DON'T GET SIDELINED!

Why High School Athletes Need to be Particularly Cautious with Cannabis

A Learning Resource on
Cannabis and Sport
for High School Student Athletes

Endorsed by the Canadian Association for Physical Education, Health, Recreation and Dance (CAHPERD)

Contents

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The opinions expressed in this document do not necessarily reflect the views of Health Canada.

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Introduction

Background: This learning resource has been developed for high school student athletes by the Canadian Centre for Ethics in Sport (CCES) in partnership with the Canadian Association for Health, Physical Education, Recreation and Dance (CAHPERD), with funding support from Health Canada. It was developed because a relatively high number of Canadian competitive athletes have tested positive for cannabis in recent years, and a positive test holds potentially serious consequences for them.

Purpose: The resource is intended to create greater awareness of the implications of cannabis use among Canadian high school student athletes. In the near future, many current high school student athletes will find themselves competing in sport settings that are subject to doping control. It is hoped that this learning resource on cannabis and sport will help these young athletes avoid an adverse analytic finding (positive test) and other cannabis use problems.

Intended target: This learning resource is most relevant to classes or teams that include students who may pursue competitive athletics (possibly in university or college), and thus find themselves subject to doping control in the future. Consequently, this resource is directed to students participating in senior high school elective physical education/health programs, or in high school varsity sports.

Approach: the resource takes an evidence-based approach relying on information drawn from a review of the literature on cannabis and sport. Scientific evidence is also reflected in the methodology – an interactive, peer-to-peer approach that is regarded as a best practice in drug education.

Time required: it is suggested that a minimum of 45 minutes is required for senior high school students to process the activities presented in this resource. The time frame for the activities could easily be expanded to allow greater exploration of the issues.

Context: the resource could be appropriately situated within units on fair play, ethics in sport, drugs in sport or substance abuse education.

Learning Activities

Overview: Through this resource, students explore issues surrounding cannabis and sport. Concerned with the number of competitive athletes testing positive for cannabis, the Canadian Centre for Ethics in Sport researched this issue and has concluded there are several reasons for young athletes to be cautious with cannabis.

In groups, students collaboratively learn about the five main reasons for young athletes to be wary of cannabis in association with sport: Anti-Doping rules-based reasons; the effects of cannabis use on performance; the health risks related to cannabis use, with particular attention to athletes; the effects of cannabis use on the image of sport; and Canadian laws regarding cannabis use.

In remixed groups, students instruct other classmates on one or another of these issues, and are in turn instructed by their peers.

The lesson concludes with a full class discussion in which main points are reinforced, questions are addressed and any remaining misperceptions clarified. To reinforce learning, an extension assignment asks students to write a short discussion paper on the pros and cons of including cannabis on the list of prohibited substances.

Learning Outcomes:
Students will develop an understanding of:

- International and Canadian regulations surrounding cannabis and sport
- The effects of cannabis use on athletic performance
- The health risks linked to cannabis use
- The implications of cannabis use for the image of sport and the responsibilities of athletes as role models
- Canadian laws pertaining to cannabis

Students will strengthen their ability to:

- Work collaboratively in group situations
- Clearly summarize and communicate information

Curriculum Links:
See Appendix.

Preparation and Materials:

- Determine in advance your school's policy on cannabis use or possession to reinforce the sports-based consequences discussed in this resource.
- Prepare Slides 1-9, *Background on Cannabis as a Prohibited Substance,* as overhead transparencies or slides:
- Copy equal numbers of the handouts (so each student receives either one of the following):
    - Handout 1: *Cannabis as a Prohibited In-Competition Substance*
    - Handout 2: *Cannabis Use and Athletic Performance*
    - Handout 3: *Health Risks Associated with Cannabis Use*
    - Handout 4: *The Impact Of Cannabis Use on the Image of Sport*
    - Handout 5: *The Legal Status of Cannabis Use and Possession*

Activity One: Full Class – Introduction and Background (10 min)

Introduction

Introduce the session by explaining that as high school students, they are unlikely to be subject to doping control (i.e. athlete drug testing), unless they participate in the Canada Games; however if they choose to pursue competitive sports beyond high school, they could very well find themselves in a sports setting that involves drug testing.

The purpose of the session is to arrive at a better understanding of the sports-based rules around cannabis in addition to other reasons young athletes need to be cautious with cannabis. Indicate that a collaborative peer-teaching approach is going to be used.

Seek agreement from the class on the term that will be used to refer to substances containing cannabinoids, the tested substance. Although students may be more familiar and comfortable with terms such as pot, weed, grass, or dope, "cannabis" is recommended in that it refers to all substances containing cannabinoids, including marijuana, hashish and hash oil.

Background

Use or refer to Slides 1-9: *Background on Cannabis as a Prohibited Substance*. Explain that in 2004, the World Anti-Doping Agency (WADA) added cannabis to its list of banned substances. The World Anti-Doping Agency arrived at its decision after an expert committee consulted globally (with international sport federations, national anti-doping organizations, the International Olympic Committee, national Olympic committees, and governments) and recommended that it be included. According to the World Anti-Doping Code, WADA will consider placing a substance or method on the Prohibited List if it determines that the substance or method meets any two of the following three criteria:

- actually or potentially enhances athletic performance;
- presents an actual or potential health risk to the athlete;
- usage violates the spirit of sport.

