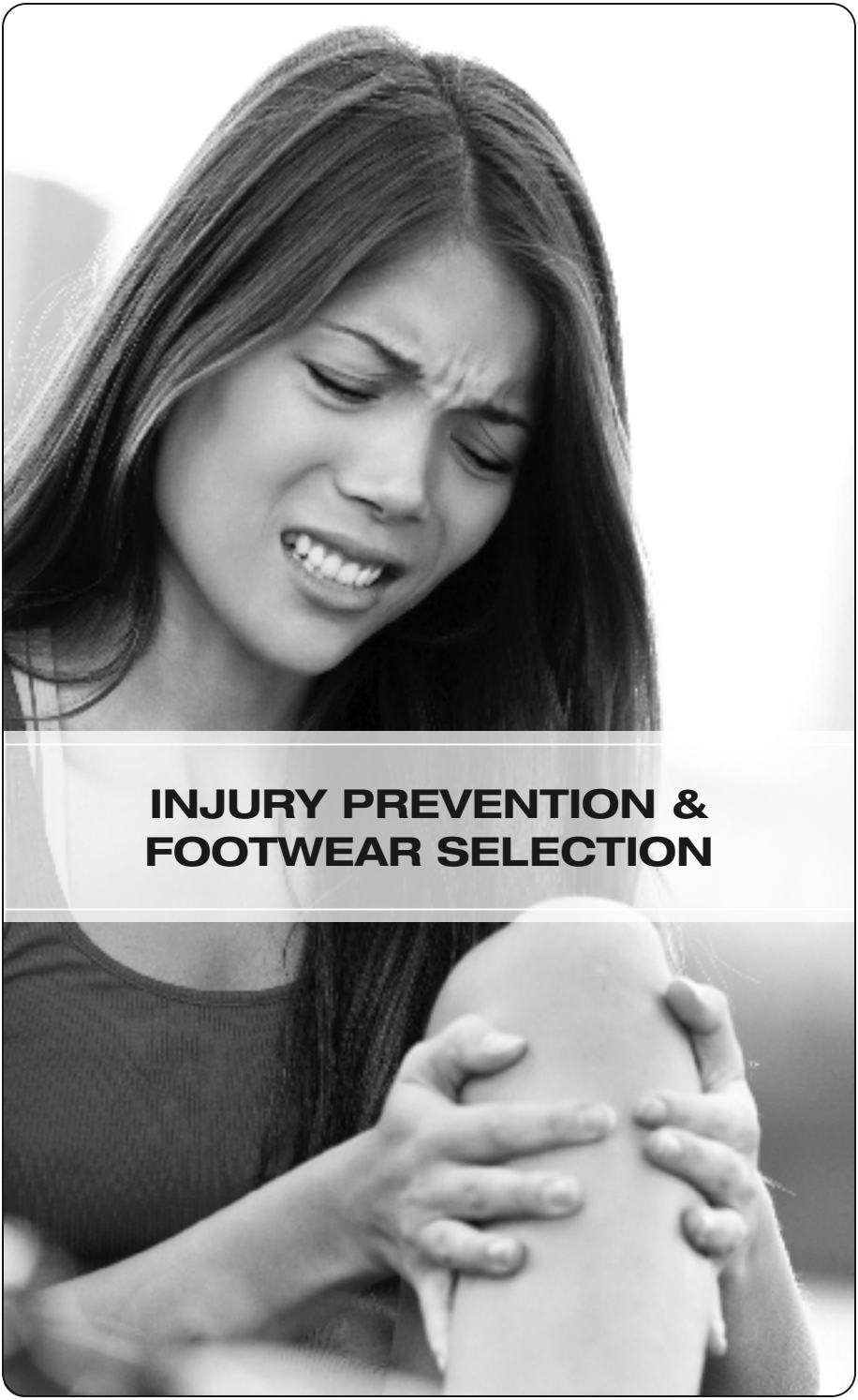


INJURY PREVENTION & FOOTWEAR SELECTION

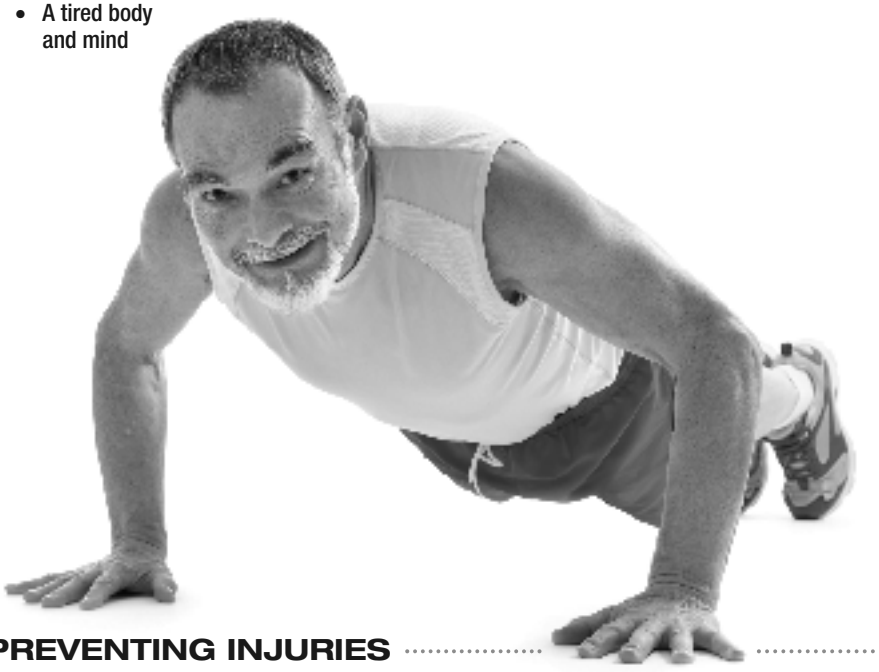
CONTRIBUTING FACTORS TO COMMON INJURIES

Physical training can be physically demanding. An active person should know the common injuries associated with training, and know what to do to prevent or lessen the seriousness of the injury.

WHY DO INJURIES OCCUR?

The following is a list of some reasons why injuries occur:

- Repetitious exercises
- Continued use of sore and inflamed muscles
- Bad form or technique
- A change of form or technique due to pain or discomfort
- Mismatching partners in size, strength and ability
- Practicing drills and exercises at full speed before learning proper technique
- Age, the level of activity and previous injuries may increase the chance of injury
- A tired body and mind



PREVENTING INJURIES

The following can be done to reduce the chance of injuries occurring:

- Warm-up activities, like calisthenics, raise body temperature, heart rate, blood pressure and breathing, and should always precede exercise.
- Light stretching exercises should follow the warm-up; a warm muscle stretches more effectively than a cool one.
- Stretching all the major muscle groups as well as the wrists, elbows, shoulders and neck muscles may reduce injuries.
- Introduce new activities gradually to make sure that they are performed correctly.
- Increase the intensity levels of new exercises slowly over time.
- Bad form and technique can cause injury to the person performing the technique or to others nearby.
- Regular aerobic and strength conditioning increase personal fitness and endurance.

TYPES OF INJURIES

ACUTE VS. CHRONIC INJURIES

Injuries can be divided into two types:

- Acute injuries
- Chronic injuries

Acute injuries

Acute is defined as "rapid onset typically requiring immediate attention." Acute injuries occur suddenly.

Some common examples of acute injuries are:

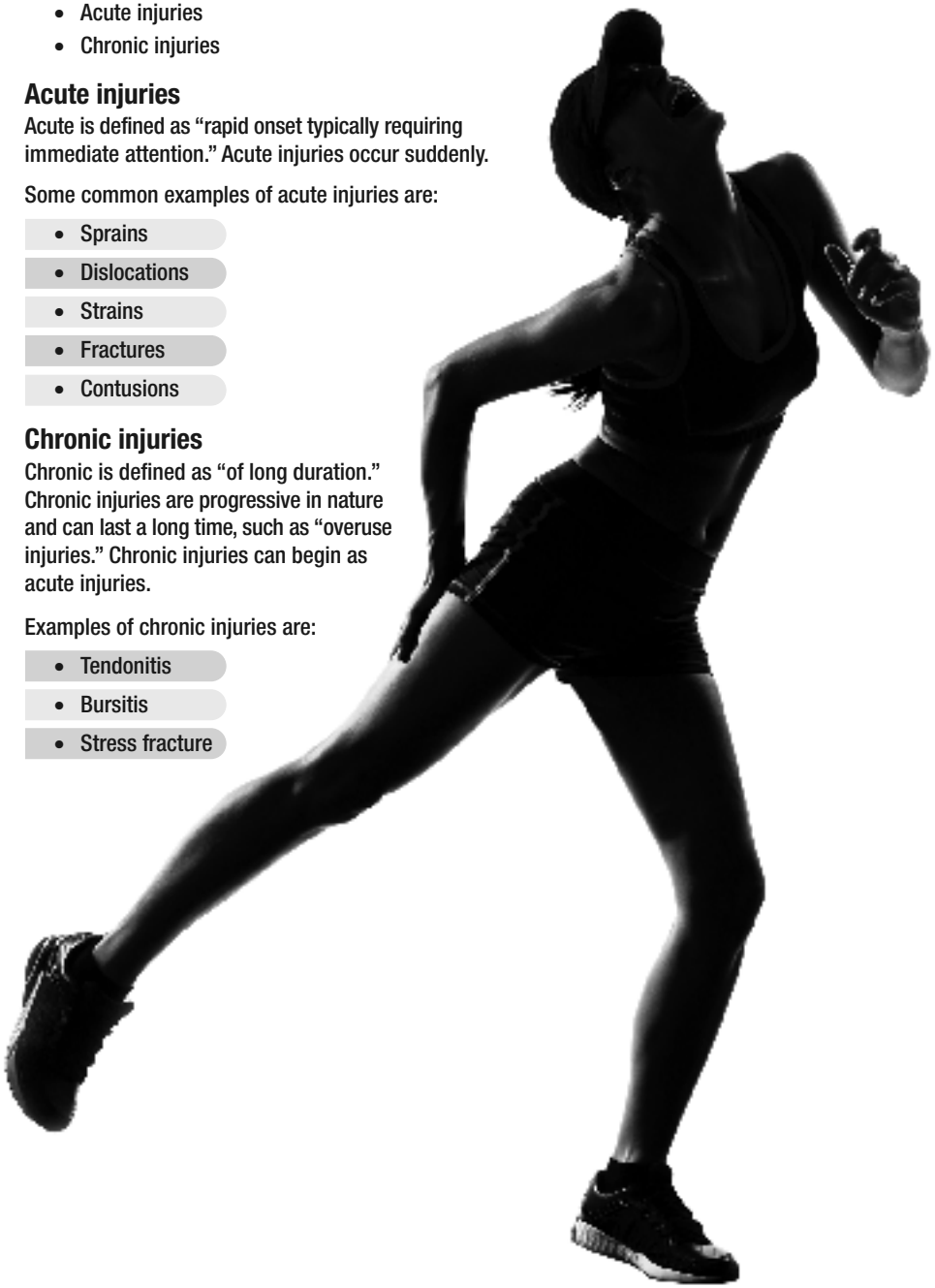
- Sprains
- Dislocations
- Strains
- Fractures
- Contusions

Chronic injuries

Chronic is defined as "of long duration." Chronic injuries are progressive in nature and can last a long time, such as "overuse injuries." Chronic injuries can begin as acute injuries.

Examples of chronic injuries are:

- Tendonitis
- Bursitis
- Stress fracture



SPRAINS, STRAINS AND CONTUSIONS

Sprains

What they are

- Sprains are injuries to ligaments, which are strong, fibrous tissue that attach bone to bone and support joints.

How they occur

- The usual mechanism of injury is a compression with rotation force to a joint, such as the ankle, knee, elbow, wrist or shoulder.

Symptoms

- Symptoms vary, depending on the extent of the injury.
- Pain, immediate swelling, inability to use the affected part or an audible “pop” or “snap” at the time of the injury may indicate a serious injury.
- Discoloration (bruising) and swelling may occur over a period of time.

Strains

What they are

- Strains are injuries to muscles or tendons. Tendons attach muscles to bone.

How they occur

- The usual mechanism of injury involves a sudden violent stretch or muscle contraction against a heavy resistance that results in overstretching or tearing.

Symptoms

- Symptoms vary depending on the extent of the injury.
- Intense pain, a ripping or tearing sensation at the time of the injury.
- Weakness in the muscle.
- Discoloration over a period of time may indicate a serious strain.

Contusions (Bruises)

What they are

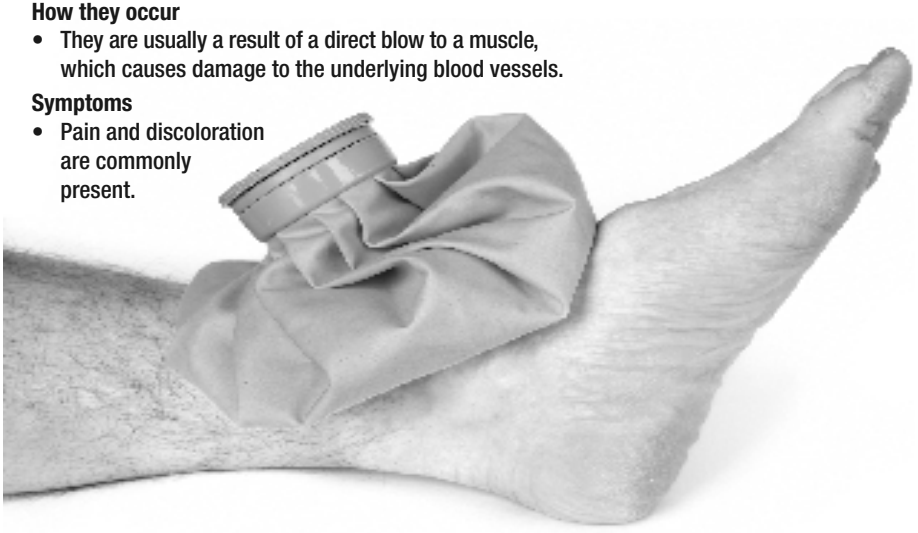
- Contusions are usually soft tissue injuries.

How they occur

- They are usually a result of a direct blow to a muscle, which causes damage to the underlying blood vessels.

Symptoms

- Pain and discoloration are commonly present.