Cannabis was added to the list because it was deemed to carry actual or potential health risks and its use violates the spirit of the sport.

Explain to students that the impact of the decision to add cannabis to the WADA Prohibited List on Canada's Anti-doping Program has been dramatic. In comparison to other banned substances, a high number of positive tests for cannabinoids have occurred during routine athlete drug testing in Canada since this ban was instituted. For example, from January 1, 2004 to February, 2005 the following positive test results were reported:

- Cocaine – 4
- Testosterone / Nandralone – 1
- Prednisone – 1
- Ephedrine – 1
- Cannabis – 22

Explain to students that in addition to the rules-based reasons, other reasons athletes need to be cautious about using cannabis (as listed on the slide/overhead) include its effect on performance, on health, and on the image of sport, as well as its illegal status. Indicate that the rest of the session will be devoted to exploring these reasons in small groups.

Activity Two: Small Group Collaborative Learning (10 min)

Divide the class into five groups and distribute copies of the handouts so that each member of each group has a copy of the same handout (i.e. each member of Group 1 should get a copy of Handout 1, and so on).

Explain that their task is to organize themselves to learn this topic well enough to be able to present the information to other classmates. They may wish to use the questions on their Handout for reference. Explain that they will have 10 minutes for this part of the session, after which they will form new groups and will share the key information pertaining to their issue with their new group members.

Remind students that all group members need to be allowed to share knowledge and voice opinions (it's helpful to distinguish between the two) in an open manner, while respecting others' privacy by not disclosing the substance use patterns of others.

Activity Three: Small Group Peer Instruction (15 min)

Remix the five groups with each new group having one member from each of the previous groups, so that each of the five issue areas are represented. In their new groups, each student will, in turn, give a brief presentation (max 3 min) for the group on the issue they studied in their original group.

Activity Four: Full Class Concluding Discussion (10 min)

Conclude the lesson with a full class wrap-up discussion. The purpose of this discussion is to reinforce main points, to clarifying misperceptions and answer questions. Focus the discussion by asking for the one or two main points that came out of each issue. If students don't arrive at the same Main Points as listed below on their own, present them as a way of wrapping up the discussion on each issue area.

Main Points:

Issue 1. Cannabis as a prohibited in-competition substance:

Athletes subject to doping control should avoid direct or significant second hand exposure during and even before the competitive season because it is very difficult to know how much THC is being taken in, and it clears from the body *very slowly* – taking even a month or more.

Issue 2. The effect of cannabis use on athletic performance:

Cannabis use hurts athletic performance, and playing under the influence can be dangerous.

Issue 3. Health risks associated with cannabis use:

Cannabis is not a demon weed; nor is it a harmless substance. As amount and frequency increase, health risks increase, particularly for adolescents.

Issue 4. Cannabis use associated with sport can have an impact on the image of an athlete and sport

Whether they are aware of it or not, young athletes are role models for others – there is a responsibility to promote the true spirit of sport that accompanies this position.

Issue 5. The legal status of cannabis in Canada.

Even though there has been much public discussion and even plans by the federal government to reduce the penalties for possessing small amounts of cannabis, the penalties have not changed – cannabis possession remains a Criminal Code offence with potentially serious, life-affecting penalties.

Cannabis production and trafficking is not usually a "mom and pop" operation, but rather a major revenue stream for organized crime.

Extension Activity

Ask students to copy to write a 250-500 word essay on the following topic: *The pros and cons of including cannabis on the World and Canadian Anti-Doping Programs' lists of prohibited substances.*

Slides 1-9: Background on Cannabis as a Prohibited Substance

See attached file

Handout 1: Cannabis is a prohibited in-competition substance

In your small group, discuss the following questions, referring to the information below. Be prepared to give a brief presentation on this subject to the members of your next group.

- Why is cannabis a prohibited substance?
- What is your understanding of the penalties under Canada's Anti-doping Program?
- Is it possible to identify a "safe limit" that won't be detected by doping control? Why or why not?
- What is the best advice for athletes subject to doping control to avoid an adverse finding (positive test result)?

Cannabis is termed a "specified substance" by the World Anti-Doping Agency (WADA) a term given to substances which are generally available in medicinal products OR are less likely to be abused as a doping agent).