RUNNING SHOE SELECTION

THE WET TEST

- Place a piece of paper on a flat, hard surface.
- Wet the bottom of your foot and stand on the piece of paper, making an imprint with your foot.
- Match your footprint as best you can to one of the foot types below:

Flat (low) Arch
A Flat or Low Arch will leave an imprint of almost the entire bottom of the foot. This foot type is usually an indication of the excessive inward roll of the foot after heel strike commonly referred to as overpronation. The arch collapses too much which may cause overuse injuries. This foot type is best suited for Stability shoes and Motion Control shoes. These shoes have firmer medial support devices and flatter soles that are best for moderate to severe overpronators as well as heavier runners.

Normal (medium) Arch
A Normal or Medium Arch will leave an imprint of the heel and the forefoot connected by a wide band. After heel strike, this foot type will pronate or roll inward slightly to absorb shock. This is the most common foot type. This foot type is best suited for Stability shoes that use support devices such as dual density midsoles and medial posts for mild overpronation.

High Arch
A High-Arched Foot will show an imprint of the heel and the forefoot connected by only a thin band. This type of foot does not overpronate at all, so its not an effective shock absorber. This is the least common foot type. Lack of pronation is generally called supination or under-pronation. The High-Arched Foot is best suited for Neutral Cushioning shoes that do not have stability devices or a medial post. This type of shoe has a softer midsole and more flexibility that will not inhibit natural pronation.

TYPES OF LAST

- "Last" is the way the body of the shoe is attached to the sole of the shoe and its overall curvature.
- Below is what you would see if you removed the insole from your running shoe:

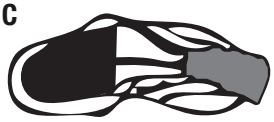
A

Board – Provides greater rigidity/stability to a shoe; recommended for runners with floppy feet/overpronators and heavy runners

B

Slip – Adds flexibility to a shoe; recommended for runners with rigid feet/high arches

C



Combination – Combines board and sliplasts; recommended for runners requiring rear foot stability and forefoot flexibility

FURTHER LAST CLASSIFICATIONS

From left to right below: straight, semi-curved, curved.

Straight – Virtually no curve in shoe from heel to toe; recommended for runners with flat feet or any runner

Semi-curved – Curved between heel and toe; recommended for no specific runner population

Curved – Approximately 8° of curvature from heel to toe; recommended for runners with high arches

IMPORTANT – Regardless of shoe selection, ensure that the shoe has adequate thread.

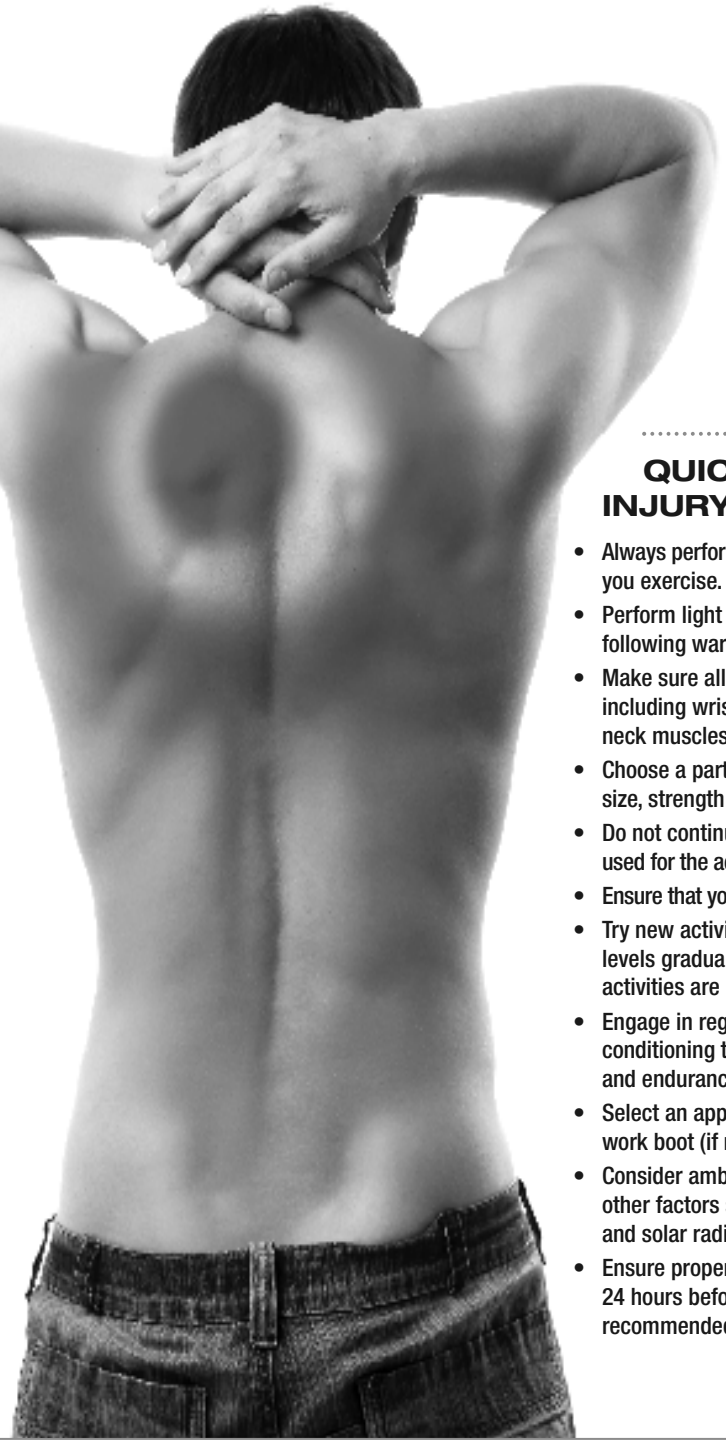
MATCHING YOUR FOOT TYPE TO A SHOE

Pes Planus/Flat Feet	Normal Arches	Pes Cavus/High Arches
Motion control shoe or stability	Stability shoe	Cushioned shoe with a flexible
Board, straight or semi-curved last	Combination or slip, semi-curved	Slip, curve last
Max control, max stiffness, dual	Moderate control or moderate	Minimal control, very flexible

RUNNING SHOE TESTS

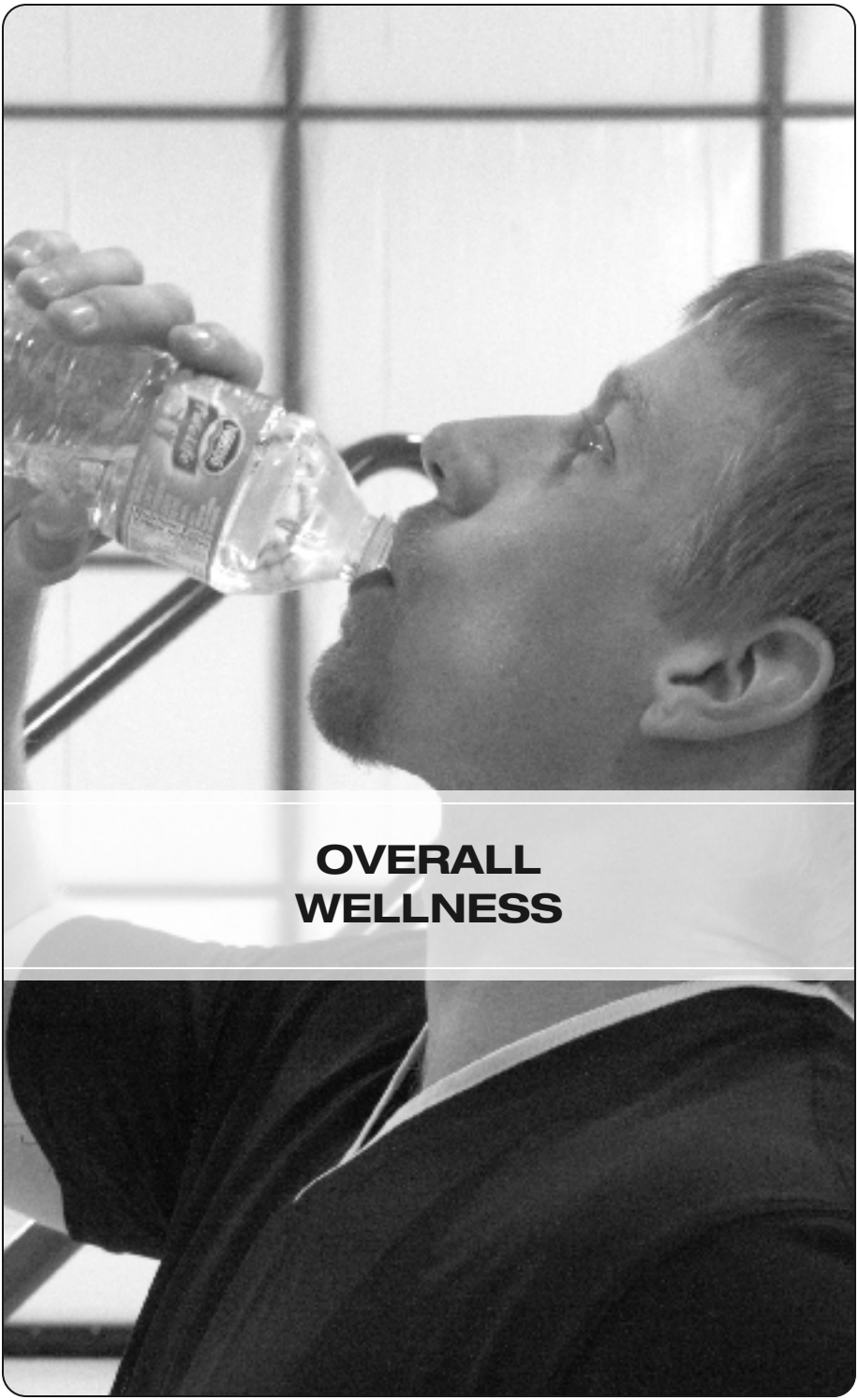
Crush Test – Hold heel firmly in left/right hand bend to "fold" toe towards heel; you should not be able to fold the shoe in half easily and should "bounce back".

Twist Test – Hold heel firmly in left/right hand and try to rotate the tow back and forth; you should not be able to fully turn the shoe and it should "bounce back".



QUICK TIPS FOR INJURY PREVENTION

- Always perform warm-up activities before you exercise.
- Perform light stretching exercises following warm-up activities.
- Make sure all the major muscle groups, including wrists, elbows, shoulders and neck muscles are stretched.
- Choose a partner according to his/her size, strength and ability.
- Do not continue an activity if the muscles used for the activity are inflamed and sore.
- Ensure that you use proper form/technique.
- Try new activities and increase intensity levels gradually to ensure that the activities are performed correctly.
- Engage in regular aerobic and strength conditioning to increase personal fitness and endurance.
- Select an appropriate athletic shoe or work boot (if required by your agency).
- Consider ambient air conditions and other factors such as heat, humidity and solar radiation.
- Ensure proper hydration and nutrition for 24 hours before physical exertion. It is recommended not to drink energy drinks.



OVERALL WELLNESS

WELLNESS

Following are some important things to think about during the offseason.

SLEEP

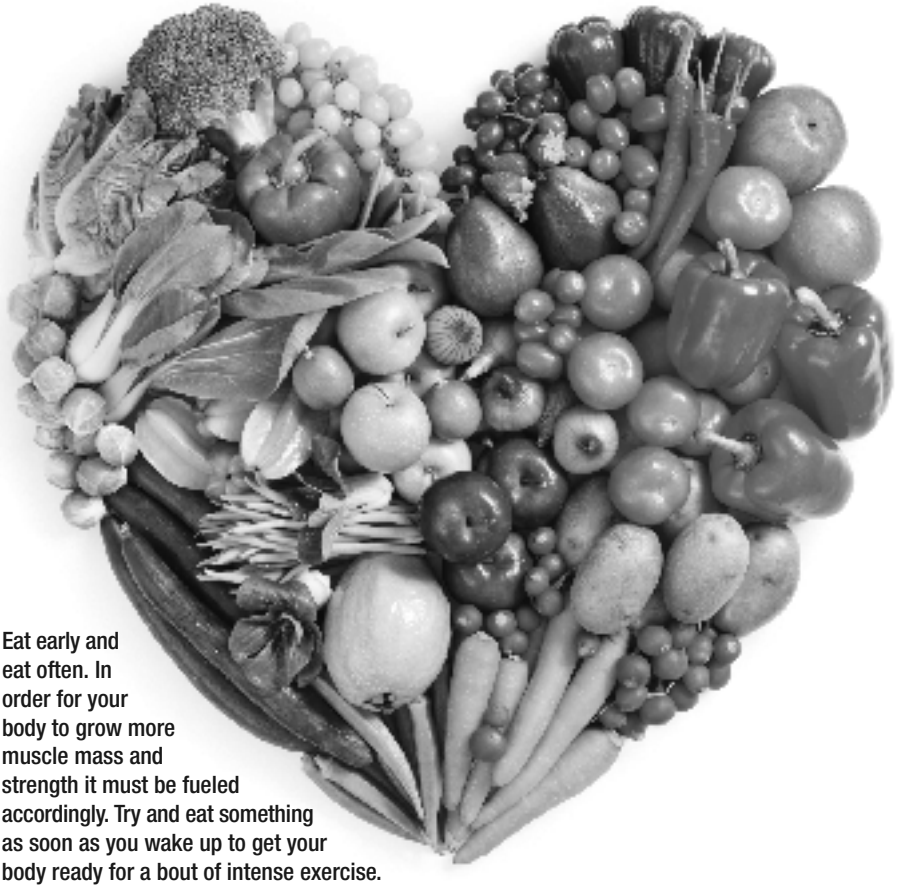
More is only better up to about 7 hours max. Working out with little rest will yield little results. Studies have shown growth hormone is released at night. Among many other functions, growth hormone builds muscle mass. To maximize your potential, get the rest you need.

FOOD CHOICES

Police yourself. (Health Canada, Canadian Food Guide - **http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php**)

Quick Tips:

- Eat fruits and vegetables for snacks
- Substitute for whole grains when possible
- Drink milk each day, particularly skim milk, as it has the lowest fat content
- Eat meats with lower fat (chicken breasts, extra lean ground beef)
- Stay away from deep fried foods (opt for baked or pan fried)



Eat early and eat often. In order for your body to grow more muscle mass and strength it must be fueled accordingly. Try and eat something as soon as you wake up to get your body ready for a bout of intense exercise.