- When an athlete can establish that an anti-doping rule violation involving a "specified substance" was not intended to enhance his/her sport performance, the sanction may range from a reprimand and warning to a one-year period of ineligibility.
- Athletes in sports participating in the Canadian Anti-doping Program (all sports receiving finding from Sport Canada) are subject to "in-competition" testing for cannabis (unlike some other substances, they are not tested in the off-season); 15 nanograms (ng) of cannabis metabolites per milliliter of urine is considered an adverse analytical finding.
- Typically, a positive test result for cannabis results in an anti-doping rule violation. Such violations carry a number of consequences:
    - First, public disclosure is mandatory under the Rules of the Canadian Anti-doping Program. Therefore, the incident will be noted in a Canadian Centre for Ethics in Sport (CCES) press release and may appear in local newspapers or other media. The athlete is no longer identified by name if he/she receives only a warning and reprimand; in all other cases, the athlete is identified by name.
    - The penalty for a first violation involving cannabis ranges from a warning and reprimand and no period of ineligibility, up to a one year period of ineligibility.
    - In most cases, the athlete's individual results for that competition will be disqualified.
    - Universities or colleges often impose additional consequences based on the school's internal policies.
    - A second violation involving cannabis automatically leads to a two-year period of ineligibility and permanent ineligibility for federal funding.

    - A third violation carries lifetime ineligibility from all sports in the Canadian Anti-doping Program, which includes all sports that receive funding from Sport Canada.
- Individuals may metabolize cannabis at different rates, based on variations in individual metabolism, the strength of a particular batch, the amount and way it is consumed.
- Cannabinoids can remain in the body for up to a month or more.
- It is well documented that individuals can test positive for marijuana after passive exposure to marijuana smoke. Inhaling the passive smoke from 16 joints in an unventilated room is approximately equivalent to smoking one joint. Passive exposure to the smoke of 16 joints over six consecutive days can produce positive tests for cannabinoids in urine samples.

Handout 2: Cannabis use can hurt athletic performance

In your small group, discuss the following questions, referring to the information below. Be prepared to give a brief presentation on this subject to the members of your next group.

- Does cannabis have any performance-enhancement value?
- In what ways might cannabis use have a negative effect on performance?

There are several areas of concern:

- **Psychomotor effects (cognitive problems)**: single doses of cannabis have been shown to affect short-term memory, problem solving and attention span. These disappear when the effect of the drug wears off; however it is quite likely that athletic performance, which almost always requires a high level of cognitive alertness for peak performance, would be adversely affected while the drug effects were active. Studies show that cannabis use produced a significant decrease in attention, ability to react to sudden unexpected emergencies, as well as perceptual and motor speed and accuracy with low doses. Cannabis use could pose serious problems in those sports with an element of danger that rely on clear minds, quick reactions and split-second timing.
- **Respiratory effects**: current evidence suggests that cannabis smoking is as harmful to the lungs as tobacco smoking. The tendency to smoke more tobacco cigarettes than cannabis cigarettes is offset by the difference in the typical depth and duration of inhalation between the two forms of smoking. Studies have demonstrated that, even after limited exposure to cannabis smoke, airway inflammation can develop. Consequently, the immediate or near-term performance and fitness compromising effects of smoking tobacco, such as coughing, wheezing and exercise-related shortness of breath could also be experienced by young frequent cannabis smokers.
- **Cardiovascular effects**: cannabis use places immediate demands on the heart muscle, resulting in an increase in heart rate (by 20-50%) and blood pressure. This is not likely to pose a problem for adolescents and young adults in normal circumstances; however, there are a few reports of heart attacks in young cannabis smokers who were likely vulnerable in other ways.
- **Effects on physical fitness**: Clearly, cannabis use can affect physical fitness as measured by VO2 max, the volume of oxygen a person is able to consume while exercising at maximum capacity. This is because smoking cannabis can reduce respiratory and cardiovascular effectiveness and one of the main factors affecting VO2 max is the ability of the

pulmonary and cardiovascular systems to transport oxygen to muscular tissues.

- **Cannabis and performance enhancement**: While cannabis is generally understood to have no performance enhancing value, some contend that it can help in alleviating performance anxiety. However, because cannabinoids can stay in the system for a number of days, it cannot be assumed young athletes testing positive for cannabis were actually using cannabis in an attempt to enhance their athletic performance.

Handout 3: Health risks associated with cannabis use

In your small group, discuss the following questions, referring to the information below. Be prepared to give a brief presentation on this subject to the members of your next group.

- What are the main health risks linked to cannabis use?
- Does amount used and frequency of use play a role in health risks?

There are several harms that can occur as a result of regular cannabis use over a period of time (e.g. weekly or more often over a period of a year or more).

- **Respiratory problems**: Evidence suggests that frequent, heavy cannabis smokers are likely placing themselves at risk for lung problems, including inflammation and cancer of the upper airways, even as young adults. This risk increases steeply for persons who smoke tobacco and cannabis frequently and for those who continue to smoke cannabis beyond early adulthood.
- **Mental health problems**: Cannabis use has been linked to mental health problems in several ways:
    - **Acute psychosis and panic or anxiety attacks** during a cannabis using session: A number of studies have found that a number of users experience acute psychosis and panic reactions as a result of high-dose intoxication from cannabis, which disappear with the drug effect.
    - **Schizophrenia**: In recent years, a number of research reports have linked cannabis use with schizophrenia, a serious mental health disorder. It appears that use during early and mid-adolescence heightens the possibility of problems with this mental illness. Based on the evidence, young people with psychosis or family history of psychosis are at highest risk of experiencing psychotic problems after using cannabis and should be advised to avoid using it.
    - **Depression**: Recent research has linked heavy use of cannabis by young people (under 17 years) with major depression.
    - **Chronic anxiety**: Personal characteristics, family history and use of other drugs are also important influences on the development of anxiety disorders and can play a more important role than cannabis.
- **Cognitive problems**: Cognitive effects, such as impaired short-term memory, decreased attention span, decreased verbal ability and slower problem solving normally disappear completely after the effect of the drug wears off. A number of reports however have shown that after long-term heavy use, the effects may remain for long periods afterwards or they remain permanently.

- **Cannabis dependence**: Cannabis dependence does occur, but is not likely to occur when doses are small and infrequent. However, psychological and physical dependence on cannabis can occur in people who use regularly and heavily. Withdrawal symptoms include anxiety, irritability, sleeping problems, sweating and loss of appetite.

Handout 4: Impact of cannabis use on the image of sport

In your small group, discuss the following questions, referring to the information below. Be prepared to give a brief presentation on this subject to the members of your next group.

- Are young athletes role models for others?
- Do athletes have a role in protecting the spirit of sport?
- Are there ways that cannabis use may tarnish the image of sport?

The concepts of "spirit of sport" and "fair play" stem from the fact that sport is a rule-based activity – fundamental to the operation of sport is full acceptance of rules.

- These concepts also rise from the view that sport, at its best, has great potential in contributing to human development (i.e., physically, mentally, ethically, and socially).
- These concepts have been expanded to include not only the leveling of the playing field, but also any behaviour that would diminish the potential of sport as a tool for human development. It is on this basis that athletes are called to present a high standard of behaviour, specifically with regard to showing their respect for the game, officials, opponents and others.
- The spirit of sport refers to that part of sport that people find most attractive – respect for the game, respect for the opponent, respect for officials, and respect for self and teammates.
- The Canadian Centre for Ethics in Sport notes that sport, by its nature, constantly demands ethical or moral decision-making.
- The international anti-doping movement is based on trying to preserve these intrinsic qualities of sport.
- Children, youth and peers look up to young elite athletes; using cannabis or any other intoxicant (e.g., alcohol) in association with sport (i.e. after a game or practice, wearing uniform or team identifiers) will be seen as showing lack of respect for the sport. The effect may be embarrassment for the team and for the individual.

Handout 5: Cannabis and the law

In your small group, discuss the following questions, referring to the information below. Be prepared to give a brief presentation on this subject to the members of your next group.

- What are the penalties for possession?
- Is the legal status a deterrent for young Canadians?
- Who profits from the sale of cannabis?
- For whom is cannabis medically available?

Prior to the spring of 2006, the federal government was considering a bill to reduce the penalties for possession of small amounts of cannabis, making possession subject to a fine.

- Some Canadians think that cannabis should be legalized or that it was the government's intention to legalize it. Legalizing cannabis would mean selling it through a government-controlled system, similar to alcohol or tobacco - no country in the world currently does that.
- The proposed changes to the law would have meant it would still be illegal to possess, sell, or share cannabis; however there would no longer be a possibility of a criminal charge for possession of cannabis. Rather than legalizing cannabis, the penalties associated with possession of small amounts of cannabis would be reduced from a criminal offence to a ticketing offence, while increasing penalties for growing and selling.
- HOWEVER, since the spring of 2006, the bill is no longer under consideration and there are no plans to decriminalize cannabis by the federal government.
- Currently, possession of cannabis is regulated under the Controlled Drugs and Substances Act (CDSA) and is a criminal offense. According to the CDSA, possession of small amounts of cannabis is subject to a fine of $1,000 or imprisonment for up to six months, or both, with penalties increasing for larger amounts, and subsequent offences.
- Anyone found guilty of possession will have a criminal record which can have an impact on finding employment, traveling outside the country, and, in some professions, becoming professionally certified.
- In 2001, Canada became the first country to start a system regulating the medicinal use of marijuana as a result of pressure from the courts. Even though there isn't clear scientific evidence supporting the use of marijuana for medicinal purposes, many people claim that it is effective for pain relief, control of nausea and vomiting, and for stimulating appetite; it appears useful for patients receiving chemotherapy and those suffering from AIDS-related anorexia. Synthesized THC is available in capsule form and has been approved for promoting appetite and reducing nausea and vomiting among cancer and AIDS patients.

- Currently, individuals who suffer from terminal illness, multiple sclerosis, spinal cord injury, epilepsy, severe pain and weight loss from cancer or AIDS and severe arthritis can get access to marijuana through the federal government in Canada (in 2004, under 1,000 people did so). In 2005, Canada became the first country to approve for medical use a cannabis-based product (not synthesized THC); Sativex® is a painkiller for patients suffering multiple sclerosis that is administered as a mouth spray.