ALCOHOL

This should be pretty obvious. Alcohol consumed outside of moderation (1 drink for a woman, 2 drinks for a man, per day) is nothing more than empty calories. Binge drinking is considered to be 4 or more drinks for a female, and 5 or more drinks for a male. Binge drinking following exercise can significantly reduce energy levels for the resulting days.

Alcohol, much like caffeine has diuretic properties. Consuming alcoholic drinks can lead to the temptation to eat fast food full of excess sodium and fat, neither of which is conducive to performing well during exercise. Although you may sleep longer, sleep quality is highly reduced, decreasing performance. Lastly, drinking causes dehydration, increasing metabolic strain when performing maximally. In short: if you have to, drink in moderation. Don't waste hard work by getting a poor quality sleep and fighting fatigue before the bout of exercise has even begun.

SMOKING

Part of a healthy lifestyle means reducing possible risk factors that can affect one's well-being. Smoking is definitely one of these risk factors. Smoking can among other things increase one's chances of heart disease, lung cancer, and chronic obstruction pulmonary disorder (COPD). These various ailments and disease will in turn affect one's ability to exercise at maximal capacity, and more importantly, one's road to healthy living.

HYDRATION

Keep in mind that by the time the body has sent the signal down to tell it its thirsty, it is already in fact dehydrated. This is because there is a delay between the thirst regulatory system and actual hydration. Drink water before, throughout, and after exercise to ensure dehydration does not happen.

SUPPLEMENTS

Protein shakes can be a good way to get quick calories if you're in a pinch. However, most people do not know that you only need 10 grams of protein immediately after a workout to satiate amino acid stores.

Try a fruit smoothie instead of protein shake. Include several types of fruits (frozen works well), some yogurt (plain preferably), and some milk, water, or fruit juice, for a healthier alternative to protein shakes.

Supplements often have little research as per their effectiveness and/or safety. Many include high levels of caffeine that can lead to dehydration. As a fire fighter, dehydration is one of the largest safety concerns.

Thus, workouts should be performed as if in the wildland fire fighting field. Stay away from poorly researched supplements to ensure one's safety and maximal performance. In more practical terms: if high caffeine or diuretics can be dangerous to a forest fire fighter's performance, and more importantly a fire fighter's overall safety, then stay away from the supplements containing them, both in training and in the field.

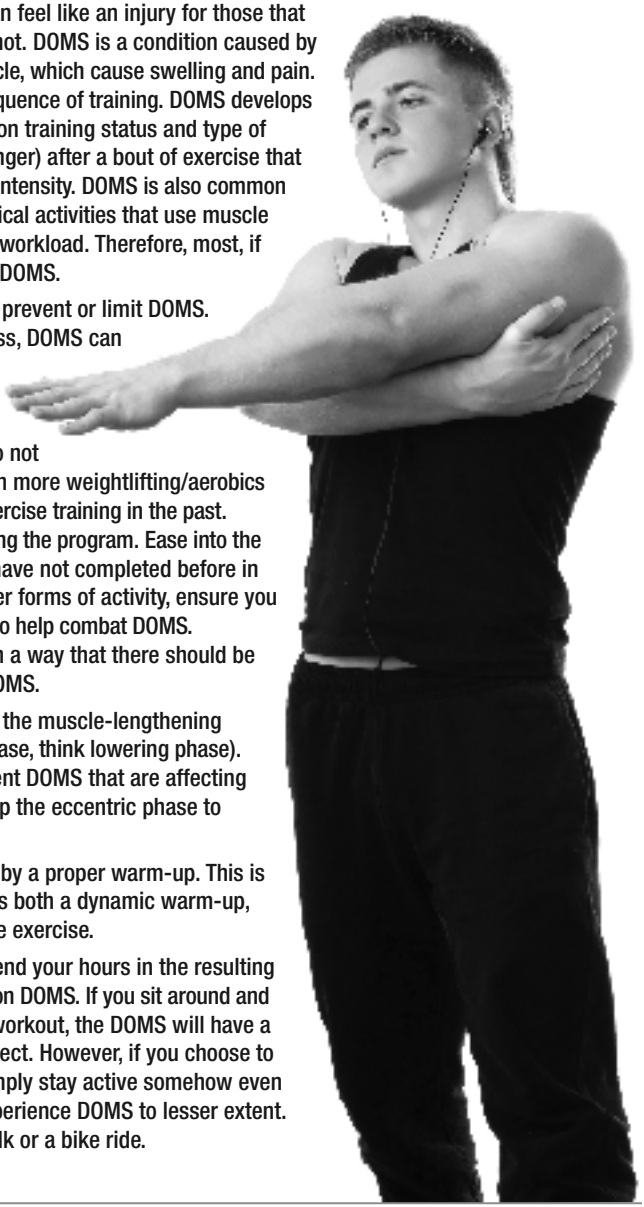
WORKOUT COMPLIANCE

This workout will be completed mostly in the late fall/winter/early spring months. It is easy to skip workouts. It is your job to resist the temptation. Explore the best strategy to complete the exercise at a convenient time.

The effort put forth in the off-season will directly translate to success on the WFX-FIT test and as a Type 1 WFF as a whole.

DELAYED ONSET MUSCLE SORENESS (DOMS)

Although muscle soreness can feel like an injury for those that are relatively untrained, it is not. DOMS is a condition caused by microscopic tears in the muscle, which cause swelling and pain. It is a perfectly normal consequence of training. DOMS develops 24-48 hours (and depending on training status and type of recovery, it may last much longer) after a bout of exercise that was excessive in duration or intensity. DOMS is also common following new or unique physical activities that use muscle groups unaccustomed to the workload. Therefore, most, if not all of you will experience DOMS.



There are a few ways to help prevent or limit DOMS. As with acute muscle soreness, DOMS can be prevented by refraining from activities that are more strenuous or prolonged than usual. In other words, do not supplement this program with more weightlifting/aerobics unless you have advanced exercise training in the past. Also, take caution when starting the program. Ease into the aspects of training you may have not completed before in the past. If you are doing other forms of activity, ensure you get proper rest and nutrition to help combat DOMS. The programs are designed in a way that there should be adequate rest time to limit DOMS.

DOMS is said to occur during the muscle-lengthening phase of the lift (eccentric phase, think lowering phase). If you are experiencing frequent DOMS that are affecting your workouts try speeding up the eccentric phase to reduce the duration of DOMS.

DOMS can also be prevented by a proper warm-up. This is why the program incorporates both a dynamic warm-up, and a warm-up specific to the exercise.

Lastly, how you choose to spend your hours in the resulting days can also have an effect on DOMS. If you sit around and be sedentary until your next workout, the DOMS will have a longer and more profound effect. However, if you choose to do an 'active recovery', or simply stay active somehow even in your rest days, you will experience DOMS to lesser extent. Try stretching, going for a walk or a bike ride.

GETTING READY & DYNAMIC WARM UPS

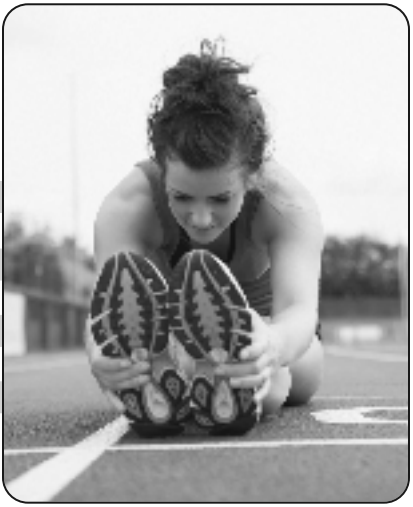
GETTING READY

Flexibility is one of the key components to being totally fit. However, it is often the component that exercisers either skip or take for granted until they start feeling stiff, lose mobility due to muscular tightness or suffer an injury.

The most common definition of flexibility given by exercise researchers is "the range of motion in a joint."

The range of motion for any joint is determined in part by its design or structure. For example:

- The structure of hinge joints, such as the elbow and knee, only allows forward and backward movement.
- The structure of a ball and socket joint, such as the shoulder and hip, allows movement in every direction, up to a large circular motion of 360 degrees.



Range of motion or flexibility is also influenced by:

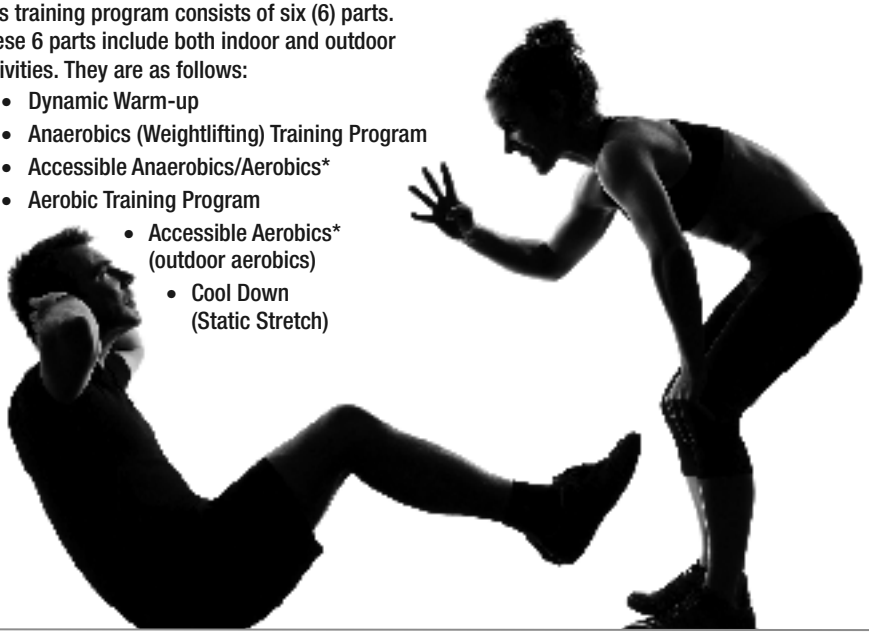
- Warm-up
- Muscle strength
- Age
- Gender
- Body proportions
- Injury history
- Time of day

Therefore, in order to have good functional fitness, excel in sports activities and stay mobile, you need a workout plan.

TRAINING PROGRAM OVERVIEW

This training program consists of six (6) parts. These 6 parts include both indoor and outdoor activities. They are as follows:

- Dynamic Warm-up
- Anaerobics (Weightlifting) Training Program
- Accessible Anaerobics/Aerobics*
- Aerobic Training Program
- Accessible Aerobics* (outdoor aerobics)
- Cool Down (Static Stretch)



WARMING UP

Warming up is of utmost importance before beginning any activity as the body is preparing to perform at the highest level of efficiency, power, speed, agility, balance, reaction time, endurance and strength. In fact, the more intense the activity, the more critical the warm-up.

GOAL OF WARMING UP

The goal of warming up is to increase blood flow to the working muscles and to increase core body temperature. However, it should not be so intense that it causes fatigue.

RESULTS OF WARMING UP

The results of an adequate warm-up include the following:

- Warmed muscles that will contract powerfully
- Warmed muscles that will stretch sufficiently
- Lubricated joints that are ready for optimal ranges of motion
- Reduced risk of muscle or joint injury
- Improved neurological conduction and increased coordination
- Reduced risk of irregular heartbeats
- Safe transition from rest to activity for all body functions

DYNAMIC WARM-UP

Dynamic warm-ups are a relatively new concept. They involve repetitive dynamic stretches designed specifically to mimic the activities of a particular exercise. A dynamic warm-up increases both muscle and core temperatures as well as blood flow and has a positive effect on injury reduction through a number of factors (e.g. easier range of motion flexibility).

Give yourself plenty of space for a warm-up. You will need an area (18-24 m) big enough to complete 20 normal strides. Ideally each dynamic stretch should be performed 10 times. If there is a left and right variation of the warm-up, then perform five (5) for each side (alternating sides). The warm-up should take approximately 8 minutes. The video found at **www.wfx-fit.ca** will provide a more visual example of the area needed.

There are many dynamic warm-up exercises; everything from walking to slow jogging, bouncing to jumping, or basic task specific movements to help to start sweating via an increase in heart rate and frequency of breathing.

The warm-ups are as follows:

High Knee, Torso Twist

Starting Position: Hands by side, legs straight, ready to take a step forward.

Execution: Step forward, lifting left knee, touching right elbow to left knee. Lower left leg, step forward, and perform the same movement with the opposite side.

Grass Grabbers

Starting Position: Hands by side, palms facing back, legs straight, ready to take a slight step forwards.

Execution: Keeping both legs straight, bring left leg slightly in front of the right leg, reaching down and brushing forward from back of the heel to the toe. Repeat the exercise for the other side (bring right leg slightly in front).



Calf Bounces

Starting Position: Hands by side, standing up straight, ready to take a step forward.

Execution: Roll from the right heel of the foot onto the point of the toe to engage the calf, bouncing off at the top of the toe, landing on the left heel. Repeat the exercise for the other side (bouncing off from the left toe).



Lunge Twist

Starting Position: Hands by side, standing up straight, ready to take a lunge step.

Execution: With the palms of the hands together in front of the body, lunge forward with the left foot. Keep torso perpendicular to the ground (do not excessively bend knee over toe). Twist at torso to the left (same side of lead foot). Repeat the exercise for the other side (right lunge).



Goose Step

Starting Position: Hands by side, standing up straight, ready to swing leg straight out in front.

Execution: Swing the left leg in front of body (keeping swinging leg straight), reaching over with right hand to touch the toe. Repeat the exercise for the other side (swinging the right leg).



Sumo Squat

Starting Position: Stand with feet shoulder width apart, hands out in front, ready to squat straight down.

Execution: Perform lateral squats, going as low as possible without breaking form. To connect each squat take one (1) side step after each squat.



Inchworm

Starting Position: Start by standing up straight with hands by side. Next, bend at the waist touching hands to the ground directly in front of the feet (if flexibility allows).



Execution: On all fours walk hands out as far as comfortable, then walk feet back up towards hands in order to stretch the hamstrings.

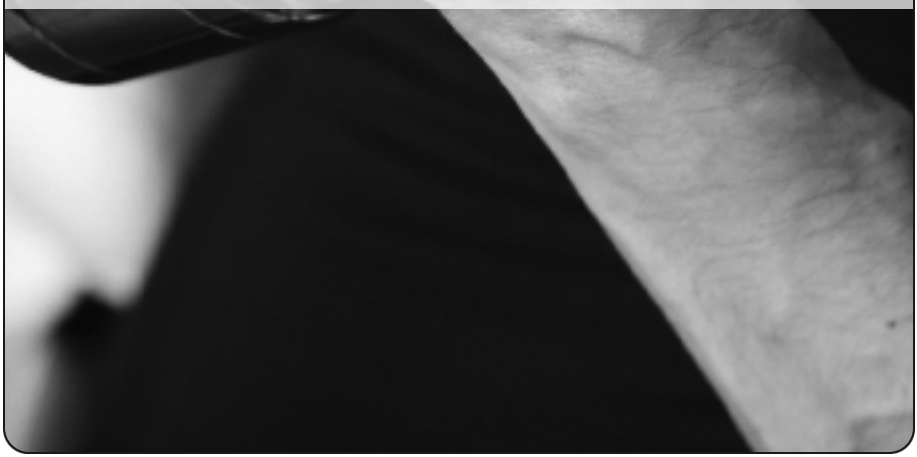
Quad Stretch / Toe Touch

Starting Position: Standing up straight, hands by side, prepare to bring leg up to hand.

Execution: Bend right leg behind body in order to grab it with the right hand. While holding a quad stretch, keep the back straight and reach down with the left hand to touch the left toe. Repeat the exercise for the other side (stretching the left quad, reaching down with the right hand).



ANAEROBIC (WEIGHTLIFTING) TRAINING PROGRAM



ANAEROBIC (WEIGHTLIFTING) TRAINING PROGRAM

The word *repetition* is used to describe an entire phase of a lift. This includes muscle lengthening, or eccentric phase of the lift, and the muscle shortening phase, also known as the concentric phase. A set is designated to encompass a particular number of repetitions (reps).

E.g. 3 sets of 10 = 10 repetitions, 3 times (see Table 2), with adequate rest (see Table 3) in between each set

The Anaerobic (Weightlifting) Training Program will utilize Hypertrophy sets/repetitions.

Below are the repetitions and sets defined with regards to training goal.

Table 2 - Repetitions and Sets

	Reps	Sets (# of times)
Strength	6 or less	2-6
Power	1-5	3-5
Hypertrophy*	6-12	3-6
Muscular Endurance	12 or more	2-3

* increasing muscular size

Appropriate rest times are a crucial point in benefitting maximally from any particular program. This program will employ mostly strength and hypertrophy rest periods. However, the Accessible Anaerobic program will utilize mainly Endurance (circuit) and Hypertrophy rest periods. The three most standard rest times are as follows:

Table 3 - Rest

	Rest
Strength/Power	2-5 mins
Hypertrophy*	30 secs - 1.5 mins
Muscular Endurance	6-12

Breathing Technique

Remember to exhale (breathe out) on the hard part of the lift and inhale (breathe in) on the easy part (e.g. Bench Press – **Inhale** when lowering the weight to chest, **exhale** when pushing the weight back up).

a) **Anaerobic (weightlifting) Training Program:** This program will run 3 days a week: Monday, Wednesday, and Friday. If for whatever reason access to a gym is not available, substitute the workout with one from Accessible Anaerobic.

b) **Accessible Anaerobics:** Accessible Anaerobics are designed as filler for when access to a gym is limited or time is an issue. To maximize benefits from the Fitness Training Manual, it is recommended not to use Accessible Anaerobic solely for the source of strength training.

ANAEROBICS (WEIGHTLIFTING)

The Anaerobic Training Program will focus on strength exercises performed inside of a weightlifting facility. The goal will be to specifically strengthen the musculature needed to be a WFF. In conjunction with the aerobics training program, the Anaerobics Training Program will help you prepare for the WFX-FIT test. This weightlifting training program will be six (6) weeks in duration.

Rest periods should be kept between the later stages of hypertrophy and the early stages of strength training. Thus, rest periods will be between **90-120 seconds**. Keeping the rest periods at 90-120 seconds will ensure the individual does not become 'cold' in between sets. If rest periods are too long, the individual may not receive the same strength benefits and muscle growth as seen with the recommended timeframe.

The anaerobics training program utilizes a subjective scale to determine the weight applied. Week 1 of the program is crucial to deciding which weight will be most fitting for the individual. Below is an explanation of the acronyms used in the program:

W Warm-up: Despite having already completed a dynamic warm-up, the individual will perform a warm-up specific to the individual exercises. A warm-up should be a very light set (should be light enough so no fatigue would be felt after 10 reps) to run through the motions of an exercise. The warm-up will help the individual to get a feel for the exercise that they are about to do, before any weight is added to the exercise. A warm-up should be completed for every new exercise. (**BW** – Body weight)

E Easy Set: An easy set, is a set in which the individual can complete the exercises without any considerable fatigue during the last repitition The easy set can be thought of a secondary warm-up to ensure that the individual is fully prepared and ready to perform an exercise with resistance.

M Medium Set: A medium set, is a set in which the individual completes the exercises with some fatigue, but should be able to complete approximately 2 more repetitions past requirement.

H Hard Set: A hard set is a set in which the individual has complete fatigue by the completion of the final repetition.

Note: The bar used for Bench Press, Deadlift & Squat is called an Olympic Bar. This bar usually weighs 20.4 kg (45 pounds). Remember to add the bar weight to the weight that you have added on the bar when calculating the weight. Record this combined weight in your workout chart.

EXAMPLE OF WORKOUT CHART

Remember to record weights. (A blank recording form can be found in Training Recording Form tab)

Monday			Wednesday			Friday		
Deadlift 3 sets of 10			**1 Arm Power Clean 3 sets of 8**			**Stiff Legged Deadlift 3 sets of 10**		
E	**E**	**M**	**E**	**E**	**M**	**E**	**E**	**M**
100	100	120	45	45	55	100	100	120
Regular Bench 3 sets of 10			**Box Step to Lunge 3 sets of 10**			**Lunge (each side) 3 sets of 10**		
E	**E**	**M**				**E**	**E**	**M**
90	90	100					90	105
Back Squat 3 sets of 10						**Lunge (each side) 3 sets of 8**		
E	**E**	**M**				**E**	**E**	**M**
120	120	120					20	40
Seated Row 3 sets of 10			**1 Arm Row 3 sets of 10**			**Chin up 3 sets of 8**		
E	**E**	**M**	**E**	**E**	**M**	**E**	**E**	**M**
80	80	95	20	20	35	BW	BW	BW
Box Steps 3 sets of 10			**Triceps Extension 3 sets of 10**			**Back Extension 3 sets of 10**		
E	**E**	**M**	**E**	**E**	**M**	**E**	**E**	**M**
BW	BW	60	60	60	70	BW	BW	BW
1 Arm Shoulder Press 3 sets of 10			**Leg Extension 3 sets of 10**			**Lying Triceps Extension 3 sets of 10**		
E	**E**	**M**	**E**	**E**	**M**	**E**	**E**	**M**
20	20	30	100	100	115	20	20	30
Bicep Curl 3 sets of 10			**Hamstring Curl 3 sets of 10**			**Shoulder Circuit 3 sets of 10***		
E	**E**	**M**	**E**	**E**	**M**	**E**	**E**	**M**
30	30	50	100	100	115	10	10	20
Calf Raise 3 sets of 10			**Calf Raise 3 sets of 10**			**Calf Raise 3 sets of 10**		
E	**E**	**M**	**E**	**E**	**M**	**E**	**E**	**M**
BW	BW	BW	BW	BW	BW	BW	BW	BW
Abs (3 exercises)**			**Abs (3 exercises)****			**Abs (3 exercises)****		

These weights are just an example to demonstrate how to fill out the workout sheet. They are not meant to be a goal, nor should any individual participating in this program follow them.

* Anterior, lateral, posterior shoulder raise performed in succession
e.g. 10 anterior x 10 lateral x 10 posterior reps for a total of 30 reps per set

** Choose three abs exercises and perform them as you would a circuit found in Accessible

Note: All weights are solely for the purpose of demonstration

ANAEROBIC EXERCISES AND TECHNIQUE

Deadlift

Starting Position: Stand with feet approximately shoulder width apart. Squat down so that the shoulders are higher than the hips, maintaining a flat back. Grasp the bar with an overhand grip (knuckles forward, in same direction as eyes). Grip should be slightly wider than shoulder width apart. The grip should be a position where the hands are outside of the knees to allow for ease of movement during the repetition.

Execution: Pull up from arms and push up through legs at the same time. Keep back flat as the bar is pulled directly up. Eyes should be directly ahead to track form in the mirror (if available), or just slightly upwards. Once standing erect, lower the bar in same fashion as it was raised until the weights touch the ground.

Stiff Legged Deadlift

Starting Position: Stand with feet approximately shoulder width apart. Squat down so that the shoulders are higher than the hips, maintaining a flat back. Grasp the bar with an overhand grip (knuckles forward, in same direction as eyes). Grip should be slightly wider than shoulder width apart. The grip should be a position where the hands are outside of the knees to allow for ease of movement during the repetition.

Execution: Pick up the bar as if performing a Deadlift. Once standing erect, lower the bar with only a slight bend in the knee (much less bend than found in a regular Deadlift). The bar/weights do not have to touch the ground in this exercise, but the upper body should come down to a point where it is in line with the ground. This exercise should be felt in the hamstrings (back of the legs) more than a regular Deadlift.

Back Extension

Starting Position: Place body in appropriate position relative to machine.

Execution: With pad on hips, keep back flat (as seen in Deadlift), bend at the waist, keeping back straight, until legs and upper body are at a 90° angle.

Back Squat

Starting Position: Before you begin, it is important to ensure safety guards are in an appropriate position relative to individual needs. Grasp bar with palm facing direction of eyes, wrapping the thumb around the bar (closed, pronated grip). Place body underneath bar with feet approximately shoulder width apart or wider (keep toes slightly pointed outward). Place bar in a stable position on back across the shoulders and upper back.

Execution: Keep back flat, chest out, eyes in mirror or slightly upwards, and lower slowly in a controlled fashion. Weight should be kept on the heels rather than in toes to prevent unnecessary stress on the knees. Lower until hips and thighs are in line with the floor. To move back to the top of the lift, keep back flat, chest out, eyes in mirror or slightly upwards, and lift back up through heels.

Lunges

Starting Position: Hands by side (weights in hands if adding resistance), ready to take a large step forward.

Execution: Keeping torso perpendicular to floor, step forward with right leg. Right leg and right knee should be at a 90° angle. Left thigh should be in a vertical line from floor. Ensure right knee is not bent past the toes. Repeat process for the other side (stepping forward with the left leg). To add weight, hold dumb bells by side (specific to individual need).

Box Step

Starting Position: Stand with hands by side, behind an elevated surface.

Execution: With left leg, step up to box as if stepping onto a flight of stairs. Do not lean forward, keep torso on a vertical plane. Step right leg up onto step with left leg. Step left leg down, then right leg down. Repeat process for the other side (step up with right leg).

Box Step with Lunge

Starting Position: Read Box Step Starting Position.

Execution: Perform box step as described above. Instead of stepping down off of the box with the right leg (left leg is on the ground) and placing it next to the left leg, step backwards (with the right leg) into a lunge. This is a more difficult variation for those who wish to challenge themselves.

Leg Extension

Starting Position: Adjust machine to fit individual needs. Sit with roller on the front of ankles, and with back firmly up against the rest.

Execution: Grasp handles and extend knees.


Hamstring Curl

Starting Position: Sit on machine with roller behind ankles. Grasp the handles on top of the lap pad. Make sure knees are slightly over the edge of the seat pad.

Execution: Flex the knees, pulling ankles towards backside/buttocks.


Calf Raise

Starting Position: Sit down on machine with thighs underneath pad. Place toes on cross bar directly beneath pad.

Execution: Push up on toes and remove guard. Move vertically (up and down) by pushing with toes. Move through a complete vertical range of ankles.


Standing Calf Raise

Starting Position: Place left foot on an elevated surface that will allow the heel to dip down further than the toes. If needed, balance by holding onto surrounding structure.

Execution: Push up from left toes, rising up onto the calf. Lower left heel down until is almost in contact with the floor. Repeat process for the right calf.


Bench Press

Starting Position: Lay down on bench with 5 points of contact (head, two shoulders and two legs). Grasp bar with slightly wider than shoulder width grip (wide enough so that when the bar is at its lowest position there is a 90° angle at the elbows). Thumbs and hand are to be wrapped around the bar (closed, pronated grip).

Execution: Lower the bar straight down in a controlled manner. Touch the chest at the bottom. Push from chest and triceps to get the bar back up.

Incline Press

Starting Position: Adjust bench to a 45° angle. Using a closed, pronated grip (thumbs and hands wrapped around bar), grasp dumb bells and sit down on the bench. Ensure the 5 points of contact are employed (head, two shoulders and two legs).

Execution: Lower the weights straight down in a controlled manner, to form a 90° angle at the elbows. Extend arms with the weights to top position.

Seated Row

Starting Position: Sit grasping the handles at a distance that keeps knees bent and back flat.

Execution: Pull back with shoulders/back/arm all in unison. Squeeze the back muscles when handle is closest to body. Return handle to starting position.

One (1) Arm Row

Starting Position: With the left knee and left hand on a bench, keep back flat. Right hand should be holding the dumb bell.

Execution: Pull up with right arm (holding dumb bell) as high as possible (maintaining form). Return dumb bell to starting position. Perform designated repetitions with right arm first, and then switch positions on bench to perform the left with the left arm.

Lat Pull Up

Starting Position: Hands should be slightly wider than shoulder width apart, using an over hand grip.

Execution: Pull body up as high as possible while maintaining form. Try to limit swinging. If unable to perform a pull up, either jump up to top position and lower slowly, or use the lat pull down machine.

Lat Pull Down (Machine)

Starting Position: Using the designated machine, utilize the same grip as the lat pull up.

Execution: Have chest slightly pointed out and pull bar down to the chest. Return bar slowly to top position.

Chin-ups

Starting Position: With underhand/neutral grip.

Execution: Pull up to highest possible point. If unable to perform the up phase, jump up to top position and lower slowly. An underhand grip has knuckles facing out, palms in.

One (1) Arm Power Clean

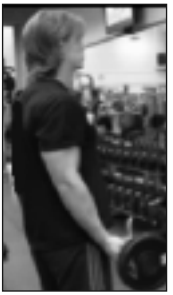
Starting Position: Using the alternate grip (if left hand palm facing left, thumb wrapped around bar; thumb should be closest to body) grasp the end of an Olympic bar (the thick part), making it angle upwards from the floor. Squat down, keeping back flat.