Student Assessment

It is suggested that student performance be assessed by a "rubric". Rubrics evaluate a student's performance based on the sum of a full range of criteria rather than a single numerical score. The criteria are logically linked to the outcomes intended for a learning activity. For example, with a small group discussion format, a teacher may intend for students to demonstrate 'new knowledge' and 'use of effective communication styles', and a rubric can help assess progress in these areas. Creating or adapting a rubric requires a teacher to be clear on their objectives. When developed or shared with students before hand, they can clarify for the student what is expected.

Sample rubric for small group discussion[1]

Criteria	Level 4	Level 3	Level 2	Level 1
Preparation	Almost always prepared with required materials and prep work for discussion.	Usually prepared with required materials and prep work for discussion.	Often prepared with required materials and prep work for discussion.	Rarely prepared with required materials and prep work for discussion.
Accuracy of information presented	All information presented in the discussion was clear, accurate and thorough.	Most information presented in the discussion was clear, accurate and thorough.	Most information presented in the discussion was clear and accurate, but was not usually thorough.	Information had several inaccuracies or was usually not clear.
Listening skills	Always listened respectfully to the perspective of others.	Usually listened respectfully to the perspective of others.	Often listened to the perspective of others.	Rarely listened and often interrupts others.
Speaking style	Consistently used eye contact, tone of voice and a level of enthusiasm in a way that	Usually used eye contact, tone of voice and a level of enthusiasm in a way that kept the	Often used gestures, eye contact, tone of voice and a level of enthusiasm in a way that	Rarely used eye contact, tone of voice and a level of enthusiasm in a way that kept the

[1] The rubric presented was adapted from samples provided in the Rubistar section of the 4teachers.org site provided by Advanced Learning Technologies in Education Consortia (ALTEC), hosted by the University of Kansas, U.S.A. http://rubistar.4teachers.org/index.php,

	kept the attention of the group.	attention of the group.	kept the attention of the group.	attention of the group.

Provincial/Territorial Curriculum Links for Cannabis and Sport Resource

Province or Territory	Source	Recommended Curriculum Links				NOTES
Alberta	**K-12 Alberta Physical Education Guide to Implementation (2000)** http://www.education.gov.ab.ca/k_12/curriculum/bySubject/physed/phys2000.pdf	**Grade 12** B30–5 discuss the effects of performance-enhancing substances on body type and body image as a part of physical activity (Page 21)	**Grade 12** C30–6 identify and demonstrate positive behaviours that show respect for self and others (Page 25)			
British Columbia	**Curriculum, Classroom Assessment, and Learning Resources (Kindergarten to Grade 12)** http://www.bced.gov.bc.ca/irp/ **Appendix A: Prescribed Learning Outcomes (1998)** http://www.bced.	**Grade 12** *Active Living*. It is expected that students will: demonstrate an understanding of physiology and performance modifiers (no page # http://www.bced.gov.bc.ca/irp/pe11_12/apa.htm)	**Grade 12** *Active Living*. It is expected that students will: analyse and describe the effect of professional sports role models on the choice of personal lifetime activities (no page # http://www.bced.gov.bc.ca/irp/pe11_12	**Grade 12** *Personal and Social Responsibility*. It is expected that students will: consistently model fair play and etiquette in a variety of roles, including: - performer - coach - official - observer	**Grade 12** *Active Living*. It is expected that students will: develop a plan to maximize personal motor performance for themselves and others (no page # http://www.bced.gov.bc.ca/irp/pe11_12/apa.htm)	

	gov.bc.ca/irp/pe11_12/apa.htm		/apa.htm)	(no page # http://www.bced.gov.bc.ca/irp/pe11_12/apa.htm)		

Manitoba	**K-S4 Physical Education/Health Education Manitoba Curriculum Framework of Outcomes for Active Healthy Lifestyles (2000)** http://www.edu.gov.mb.ca/ks4/cur/physhlth/framework/index.html	**Grade K to S4** General Curriculum Outcome: **Healthy Lifestyle Practices** The student will demonstrate the ability to make informed decisions for healthy living related to personal health practices, active living, healthy nutritional practices, substance use and abuse, and human sexuality. (Page 149)	**Senior 2** Specific Curriculum Outcome: K.5.S2.D.1 Analyze issues (e.g. substance dependence, addiction, medical concerns, law, ethics. effects on families/friends) concerning the use and abuse of legal and illegal substances (e.g. alcohol, prescription drugs, tobacco, marijuana, steroids/ performance enhancing substances, street drugs) (Page 167)	**Senior 2** Specific Curriculum Outcome: K.5.S2.D.2 Evaluate the legal aspects and consequences of substance use abuse, and addiction, (e.g. drinking and driving, street drugs, inhalants) (Page 169)	**Senior 2** Specific Curriculum Outcome: K.5.S2.D.3 Examine current statistics on substance use as it affects healthy living, locally and nationally (Page 171)	**NOTE:** S2 is the highest level at which Specific Outcomes are available. For S4, must use General Outcomes.