Execution: Explode up from legs, pulling up with left arm. Land in squat position with left elbow tight to the body. Once more, explode from legs up onto calves, with left arm completely extended. This is a difficult but necessary maneuver. Complete all of the repetitions with the left arm before moving on to the right arm. Consult video if there is any difficulty understanding.

Bicep Curl (Barbell)

Starting Position: Stand up straight, knees slightly bent, grasping barbell with an underhand grip.

Execution: Rotate/Pull pull bar up to chest without breaking elbows away from the side of body. Lower barbell in a controlled manner.




Hammer Curl

Starting Position: Stand with knees slightly bent and dumb bells by side.

Execution: Pull up with thumbs facing upwards. Keep elbows by side (as per instructions from the Bicep Curl). Lower dumb bells in a controlled manner.


Lying Triceps Extension

Starting Position: Lay down with barbell held directly up from body, hold the bar with the hand and thumb wrapped around it (overhand grip).

Execution: Bend at elbows to a 90° angle. The weight should be above head when at 90° degree angle. Push barbell away from head and extend elbows to complete the repetition.


Triceps Extension (Solid Bar)

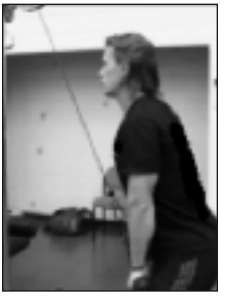
Starting Position: Standing with knees slightly bent, grasp bar with an overhand grip.

Execution: Extend elbows straight down until fully extended.

Triceps Extension (Rope)

Starting Position: Standing with knees slightly bent, grasp rope handles with an overhand grip.

Execution: Extend elbows out. Nearing full extension, slightly rotate hands out to fully engage the Triceps.

Single Arm Shoulder Press


Starting Position: Stand with a slight knee bend holding a single dumb bell with right hand. Bring weight up to rest on top of the right shoulder.

Execution: Press dumb bell overhead (over right shoulder). Lower dumb bell to right side at a 90° angle. Keep back straight. Repeat this process for the left arm.

Shoulder Circuit



Starting Position: Stand with knees slightly bent, dumb bells in hand.

Execution: Perform the following three (3) exercises in succession for the Anaerobic Training Program.

Anterior Raise: Raise dumb bells in front of body, with thumbs slightly pointed up.

Lateral Raise: Raise dumb bells to side, with thumbs slightly pointed up.

Posterior Raise: Bend over at waist with thumbs pointed out, and raise dumb bells to the side while engaging the back muscles.

Wipers


Starting Position: Stand with knees slightly bent. Have bar in same position on the floor as seen with the One (1) Arm Power Clean. Grasp bar with both hands at the fat end of an Olympic bar, palms facing in towards each other. Bring bar directly out in front of chest.

Execution: Twist down to left side side, keeping core tight. Return to center starting position. Twist down to right side. Feet should twist and point in the direction of the bar to allow for full range of movement.

Tension Twisters

Starting Position: Fix a heavy-duty exercise band to a sturdy structure (ie a squat rack). Grasp the handle with both hands.

Execution: Twist to right side, returning to center position each time. Twist and point inside foot in the direction of the turn to allow for full range of motion. After completion of right side repetitions, complete left side.


Ball Crunches

Starting Position: Lay on an exercise ball (back on the ball).

Execution: Crunch forward/down to engage the abs.


Crunch (inner thigh Squeeze)

Starting Position: Lay on the ground with a light medicine ball in between your legs.

Execution: Crunch up/forward and squeeze the ball with knees. Hold the knee squeeze for 3 seconds each time.


Bosu V Sits

Starting Position: Balance on a bosu ball in a V sit position.

Execution: Bring legs and torso together to engage abs.


Leg Raises

Starting Position: Lay flat on back with hands underneath the gluteal.

Execution: Raise the legs up and crunch forward with the upper body to engage the abs.


Ball Throw Downs

Starting Position: Stand on one leg, holding a ball that can be comfortably thrown down at the ground.

Execution: Raise ball above head and throw the ball down. Catch the ball on the up bounce.


Ball Climbers

Starting Position: Using an exercise ball, extend elbows and place hands on the ball, shoulder width apart. Have feet coming up from the ground at a 45° angle. The legs and back should form a straight line.

Execution: Alternating left and right, bring knees and toes up to touch the ball.


Planks

Starting Position (Front): Lay face down, holding body in a straight line from toes and forearms.

Starting Position (Side): Lay on left/ right side, holding body in a straight line by the side of the foot and the forearm.


Execution: Hold the position, keeping core engaged.

WEEK 1

Monday			Wednesday			Friday		
Deadlift 3 sets of 10			1 Arm Power Clean 3 sets of 8			Stiff Legged Deadlift 3 sets of 10		
E	M	M	E	M	M	E	M	M
Regular Bench 3 sets of 10			Box Step to Lunge 3 sets of 8			Lunge (each side) 3 sets of 10		
E	M	M	E	M	M	E	M	M
Back Squat 3 sets of 10			Box Step to Lunge 3 sets of 8			Lunge (each side) 3 sets of 10		
E	M	M	E	M	M	E	M	M
Seated Row 3 sets of 10			1 Arm Row 3 sets of 10			Chin up 3 sets of 8		
E	M	M	E	M	M	E	M	M
Box Steps 3 sets of 10			Triceps Extension 3 sets of 10			Back Extension 3 sets of 10		
E	M	M	E	M	M	E	M	M
1 Arm Shoulder Press 3 sets of 10			Leg Extension 3 sets of 10			Lying Triceps Extension 3 sets of 10		
E	M	M	E	M	M	E	M	M
Bicep Curl 3 sets of 10			Hamstring Curl 3 sets of 10			Shoulder Circuit 3 sets of 10*		
E	M	M	E	M	M	E	M	M
Calf Raise 3 sets of 10			Calf Raise 3 sets of 10			Calf Raise 3 sets of 10		
E	M	M	E	M	M	E	M	M
Abs (3 exercises)**			Abs (3 exercises)**			Abs (3 exercises)**		

* Anterior, lateral, posterior shoulder raise performed in succession
e.g. 10 anterior x 10 lateral x 10 posterior reps for a total of 30 reps per set

** Choose three abs exercises and perform them as you would a circuit found in Accessible Anaerobics

WEEK 2

Monday			Wednesday			Friday		
Deadlift **3 sets – 10, 10, 8**			**1 Arm Power Clean** **3 sets of 8**			**Stiff Legged Deadlift** **3 sets – 10, 10, 8**		
E	**M**	**H**	**E**	**M**	**H**	**E**	**M**	**H**
Regular Bench **3 sets – 10, 10, 8**			**Lat pull down/pull up** **3 sets – 10, 10, 8**			**Regular Bench** **3 sets – 10, 8, 8**		
E	**M**	**H**	**E**	**M**	**H**	**E**	**H**	**M**
Back Squat **3 sets – 10, 10, 8**			**Box Step to Lunge** **3 sets – 10, 10, 8**			**Lunge (each side)** **3 sets of 7**		
E	**M**	**H**	**E**	**M**	**H**	**E**	**M**	**H**
Seated Row **3 sets – 10, 10, 8**			**1 Arm Row** **3 sets – 10, 10, 8**			**Chin up** **3 sets of 8**		
E	**M**	**H**	**E**	**M**	**H**	**E**	**M**	**H**
Box Steps **3 sets – 10, 10, 8**			**Triceps Extension** **3 sets – 10, 10, 8**			**Back Extension** **3 sets of 10**		
E	**M**	**H**	**E**	**M**	**H**	**E**	**M**	**H**
1 Arm Shoulder Press **3 sets – 10, 10, 8**			**Leg Extension** **3 sets – 10, 10, 8**			**Lying Triceps Extension** **3 sets – 10, 10, 8**		
E	**M**	**H**	**E**	**M**	**H**	**E**	**M**	**H**
Bicep Curl **3 sets – 10, 10, 8**			**Hamstring Curl** **3 sets – 10, 10, 8**			**Shoulder Circuit** **3 sets of 10***		
E	**M**	**H**	**E**	**M**	**H**	**E**	**E**	**M**
Calf Raise **3 sets of 10**			**Calf Raise** **3 sets of 10**			**Calf Raise** **3 sets of 10**		
E	**M**	**M**	**E**	**M**	**H**	**E**	**M**	**H**
Abs (3 exercises)**			**Abs (3 exercises)****			**Abs (3 exercises)****		

* Anterior, lateral, posterior shoulder raise performed in succession
e.g. 10 anterior x 10 lateral x 10 posterior reps for a total of 30 reps per set

** Choose three abs exercises and perform them as you would a circuit found in Accessible Anaerobics

WEEK 3

Monday			Wednesday			Friday		
Deadlift 3 sets – 10, 10, 8			**1 Arm Power Clean 3 sets of 5**			**Stiff Legged Deadlift 3 sets – 10, 10, 8**		
E	H	H	M	H	H	M	H	H
Regular Bench 3 sets – 10, 10, 8			**Lat pull down/pull up 3 sets – 10, 8, 8**			**Regular Bench 3 sets – 8, 7, 7**		
M	H	H	M	H	H	M	H	H
Back Squat 3 sets – 10, 8, 8			**Box Step to Lunge 3 sets of 8**			**Lunge (each side) 3 sets of 6**		
M	H	H	M	H	H	M	H	H
Seated Row 3 sets – 10, 8, 8			**1 Arm Row 3 sets – 10, 8, 8**			**Chin up 3 sets of 8**		
M	H	H	M	H	H	M	H	H
Box Steps 3 sets – 8, 7, 6			**Triceps Extension 3 sets – 10, 8, 8**			**Back Extension 3 sets of 8**		
M	H	H	M	H	H	M	H	H
1 Arm Shoulder Press 3 sets of 8			**Leg Extension 3 sets of 8**			**Lying Triceps Extension 3 sets of 8**		
M	H	H	M	H	H	M	H	H
Bicep Curl 3 sets of 8			**Hamstring Curl 3 sets of 8**			**Shoulder Circuit 3 sets of 10***		
M	H	H	M	H	H	E	M	M
Calf Raise 3 sets of 8			**Calf Raise 3 sets of 8**			**Calf Raise 3 sets of 8**		
M	H	H	M	H	H	M	H	H
Abs (3 exercises)**			**Abs (3 exercises)****			**Abs (3 exercises)****		

* Anterior, lateral, posterior shoulder raise performed in succession
e.g. 10 anterior x 10 lateral x 10 posterior reps for a total of 30 reps per set

** Choose three abs exercises and perform them as you would a circuit found in Accessible Anaerobics

WEEK 4

Monday			Wednesday			Friday		
Deadlift 3 sets of 10			1 Arm Power Clean 3 sets of 8			Stiff Legged Deadlift 3 sets of 10		
E	M	H	E	M	H	E	M	H
Regular Bench 3 sets of 10			Lat pull down/pull up 3 sets of 10			Regular Bench 3 sets of 10		
E	M	H	E	M	H	E	M	H
Back Squat 3 sets of 10			Box Step to Lunge 3 sets of 8			Lunge (each side) 3 sets of 8		
E	M	H	E	M	H	E	M	H
Seated Row 3 sets of 10			1 Arm Row 3 sets of 10			Chin up 3 sets of 8		
E	M	H	E	M	H	E	M	H
Box Steps 3 sets of 10			Triceps Extension 3 sets of 10			Back Extension 3 sets of 10		
E	M	H	E	M	H	E	M	H
1 Arm Shoulder Press 3 sets of 10			Leg Extension 3 sets of 10			Lying Triceps Extension 3 sets of 10		
E	M	H	E	M	H	E	M	H
Bicep Curl 3 sets of 10			Hamstring Curl 3 sets of 10			Shoulder Circuit 3 sets of 10*		
E	M	H	E	M	H	E	M	H
Calf Raise 3 sets of 10			Calf Raise 3 sets of 10			Calf Raise 3 sets of 10		
E	M	H	E	M	H	E	M	H
Abs (3 exercises)**			Abs (3 exercises)**			Abs (3 exercises)**		

* Anterior, lateral, posterior shoulder raise performed in succession
e.g. 10 anterior x 10 lateral x 10 posterior reps for a total of 30 reps per set

** Choose three abs exercises and perform them as you would a circuit found in Accessible Anaerobics

WEEK 5

Monday			Wednesday			Friday		
Deadlift 3 sets – 10, 10, 8			1 Arm Power Clean 3 sets of 6			Stiff Legged Deadlift 3 sets – 10, 10, 8		
M	H	H	M	H	H	M	H	H
Regular Bench 3 sets – 10, 10, 8			Lat pull down/pull up 3 sets – 10, 10, 8			Regular Bench 3 sets – 10, 8, 8		
M	H	H	M	H	H	M	H	H
Back Squat 3 sets – 10, 10, 8			Box Step to Lunge 3 sets of 6			Lunge (each side) 3 sets of 7		
M	H	H	M	H	H	M	H	H
Seated Row 3 sets – 10, 10, 8			1 Arm Row 3 sets – 10, 10, 8			Chin up 3 sets of 8		
M	H	H	M	H	H	M	H	H
Box Steps 3 sets – 10, 10, 8			Triceps Extension 3 sets – 10, 10, 8			Back Extension 3 sets of 10		
M	H	H	M	H	H	M	H	H
1 Arm Shoulder Press 3 sets – 10, 10, 8			Leg Extension 3 sets – 10, 10, 8			Lying Triceps Extension 3 sets – 10, 10, 8		
M	H	H	M	H	H	M	H	H
Bicep Curl 3 sets – 10, 10, 8			Hamstring Curl 3 sets – 10, 10, 8			Shoulder Circuit 3 sets of 10*		
M	H	H	M	H	H	M	H	H
Calf Raise 3 sets of 10			Calf Raise 3 sets of 10			Calf Raise 3 sets of 10		
M	H	H	M	H	H	M	H	H
Abs (3 exercises)**			Abs (3 exercises)**			Abs (3 exercises)**		

* Anterior, lateral, posterior shoulder raise performed in succession
e.g. 10 anterior x 10 lateral x 10 posterior reps for a total of 30 reps per set