New Brunswick	**Elementary Physical Education Curriculum Kindergarten – Grade 5 (2000)** http://www.gnb.ca/0000/publications/curric/elementarypysed.pdf	**Grades K-12** **KNOWING** Students will be expected to • understand the principles and concepts that support active living • understand how to maintain a personal level of functional physical fitness • understand the importance of safety rules and procedures (Page 6) **Understand the principles and concepts that support active living** -Factors Affecting Performance: age, gender, drugs, culture, role models, environment, special needs	**Grades K-12** **VALUING** Students will be expected to - develop positive personal and social behaviours and interpersonal relationships - develop a positive attitude toward active living in the pursuit of lifelong health and well-being (Page 6) **Develop positive personal and social behaviours and interpersonal relationships** - Fairplay: appropriate competitive behaviour, respect for property, rules, and authority; acceptance and appreciation of the			**NOTE:** Outcomes listed here are general Phys Ed outcomes for K-12. Specific outcomes are only available (online) for elementary and junior, not high school. The New Brunswick Department of Education is currently in the process of redoing the high school curriculum, which should be available in the next year.

		(Page 8)	abilities of others (Page 9)			
Newfoundland and Labrador	**Physical Education 3100 Course Description (1983)** http://www.ed.gov.nl.ca/edu/sp/sh/phys_ed/phys_ed_3100/pe3100.PDF **Healthy Living 1200 – A Curriculum Guide (2002)** http://www.ed.gov.nl.ca/edu/sp/sh/phys_ed/healthy_living/hl1200.htm	**Grade 12** **Physical Education 3100** **B. Affective Objectives:** The development and fostering of: - an appreciation of the value of sport and physical activity in healthful living - responsibility in making and accepting the consequences of decisions - acceptable social habits, emotional control, and specific game etiquette for sport and other recreational activities, including co-educational play. (Page 2)	**Grade 10 (Senior High Level 1)** **Healthy Living 1200** Critically analyse the impacts of substance use/abuse on personal aesthetics and behaviour. (H-GCO5, KSCO1) -Identify and analyse the impact of substance use/abuse on personal well-being. (H-GCO5, KSCO1) (Page 56)	**Grade 10 (Senior High Level 1)** **Healthy Living 1200** -Demonstrate an understanding of what constitutes socially responsible behaviour towards substance use within the home, school and community. (H-GCO5, KSCO3) -Identify the impacts of substance use/abuse on society. (H-GCO5, KSCO3) (Page 56)	**Grade 10 (Senior High Level 1)** **Healthy Living 1200** - Analyse moral and ethical issues related to substance use/abuse. (H-GCO5, KSCO3) - Develop a personal plan for the management of substance use. (H-GCO5, KSCO2; GCO8, KSCO1) (Page 56)	

Northwest Territories	**K-12 Alberta Physical Education Guide to Implementation (2000)** http://www.education.gov.ab.ca/k_12/curriculum/bySubject/physed/phys2000.pdf	**Grade 12** B30–5 discuss the effects of performance-enhancing substances on body type and body image as a part of physical activity (Page 21)	**Grade 12** C30–6 identify and demonstrate positive behaviours that show respect for self and others (Page 25)			**NOTE:** Northwest Territories Phys Ed curriculum links to the K-12 Alberta Physical Education Guide to Implementation (2000) (NWT uses Alberta's curriculum and outcomes)
Nova Scotia	**Physical Education Curriculum Grades 7-9 (1999)** http://www.ednet.ns.ca/pdfdocs/curriculum/physed7-9.pdf	**Physical Education General Curriculum Outcomes for all grades:** **Valuing** The student will be expected to: -demonstrate positive personal and social behaviours and interpersonal relationships (Page 27)	**Grade 9** **Physical Education** Specific Curriculum Outcome **Sport Experience:** The student will be expected to: -demonstrate positive personal and social behaviours that emphasize fair play (Page 39)			**NOTE:** Outcomes listed here are general Phys Ed outcomes for K-12. Specific outcomes are only available for elementary and junior, not high school. The phys ed curriculum has 3 organizing strands: Knowing, Valuing, Doing. Each organizing strand has general curriculum

						outcomes, followed by key-stage curriculum outcomes, followed by specific curriculum outcomes.
Nunavut	**Physical Education Kindergarten to Grade 12 (2000)** http://ednet.edc.gov.ab.ca/k_12/curriculum/bySubject/physed/phys2000.pdf	**Grade 12** B30–5 discuss the effects of performance-enhancing substances on body type and body image as a part of physical activity (Page 21)	**Grade 12** C30–6 identify and demonstrate positive behaviours that show respect for self and others (Page 25)			**NOTE:** Nunavut currently uses the K-12 Alberta Physical Education curriculum and outcomes

Ontario	**The Ontario Curriculum Grades 11 and 12: Health and Physical Education (2000)** http://www.edu.gov.on.ca/eng/curriculum/secondary/health1112curr.pdf	**Exercise Science, Grade 12 (University Prep)** **The Biological Basis of Movement:** **Specific Expectations:** – analyse the effects of performance enhancing methods and substances (e.g. drugs, alcohol, nutritional and herbal supplements, steroids, blood doping) on human performance (Page 26)	**Exercise Science, Grade 12 (University Prep)** **Physical Activity and Sports in Society:** **Specific Expectations:** – identify issues in society related to sports and physical activity (e.g., violence in sports, exploitation in sports, cheating in sports, equal access to sports, physical activity trends) (Page 28)	**Healthy Active Living Education, Grade 12** **Active Living:** **Specific Expectations:** – demonstrate positive, responsible personal and social behaviour in physical activity settings (e.g. modelling positive behaviour, facilitating group cohesiveness and cooperation) (Page 20)		**NOTE:** These are listed by course (e.g. Exercise Science, Grade 12), with sub-headings and both Overall and Specific Expectations.
Prince Edward Island	http://www.gov.pe.ca/educ/index.php3?number=74882&lang=E;	Curriculum links for Prince Edward Island were not available at the time of publication of this resource.				

Quebec	**Physical Education and Health** http://www.qesnrecit.qc.ca/personal_dev/pe/pdf/QEP_PEH_SecFirstCycle.pdf (no date)	**All Secondary** **Key Competency 3: Adopts a Healthy, Active Lifestyle** **Key Features:** Analyzes the impact of certain lifestyle habits on own health and well-being - Identifies which habits are conducive or detrimental to own health and well-being (Page 443)	**All Secondary** **Concepts to be Learned:** Rules related to activities - Code of ethics Detrimental lifestyle habits - Comparison of beneficial and detrimental effects of various substances: tobacco, drugs, alcohol, steroids, supplements, foods – Side effects on different systems - Long-term effects (diseases) - Short-term effects – Psychological effects - Effects on performance and training (Pages 446-447)	**All Secondary** **Skills:** Safe participation in physical activity - Compliance with standards and rules set by a sports federation, if applicable (Page 450)	**All Secondary** **Cultural References:** Values - Values that are promoted in the media and that influence behaviours - Sports ethics (Page 452)	

Saskatchewan	**Instructional Physical Education 20 and 30: A Curriculum Guide for the Secondary Level (August 1994)** http://www.saskle arning.gov.sk.ca/ docs/physed/phys ed2030/index.htm l	**Grade 11 and 12:** **Foundational Objective:** Contribute to the development of "strong sense" critical and creative thinkers. "Strong sense" thinkers are committed to using their abilities to seek out the most accurate and fair positions, regardless of or in spite of their own particular interests or desires. **Learning Objectives:** Students will demonstrate the ability to: - explore the implications or consequences of actions (No Page #, http://www.sasklear				-Has a separate *Health and Drug Awareness* section http://www.sasked. gov.sk.ca/branches/ comm/DrugEd.shtml

		ning.gov.sk.ca/docs/physed/physed2030/components.html)				
Yukon Territory	**Curriculum, Classroom Assessment, and Learning Resources (Kindergarten to Grade 12)** http://www.bced.gov.bc.ca/irp/ **Appendix A: Prescribed Learning Outcomes (1998)** http://www.bced.gov.bc.ca/irp/pe11_12/apa.htm	**Grade 12** *Active Living*. It is expected that students will: demonstrate an understanding of physiology and performance modifiers (no page # http://www.bced.gov.bc.ca/irp/pe11_12/apa.htm)	**Grade 12** *Active Living*. It is expected that students will: analyse and describe the effect of professional sports role models on the choice of personal lifetime activities (no page # http://www.bced.gov.bc.ca/irp/pe11_12/apa.htm)	**Grade 12** *Personal and Social Responsibility*. It is expected that students will: consistently model fair play and etiquette in a variety of roles, including: - performer - coach - official - observer (no page # http://www.bced.gov.bc.ca/irp/pe11_12/apa.htm)	**Grade 12** *Active Living*. It is expected that students will: develop a plan to maximize personal motor performance for themselves and others (no page # http://www.bced.gov.bc.ca/irp/pe11_12/apa.htm)	**NOTE:** Their site states: "The Yukon Department of Education, Public Schools Branch, relies on the curriculum produced by other jurisdictions, especially the British Columbia Ministry of Education."

Health Canada Drug Wise
http://drugwise-droguesoisfute.hc-sc.gc.ca/facts-faits/marijuana_e.asp

Canadian Centre on Substance Abuse
http://www.ccsa.ca/ccsa/

DEAL
http://www.deal.org/content/index.php?option=com_frontpage&Itemid=79&lang=en

The moderate use of cannabis in competition by some athletes for the purpose of reducing performance-related anxiety has been reported in the scientific literature. It appears that those most likely to use cannabis in this way tend to be heavier users who also use cannabis to enhance performance in non-sporting (e.g. social situations) situations. Using cannabis or any substance in this kind of more functional manner (as opposed to using it occasionally to have fun) has been linked to ongoing problematic use into adulthood (Lorente *et al*, 2005).

Effects of cannabis use vary greatly, and for some, a sense of relaxation occurs. In contrast, others, particularly new users, can experience anxiety and panic attacks. A range of effects that are not compatible with athletic performance and can be experienced at low doses include sleepiness, dizziness, euphoria, anxiety, palpitations, and rapid heart rate. At higher doses, amnesia, hallucinations and loss of motor coordination can occur.