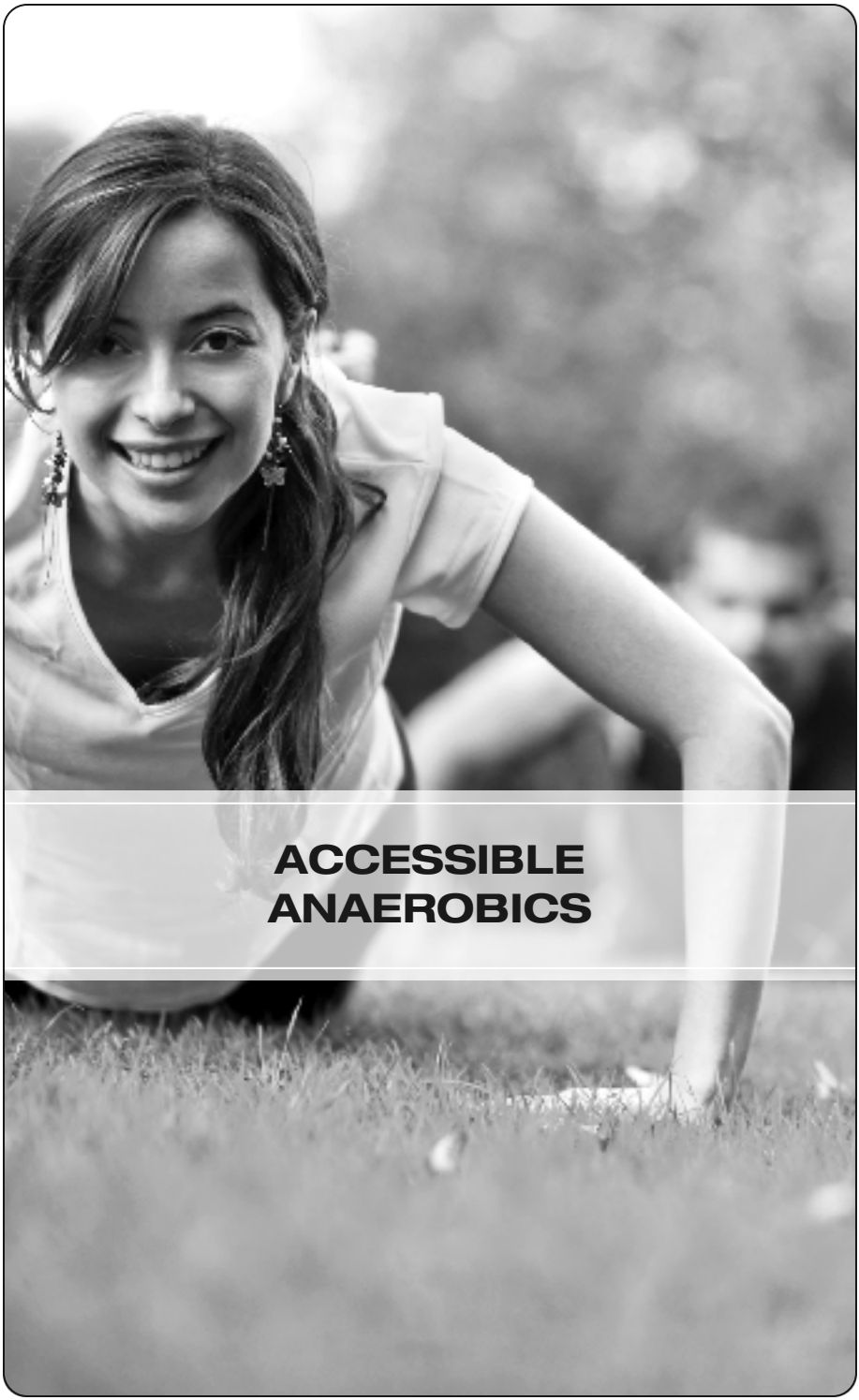
** Choose three abs exercises and perform them as you would a circuit found in Accessible Anaerobics

WEEK 6

Monday			Wednesday			Friday		
Deadlift 3 sets of 8			**1 Arm Power Clean 3 sets of 6**			**Stiff Legged Deadlift 3 sets of 8**		
M	**H**	**H**	**M**	**H**	**H**	**M**	**H**	**H**
Regular Bench 3 sets of 8			**Lat pull down/pull up 3 sets – 10, 8, 8**			**Regular Bench 3 sets of 8**		
M	**H**	**H**	**M**	**H**	**H**	**M**	**H**	**H**
Back Squat 3 sets of 8			**Box Step to Lunge 3 sets of 8**			**Lunge (each side) 3 sets – 7, 6, 6**		
M	**H**	**H**	**M**	**H**	**H**	**M**	**H**	**H**
Seated Row 3 sets of 8			**1 Arm Row 3 sets of 8**			**Chin up 3 sets of 8**		
M	**H**	**H**	**M**	**H**	**H**	**M**	**H**	**H**
Box Steps 3 sets – 10, 8, 8			**Triceps Extension 3 sets – 10, 8, 8**			**Back Extension 3 sets – 10, 8, 8**		
M	**H**	**H**	**M**	**H**	**H**	**M**	**H**	**H**
1 Arm Shoulder Press 3 sets – 10, 8, 8			**Leg Extension 3 sets – 10, 8, 8**			**Lying Triceps Extension 3 sets – 10, 8, 8**		
M	**H**	**H**	**M**	**H**	**H**	**M**	**H**	**H**
Bicep Curl 3 sets – 10, 8, 8			**Hamstring Curl 3 sets – 10, 8, 8**			**Shoulder Circuit 3 sets of 10***		
M	**H**	**H**	**M**	**H**	**H**	**M**	**H**	**H**
Calf Raise 3 sets of 8			**Calf Raise 3 sets of 8**			**Calf Raise 3 sets of 8**		
M	**H**	**H**	**M**	**H**	**H**	**M**	**H**	**H**
Abs (3 exercises)**			**Abs (3 exercises)****			**Abs (3 exercises)****		

* Anterior, lateral, posterior shoulder raise performed in succession
e.g. 10 anterior x 10 lateral x 10 posterior reps for a total of 30 reps per set

** Choose three abs exercises and perform them as you would a circuit found in Accessible Anaerobics



ACCESSIBLE ANAEROBICS

ACCESSIBLE ANAEROBICS

Many anaerobic exercises can be completed with equipment or items one can find around the workplace or home. For times where access to a gym is not possible, Accessible Anaerobics may be the solution to getting fit.

Because of the lightweight nature of the various exercises found in the Accessible Anaerobics training, the Accessible Anaerobic program takes on a circuit training feel. Unlike the Anaerobic (weightlifting) program in the previous section, the Accessible Anaerobics training program utilizes a much shorter rest ratio, and gives the user an option to choose from a number of exercises.

If access to a gym is available, feel free to experiment/substitute with workouts from the Accessible Anaerobics program.

How to Workout using the Accessible Anaerobics Program

Using the explanations, pictures, and video found at **www.wfx-fit.ca**, demonstrating proper techniques, and the list of exercises below choose the corresponding number of exercises as per defined by the Table 4.

> **Note:** Week 4, is considered to be a working recovery week, hence the drop back to 5 exercises. In the following weeks it progresses to shorter rest periods and more exercises.

Table 4 – List of exercises with corresponding number of exercises.

Week #	# of Exercises	Circuits	Work Time	Rest Time
Week 1	5	3	30 sec.	60 sec.
Week 2	6	3	30 sec.	60 sec.
Week 3	7	3	30 sec.	60 sec.
Week 4	5	3	30 sec.	45 sec.
Week 5	6	4	30 sec.	45 sec.
Week 6	7	4	30 sec.	45 sec.

> **Note:** After each full circuit, the rest times is two times (2x) the specified rest time.
> E.g. If the Rest Time is 60 seconds; break between circuits is 120 seconds (2 minutes).

Table 5 – Workout Chart to be filled out by participant.

Week #	# of Exercises	Circuits	Work Time (secs)	Rest Time (secs)
	1.			
	2.			
	3.			
	4.			
	5.			
	6.*			
	7.*			

The 6th & 7th exercise in Table 5 will only be used in the progression weeks (weeks 2, 3, 5, 6)

Table 6 – Example of a Week 2 Workout Chart.

Week #	# of Exercises	Circuits	Work Time (secs)	Rest Time (secs)
2	**1.** Push-ups			
	2. Squat Thrusts			
	3. Supermans	3	30 secs.	60 secs.
	4. Leg Raises			
	5. Chin-ups			
	6.* Front Plank			
	7.*			

* Week two utilizes 6 exercises in the circuit and therefore the 7th exercise block is left out intentionally.

Table 7 – Accessible Anaerobics Exercise List.

Accessible Anaerobics Exercise List		
Upper Body	Push-ups	Regular push-ups, triceps push-ups, spiderman push-ups, leg through push-ups, camel push-ups, t push-ups, decline push-ups, decline triceps push-ups, decline camel push-ups.
	Triceps	Regular dips, level ground dips with 1 foot variation.
	Pull-ups	Regular pull-ups, narrow grip pull-ups, chin-ups, inverted pull/chin-ups.
Lower Body	Plyometrics	Hops, squat hops, jumps, squat jumps, squats, squats to calf raise, squat tuck jumps, full burpees, burpee (without pushup), lunges, Mary Katherine's, iron cross hops, side hops (one & two feet).
	Step-ups	Normal step-ups, step-up to knee lift & torso twist, step-up to knee lift & torso twist with back lunge.
	Calf Raises	One & two feet.
	Deadlifts	Single leg deadlifts.
Abs/Lower Back	Abs	Regular crunches & crossover crunches, leg raises, side leg raises, toe touches, v sits, alternating touches, front & side planks.
	Lower Back	Regular and alternating supermans.

ACCESSIBLE ANAEROBIC EXERCISES AND TECHNIQUE

Regular Push-ups


Starting Position: Lay face down, with chest off ground, supported by hands and toes placed on the ground.

Execution: Bend elbows and lower chest to the ground. Be sure to keep the spine in line (Do not strain to look ahead).

Triceps Push-ups


Starting Position: Same starting position as a regular push-up, except hands are placed closer together.

Execution: Bend elbows and lower chest to the ground. Be sure to keep the spine in line (Do not strain to look ahead).

Spiderman Push-ups


Starting Position: Lay face down, with chest off ground, supported by hands and toes placed on the ground.

Execution: Lower body as you would do a regular push-up. As the chest is brought to the ground, alternate bringing the left/right knee up to touch the left/right elbow.

Leg Through Push-ups


Starting Position: Lay face down, with chest off ground, supported by hands and toes placed on the ground.

Execution: Lower body to the ground as you would a normal push-up. As the chest is brought to the ground twist hips to the left/right and bring the bottom leg underneath the leg left supporting your body.

'T' Push-ups


Starting Position: Lay face down, with chest off ground, supported by hands and toes placed on the ground.

Execution: Same form as regular push-ups for the entire up and down phase. Once at the top of the up phase, push body up into a 'T' position by removing your left/right hand and reaching upwards with it. Return from the 'T' position by landing back into a normal push-up position.

Camel Push-ups


Starting Position: Lay face down, with chest off ground, supported by hands on the ground and toes placed on an elevated surface. Legs and torso should come together at an angle (back and legs should not be in a straight line).

Execution: Lower upper body to the ground. Push back up to complete a repetition.

Decline Push-ups


Starting Position: Lay face down, with chest off ground, supported by hands on ground and toes placed on an elevated surface.

Execution: Same form as Regular Pushups. Lower chest to ground and press back up.

Triceps Dips

Starting Position: Place heels of hands on a raised surface with legs extended straight out in front. This exercise can also be modified to Level Ground Triceps Dips by placing legs up on a raised surface to make the exercise more difficult.

Execution: Lower body by bending at the elbows. Press from arms to bring body back up to starting position. This can be completed with one foot off of the ground to increase the difficulty of the exercise.



Pull-ups

Starting Position: Place hands (overhand grip) slightly wider than shoulder width apart. This exercise can be modified to a Narrow Grip Pull-up by bringing hands in to shoulder width or closer grip.



Execution: Pull body up as high as possible. Try to limit swinging. If the strength is lacked to pull-up, jump-up to top position and lower slowly.

Chin-ups

Starting Position: Place hands on bar, utilizing an underhand grip (approximately shoulder width apart or narrower). Arms will be fully extended.

Execution: Pull up to highest possible point and then lower body. If the strength is lacked to pull body up, jump up to top position and lower slowly.


Inverted Pull-ups

Starting Position: Place a bar in between two raised surfaces or use the tailgate of a truck as equipment to perform this exercise. Put body underneath raised surface, keep back flat, feet directly out in front, and arms fully extended (using overhand grip, wider than shoulder width apart).
To perform the Inverted Chin-up variation, simply use an underhand grip (used in regular chin-ups).

Execution: Pull chest up to bar as far as capable, and lower body back down.

Hops / Jumps

Starting Position: Stand in a slight squat position, with arms held back behind body, ready for a quick explosive movement.

Execution: Explode upwards, swinging arms forward to propel body up onto a particular object. Step back down safely. 'Hop' is used for smaller heights whereas 'jump' is designated for higher objects.

Squat Hops / Jumps

Starting Position: Start in a squat position, with arms held back behind body, ready for a quick explosive movement.

Execution: Explode upwards; swinging arms forward to propel body up onto a particular object. Step back down safely. 'Hop' is used for smaller heights whereas 'jump' is designated for higher objects.

Squats

Starting Position: Stand with feet shoulder width apart, toes slightly pointed out, and arms held out in front of the body.

Execution: Lower body to squat position (back flat and arms out in front). Push through heels to raise back up into starting position.

Squats to Calf Raise

Execution: Squat down and explode back up, bouncing up onto toes to engage the calves. Once on the toes, engaging the calves, hold the position for a one (1) count.

Squat Tuck Jumps

Starting Position: Stand with feet shoulder width apart, toes slightly pointed out, and arms held out in front of the body.

Execution: Lower body in the same fashion as a squat. Instead of returning to top position, explode from legs into a jump. Once in the air, bring knees into chest and wrap arms around legs. Land safely in a controlled fashion.

Full Burpee

Starting Position: Stand in the start position for a hop/squat.

Execution: Drive up with arms and explode with legs to jump into the air (arms should be above head). Land back on the ground. Squat down, placing hands on the ground just outside of feet. Thrust feet backwards into a regular push-up position. Complete push-up, and bring feet back up under hands.

Burpee (Without Push-up)

Starting Position: Stand in the start position for a hop/squat.

Execution: Drive up with arms and explode with legs to jump into the air (arms should be above head). Land back on the ground. Squat down, placing hands on the ground just outside of feet. Thrust feet backwards into a regular push-up position. Bring feet back up under hands, and stand up.

Lunges

Starting Position: : Feet together, standing up straight, ready to take a step forward.

Execution: Step forwards with left leg, keeping torso perpendicular to the ground. Front (left) leg should be at a 90° angle. Ensure front knee is not bent over toes. Repeat process for right leg. Alternate between left and right.


Mary Katherine's

Starting Position: Feet together, standing up straight, ready to take a step forward.

Execution: Step forwards with left leg, keeping torso perpendicular to the ground. Front (left) leg should be at a 90° angle. Ensure front knee is not bent over toes. To transition between left and right lunges, explode from the lunge position into a jump, landing in the opposite leg lunge position. This is a much more difficult variation of the lunge.



Iron Cross Hops

Starting Position: Draw or imagine a box with four squares inside of it. Lift right leg off of the ground and prepare to hop on left foot.

Execution: On left foot hop clock wise inside the squares. Repeat the Iron Cross Hops for the right foot.

Side Hops

Starting Position: Draw or imagine a line that could be hopped across. Stand with knees slightly bent, both feet on the ground.

Execution: Hop from side to side with one or two feet.

Step Ups

Starting Position: Stand straight with both feet on the ground. Prepare to take a step forward with the left foot.

Execution: Step up onto box (with left foot) as if stepping onto a flight of stairs. Do not lean forward, keep torso perpendicular to the ground. Lift body with left leg. Step up with right foot onto box. Step down with left foot. Step down with right foot. Repeat this process using the right leg as the stepping leg.

Step Up, Knee Life, Torso Twist

Starting Position: Use the same starting position as seen above with Step Up.

Execution: Complete a Step Up as described above, except instead of stepping up with right leg, bring right knee all the way up and touch the left elbow. Bring the leg back down to meet the left leg on the elevated surface. Step down with left foot. Step down with right foot. Repeat this process using the right leg as the stepping leg.

Step Up, Knee Life, Torso Twist, with Lunge

Starting Position: Use the same starting position as seen above with Step Up.

Execution: Complete a Step Up, Knee Lift, Torso Twist as described above, except take the right knee that was raised, and step directly down onto the ground. Once right foot is stable on the ground, step with left foot off of the elevated surface and straight back into a lunge step. Repeat this process using the right leg as the stepping leg.

Calf Raise

Starting Position: Place left foot on an elevated surface that will allow the heel to dip down further than the toes. If an elevated surface is not available, perform Calf Raise on level ground. If needed, balance by holding onto surrounding structure.

Execution: Press up from left toes to the highest point possible to engage the calf. Lower in a controlled manner. Repeat this process for the right foot.

Single Leg Deadlift

Starting Position: Stand balancing on left foot, with hands by side.

Execution: Reach down with both hands and touch toes. While reaching down to touch toes, bring right leg up as high and as straight as possible to balance out reaching movement. Repeat this process using the right foot to balance and lifting the left leg off of the ground. To add resistance, hold a rock or a block of wood with hands.

Regular Crunches

Starting Position: Lay on back with elbows bent, and hands placed on head. Lift feet off of the ground. Have thighs perpendicular to ground (sticking straight up from the ground), and lower leg at a 90° angle out from the thigh.

Execution: Lay on back with elbows bent, and hands placed on head. Lift feet off of the ground. Have thighs perpendicular to ground (sticking straight up).



Crossover Crunches

Starting Position: Use the same starting position as described above for crunches.

Execution: Alternate crunching up and forward, bringing left elbow to right knee, and right elbow to left knee.

Leg Raises

Starting Position: Lay flat on back with hands underneath the gluteal, legs slightly raised-up off of the ground.


Execution: Raise the legs up and crunch forward with the upper body. Keep as straight as possible when raising them.

Toe Touches

Starting Position: Lay flat on back with hands extended above head, in line with the body. Have the legs slightly raised up off of the ground.


Execution: While raising the legs up and crunching forward with the upper body, bring hands up to touch the toes. Lower in a controlled manner to the starting position.

Side Leg Raises

Starting Position: Lay on right side with left arm suspended in the air, and the right arm placed on the ground, creating a 90° angle from the torso (T shape). Have legs straight and angled out to the right from the body.


Execution: Raise the legs (keeping them as straight as possible), and reach over with the left arm to touch the toes. Lower in a controlled manner to the starting position. Repeat this process by lying on the left side with the right arm suspended in the air.

V Sits

Starting Position: Sit balancing with back and legs off the ground. Arms should be forward to maintain balance. Legs should be straight out in front of body.

Execution: Bring knees and arms together to create a 'V' shape. Return to starting position.


Alternating Touches

Starting Position: Sit in V Sit position.

Execution: Keeping legs off of the ground and maintaining V Sit, alternate touches the ground on the left and right sides.


Front & Side Planks

Starting Position (Front): Lay face down, holding body in a straight line from toes and forearms.

Execution: Hold the position, keeping core engaged.


Supermans

Starting Position: Lay face down (prone) with arms placed above the head, on the ground.

Execution: Raise hips/legs along with arms, head, and chest off of the ground to engage the lower back muscles. Lower back to starting position.



Alternating Supermans

Starting Position: Use the Superman Starting Position.

Execution: Raise right arm and chest along with left leg and hip off of the ground.

ACCESSIBLE ANAEROBICS WORKOUT

Week #	# of Exercises	Circuits	Work Time (secs)	Rest Time (secs)
	1.			
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			

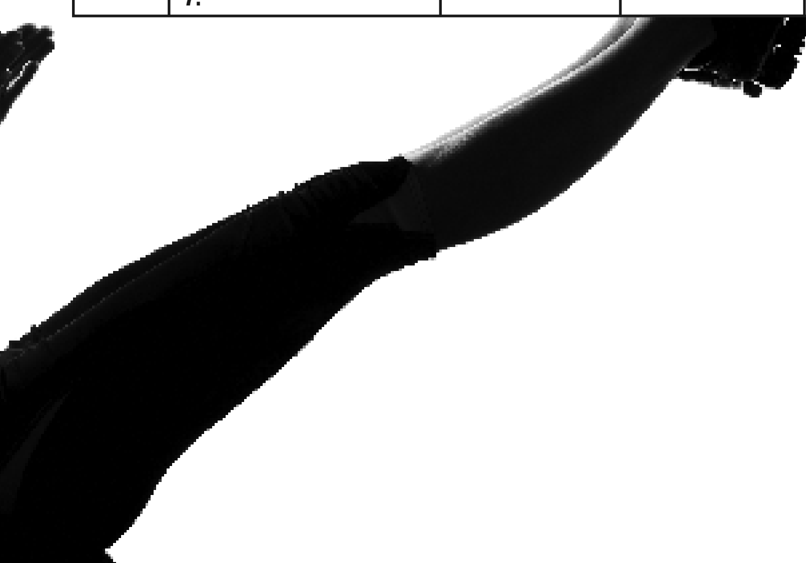
Week #	# of Exercises	Circuits	Work Time (secs)	Rest Time (secs)
	1.			
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			

Week #	# of Exercises	Circuits	Work Time (secs)	Rest Time (secs)
	1.			
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			

Week #	# of Exercises	Circuits	Work Time (secs)	Rest Time (secs)
	1.			
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			

Week #	# of Exercises	Circuits	Work Time (secs)	Rest Time (secs)
	1.			
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			

Week #	# of Exercises	Circuits	Work Time (secs)	Rest Time (secs)
	1.			
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			



AEROBIC TRAINING PROGRAM

AEROBIC TRAINING PROGRAM

Otherwise known as the oxidative system, the aerobic system is typically activated at rest and during low intensity activities. The word aerobic is used in relation to, or involving oxygen.

- **VO_2max:** VO_2max is the greatest amount of oxygen that can be consumed or used by the body at a given point in time.

Aerobic training is a great way to improve cardiovascular fitness, something that is a necessity for any WFF.

This particular Aerobic Training program will include interval training, repetition training, and a combination of the two, also known as Fartlek Training.

Interval Training

Interval training involves exercise at an intensity that is close to VO_2max for the participant, followed by an equal ratio of rest. Work times are usually 3-5 minutes. Typically, work to rest ratios is 1:1. Aspects of this ratio will be demonstrated in the program.

Repetition Training (REP)

REP is generally at a work intensity greater than VO_2max. Work times are much shorter than Interval training, while rest times are much longer to allow to compensate for greater amount of work being completed.

2.4 km Run

The 2.4 km run is a good indicator of cardiovascular fitness. It is used as a fitness standard for many sports. The reasoning behind employing a 2.4 km run as part of the aerobic training fitness regime is because of its similar characteristics. The new fitness test and the 2.4 km run share the same burn felt in the legs if a good pace is kept.

The only place where the 2.4 km run may come up short is the lack of incline. However, if a good pace is maintained, there will be no shortage of fatigue felt in the legs.

To reproduce the charged hose advance (sled pull), which is the fourth and final component of the WFX-FIT test, the 2.4 km run will be followed by a series of 50 m sprints. This aspect will help add to specificity of training to testing.

Each week the individual is encouraged to push for a better pace, and in turn better times on the 2.4 km run. If the 2.4 km run is going to be performed on a track, it is important to know that **2.4 km is 6 times around a 400 m track**. If a track is not available, an odometer, GPS, or a treadmill, could be used for measurement. It is important to note that whichever method of measurement is used, that the same distance be run every time. This will ensure accurate times and paces can be recorded. Although there will be no rest in between the 2.4 km and sprint section (because there is no rest in the WFX-FIT test) please record times individually.

The 'Sprint' consists of four (4) 50 m sprints. This can be measured by running approximately half of the 100 m track.

Table 8 – 6-Week Program for 2.4 km Run.

	Tuesday		Thursday	
	2.4 km Time	Sprint Time	2.4 km Time	Sprint Time
Week 1	Walk	Run	Jog	Fast Run
Week 2	Quick Jog	Sprint	Quick Jog	Sprint
Week 3	Full Effort	Sprint	Full Effort	Sprint
Week 4	Quick Jog	Fast Run	Quick Jog	Fast Run
Week 5	Full Effort	Sprint	Full Effort	Sprint
Week 6	Full Effort	Sprint	Full Effort	Sprint

2.4 KM RUN

	Tuesday		Thursday	
	2.4 km Time	Sprint Time	2.4 km Time	Sprint Time
Week 1				
Week 2				
Week 3				
Week 4				
Week 5				
Week 6				

	Tuesday		Thursday	
	2.4 km Time	Sprint Time	2.4 km Time	Sprint Time
Week 1				
Week 2				
Week 3				
Week 4				
Week 5				
Week 6				

	Tuesday		Thursday	
	2.4 km Time	Sprint Time	2.4 km Time	Sprint Time
Week 1				
Week 2				
Week 3				
Week 4				
Week 5				
Week 6				

	Tuesday		Thursday	
	2.4 km Time	Sprint Time	2.4 km Time	Sprint Time
Week 1				
Week 2				
Week 3				
Week 4				
Week 5				
Week 6				

	Tuesday		Thursday	
	2.4 km Time	Sprint Time	2.4 km Time	Sprint Time
Week 1				
Week 2				
Week 3				
Week 4				
Week 5				
Week 6				

	Tuesday		Thursday	
	2.4 km Time	Sprint Time	2.4 km Time	Sprint Time
Week 1				
Week 2				
Week 3				
Week 4				
Week 5				
Week 6				

Outdoor Training

The majority of a WFF time is spent outdoors. Therefore, the most specific training will be found outdoors in the same environment that is worked in. For this component of aerobic training, the individual is tasked with a series of walk, jogs, and sprints up and down a hill.

Find a hill typical of the environment normally worked in. Find a safe path that can be easily travelled on. Walk the route ensuring it is completely safe for use. Once safety is determined, the hill is ready to be used for exercise.

Chose a comfortable distance to start with. Remember, this distance will stay the same for the walk, jog and sprint. Mark the distance off as a guide for where to walk/jog/sprint to. Walk the line to get a good feel for it, and to get warmed up (beyond the dynamic warm-up).

Table 9 – Progression Chart for Outdoor Training.

	Tuesday	Thursday
	Workout	**Workout**
Week 1	W, W, W, J, J	W, W, W, W, W, J, J
Week 2	W, W, W, J, J,J,J,S	W, W, J, J, J, J, S, S, S
Week 3	W, W, J, J, J, J, J, S, S, S	W, W, J, J, J, J, S, S, S, S, S
Week 4	W, W, W, J, J, J, S	W, W, W, J, J, J, S
Week 5	W, J, J, J, S, S, S, S, S	W,W, J, J, J, S, S, S, S, S, J
Week 6	W, J, J, S, S, S, J, S, S, S, S	W, J, J, S, S, S, S, J, S, S, S, S

W = Walk up, walk down J = Jog up S = Sprint up

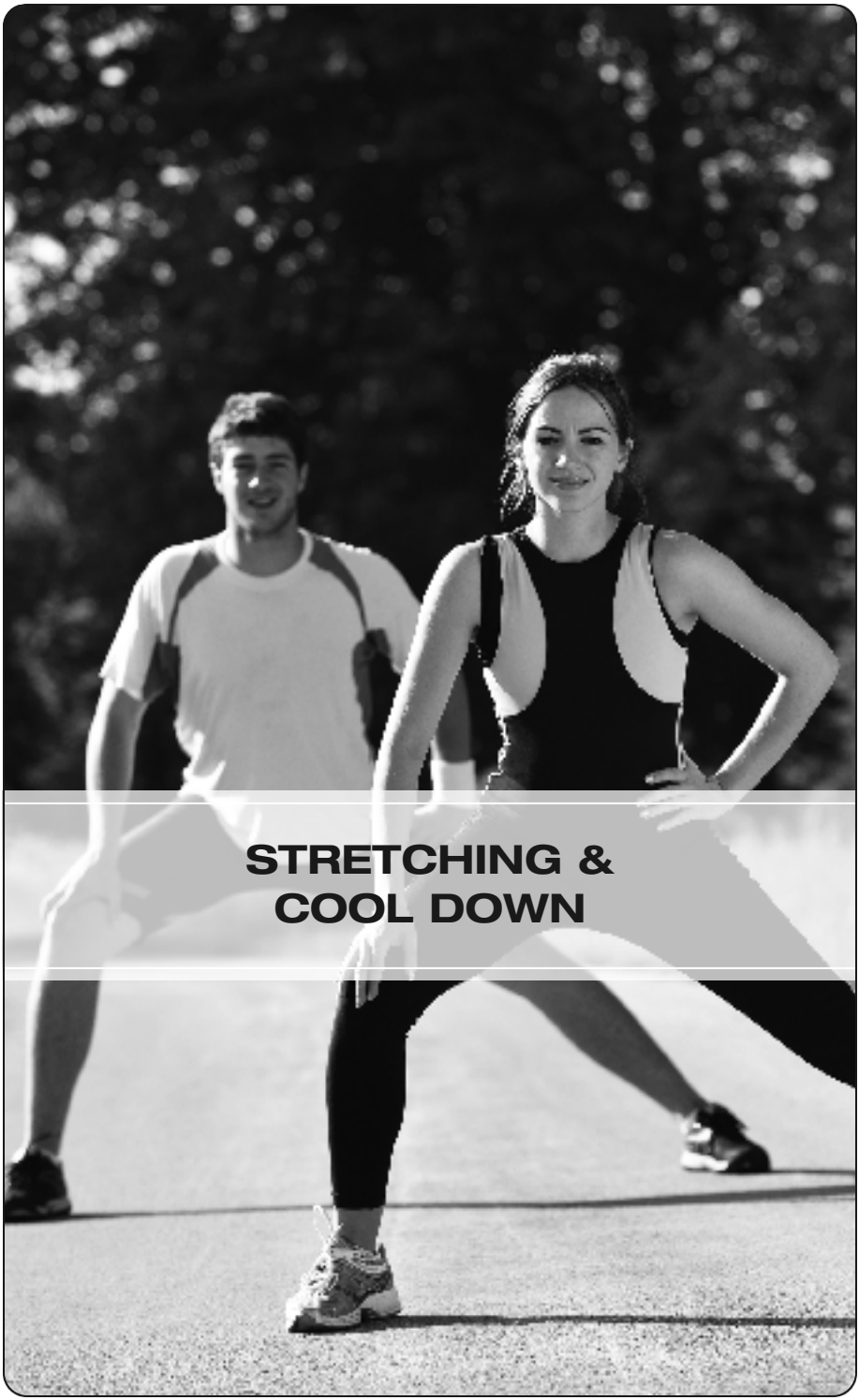
Each letter refers to the style in which the uphill is taken; **all down hills will be walked down**.
W, W, J, S

W Walk up, walk down **J** Jog-up, walk-down
W Walk up, walk down **S** sprint up and walk down

ACCESSIBLE AEROBICS (Outdoor Aerobics)

It is important to be able to utilize the area around oneself for fitness. Try to find other ways to be fit in the environment provided. It's as easy as going for a hike to explore the outdoors or going for a bike ride. The most important thing is to be creative and have fun. Getting away from structured anaerobic/aerobic workouts can be a good change of pace and/or active recovery.

Some ideas of aerobic workouts: bike rides, rollerblading, skiing, skating, running, hiking, kayaking, swimming, squash, skipping.



STRETCHING & COOL DOWN

STRETCHING & COOL DOWN

BENEFITS OF STRETCHING

- Improves joint range of motion
- Helps maintain optimal joint range of motion
- Reduces muscular tension
- Reduces low-back pain and prevents low-back pain for some people
- Contributes to correct posture and body symmetry
- Increases stability and brings grace to movements
- Preserves independent living and autonomy in older adults
- Improves the performance of daily functions like reaching for objects
- Reduces risk of injury in some activities
- Increases force production of a muscle during plyometric (rapid muscle movements) activities
- Helps maintain neural conduction (motor and sensory nerve function in the body) in muscles
- Reduces the risk of cramping

STRETCHING GUIDELINES

- Always stretch after working out or after doing an activity, while the muscles are still warm.
- Stretch only to the point of moderate tension, not pain.
- Move into each stretch slowly to enhance reach.
- Exhale slowly as you stretch, helping to relax the muscles.
- Hold each stretch for 30 15-60 seconds.

HOW TO

- Inhale, then exhale as you begin the stretch.
- Slowly stretch to the farthest end of your personal reach.
- You will feel mild to moderate tension.
- Hold this reach for 30 15-60 seconds.
- During the 30 15-60 second hold, the muscle will stretch, then relax.
- Release and repeat for a total of 4 times.
- Perform as part of a cool down.
- Perform on a variety of muscles and joints.
- Perform 4-7 times per week.

COOL DOWN (STATIC STRETCH)

Cooling down is an activity that is normally performed 5-10 minutes after an exercise regime has been performed. This program utilizes a group of static stretches as a means of cooling down.

The static stretch involves relaxation techniques through controlled breathing, and is slow and constant in nature.

Static stretches will help retain levels of flexibility and reduce muscle soreness.

The static stretches are as follows:

Behind Neck Triceps Stretch

Starting Position: Stand with both arms above the shoulders.

Execution: Bend right elbow down towards the back, and reach to the lowest point possible on the back with the right hand. With the left hand, grasp the right elbow and gently pull down on it. A stretch in the back of the right arm should be felt. Repeat the exercise for the other side.


Pillar Stretch

Starting Position: In a standing position, have hands placed in front of body with the fingers interlocked.

Execution: Bring connected hands above head and reach as high as possible, pushing from the point where the fingers are interlocked.


Spinal Twist

Starting Position: Sit with the left leg straight and the right leg crossed over the left leg.

Execution: Reach the left elbow past the right knee (that is crossed), and place the left elbow on raised knee. Press the left elbow up against the right knee, and turn torso to the right. Repeat the exercise for the other side.


Supine Knee Flex

Starting Position: Lay on your back with legs straight/flat.

Execution: Place hands underneath the left knee and pull the left knee up to chest. Repeat the exercise for the other side.


Quad Stretch

Starting Position: Lay on right side.

Execution: Bend left knee, grasping the left foot with the left hand. Pull the foot back until a sufficient stretch is felt. Repeat the exercise for the other side.


Sitting Toe Touch

Starting Position: Sit down on ground with legs directly in front of the body.

Execution: Reach forward with hands and touch/grab feet (if flexibility allows).


Straddle

Starting Position: Sit with upper body perpendicular to the ground, spreading legs out to the side as much as possible.

Execution: Reach and stretch both left and right sides by bringing both hands as close as possible to the toe. Where flexibility allows, touch/grab the toes. After left and right stretches, reach to center and stretch forwards.



Butterfly

Starting Position: Sit with soles of feet placed against each other, knees pointing out.

Execution: Holding the feet, press down gently on the knees with forearms.

Calf Stretch

Starting Position: Face down, body stretched out, balancing on hands and toes.

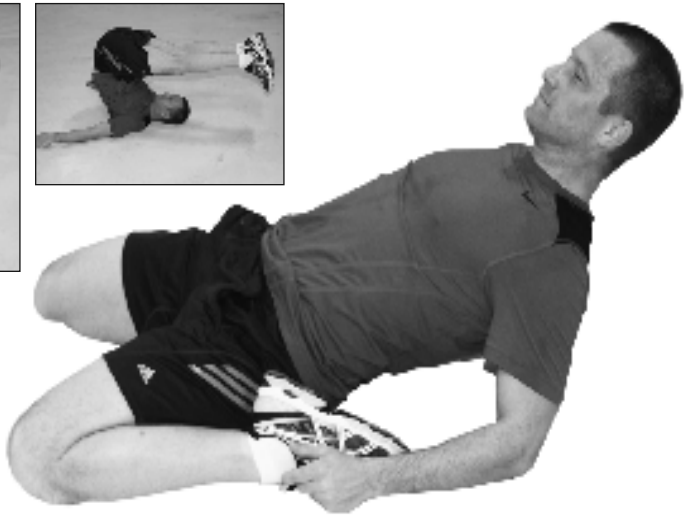
Execution: Lift left leg off of the ground and rest it on the stretching leg. Push back with hands and stretch heel to the ground. Bend right knee forwards to create a more sufficient stretch. Repeat the exercise for the other side.


RISKY STRETCHES

The six stretches and positions shown below are considered high risk and should be avoided because:

- The use of speed or force may overstretch tendons and ligaments.
- Overstretched tendons and ligaments cause joint instability.
- Lax tendons and ligaments may require surgical repair.
- They increase the chance of muscle tears or rupture.
- They increase the risk of joint dislocation.
- They include poor body mechanics.
- The average person should not perform "risky" stretches.

STRECHES TO AVOID



Definitions

The following definitions are explained with regards to their use in the program.

Accessible Anaerobics – Type of exercises found in the program that can easily be performed without the use of gym equipment. Accessible Anaerobics are intended to increase muscular strength/endurance.

Accessible Aerobics – Types of exercises found in the program that can easily be performed without the use of gym equipment. Accessible Aerobics are intended to increase ability to perform longer duration activities.

Anaerobics – Type of exercises found in the program intended to increase muscular strength/endurance.

Anterior – Relates to position. Anterior refers to something being front in position.

Aerobics – Type of exercises found in the program intended to increase duration/intensity of activities typical of a wildland fire fighter (e.g. hiking, running).

Cardiovascular Fitness – Aerobic capacity. The degree of training achieved by aerobic training.

Concentric Phase – The muscle shortening phase of a lift.

Dynamic – A movement that involves the whole body.

Eccentric Phase – The muscle lengthening phase of a lift

Fartlek Training – A combination of Interval and repetition training.

Gluteal – backside/buttocks.

Hypertrophy – Process of muscle growth through an increase in cell size.

Interval Training – Training that uses a 1:1 work/rest ratio (e.g. 3 minutes of jogging up an incline followed by 3 minutes of walking on level ground).

Lateral – Relates to position. Lateral refers to something being to the side in position.

Muscle Shortening – Voluntary process of muscle decreasing in length in response to resistance.

Musculature – The muscles that surround an individual's bone structure.

Oxidative System – In use when aerobic activity is being maintained.

Perpendicular – Relates to position. Perpendicular refers to something being at a 90 degree angle up from the ground, creating an upside down 'T' shape.

Plyometrics – Rapid muscle movements. Found in the program as hops/jumps.

Posterior – Relates to position. Posterior refers something being back in position

Repetition – Used to describe an entire phase of a lift. This includes muscle lengthening, or eccentric phase of the lift, and the muscle shortening phase, also known as the concentric phase.

Repetition Training – Similar to Interval training. Instead of 1:1 work/rest ratio, Repetition Training has much shorter and more intense exercises and therefore has longer rest intervals (e.g. 15 seconds of sprinting, 1 minute of walking).

Set – Designated word to describe a particular number of repetitions (e.g. 3 sets of 10 repetitions = 30 total repetitions).

Static Stretch – An isolated or single stretch of a muscle.

VO_2max – The maximum aerobic capacity of an individual.

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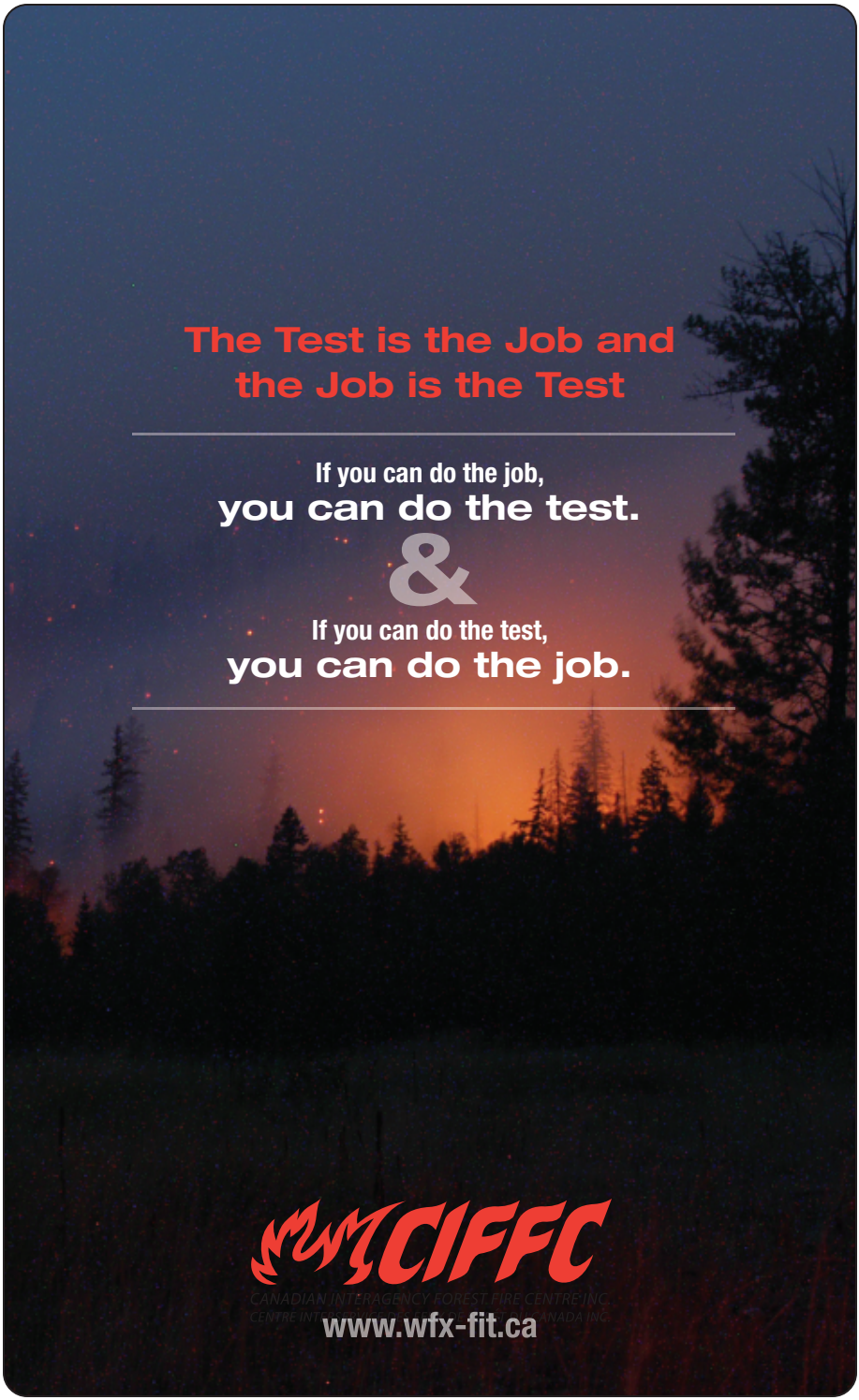
NOTES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