While its role as a performance enhancing substance is quite limited, cannabis may be used in this way by some, and in those cases, it needs to be proscribed to the same degree as other performance enhancing substances or methods.

2. In-competition performance- and safety-compromising effects

The performance- and safety-compromising effects of cannabis use while playing sports have not been studied directly to our knowledge; however it is possible to identify several areas of concern.

Psychomotor effects: single doses of cannabis have been shown to affect short-term memory, problem solving and attention span. These disappear when the action of the drug wears off, however it is quite likely that athletic performance, which almost always requires a high level of cognitive alertness for peak performance, would be adversely affected while the drug effects were active. Research on the effects of cannabis use on driving ability suggests that a negative impact on athletic performance and safety could occur, even with low doses, and that the impact would increase with the dosage and degree of intoxication. Kalant (2004) in a rigorous review of the effects of cannabis on driving skill concludes that cannabis does have a demonstrated capacity to impair driving skills. Reviewed studies showed that cannabis use produced a significant decrease in attention, ability to react to sudden unexpected emergencies, as well as perceptual and motor speed and accuracy with low doses. Driving studies suggest that combining cannabis with alcohol use greatly increases impairment levels (CCSA, 2003). In their discussion on marijuana and sport, Campos *et al* (2003) conclude that cannabis use could pose serious problems in those sports with an element of danger that rely on clear minds, quick reactions and split-second timing. Cannabis use is often accompanied by use of alcohol, which has been found to greatly increase impairment levels in driving situations.

Respiratory effects: current evidence suggests that cannabis smoking is as harmful to the lungs as tobacco smoking. The tendency to smoke more tobacco cigarettes than cannabis cigarettes is off set by the difference in the typical depth and duration of inhalation between the two forms of smoking. Studies have demonstrated that, even after limited exposure to cannabis smoke, airway inflammation can develop. Consequently, immediate or near-term performance compromising effects of smoking tobacco, such as coughing, wheezing and exercise-related shortness of breath could also be experienced by young frequent cannabis smokers (Taylor and Hall, 2003).

Cardiovascular effects: cannabis use places immediate demands on the heart muscle, resulting in an increase in heart rate (by 20-50%) and blood pressure. This is not likely to pose a problem for adolescents and young adults in normal circumstances; however, there are a few reports of heart attacks in young cannabis smokers who were likely vulnerable in other ways (WHO, 1997).

years to develop (30-40 years for tobacco) and because cannabis smokers have, to date, tended not to use cannabis beyond young adulthood, the evidence in this area is not as definitive as it is for tobacco. Nevertheless, the weight of evidence suggests that frequent, heavy cannabis smokers are likely placing themselves at risk for lung problems, including inflammation and cancer of the upper airways, even as young adults. This risk increases steeply for persons who smoke tobacco and cannabis frequently and for those who continue to smoke cannabis beyond early adulthood (Taylor and Hall, 2003; Taylor *et al.,* 2002).

Mental health problems: cannabis use has been linked to mental health problems in several ways:

- Acute psychosis and panic or anxiety attacks: A number of studies have found that a significant proportion of users experience acute psychosis and panic reactions as a result of high-dose intoxication from cannabis, which disappear with the drug effect (Kalant 2004).

- Schizophrenia: In recent years, a number of research reports have linked cannabis use with schizophrenia, a serious mental health disorder – but the evidence is not complete. It is clear that cannabis use can make a person who has schizophrenia worse; it also seems that if a young person has a predisposition towards schizophrenia, there is a good chance smoking cannabis will bring on the disorder; what is not clear is whether cannabis smoking over a long period of time could actually bring on schizophrenia in a person who was not predisposed (that is to say they wouldn't have developed it otherwise); some experts think it may, while most disagree. It appears that use during early and mid-adolescence heightens the possibility of problems with this mental illness. Based on the evidence, young people with psychosis or family history of psychosis are at highest risk of experiencing psychotic problems after using cannabis and should be advised to avoid using it (Semple *et al*, 2005; Stockwell *et al*, 2005).

- Depression: recent research has linked early (<17 years), heavy use of cannabis with major depression (Kalant 2004).

- Other mental health problems: studies have found early, heavy, longer term use of cannabis to be linked to personality disorders, chronic anxiety, and emotional repression (Kalant 2004).

Cognitive problems: cognitive effects, such as impaired short-term memory, decreased attention span, decreased verbal ability and slower problem solving normally disappear completely after the effect of the drug wears off. A number of reports however have shown that after long-term heavy use, the effects may remain for long periods afterwards or they remain permanently. Longitudinal studies link ongoing cannabis use to poorer school performance and self-reported poorer cognitive functioning. (Kalant, 2004).

Cannabis dependence: cannabis dependence does occur, but is not likely to occur in the usual patterns of social use (that is, when doses are small and infrequent). The dependence potential of cannabis is considered weaker than that of many other drugs, including alcohol and tobacco, and dependence disrupts the user's ability to function less than with other substances. However, psychological and physical dependence on cannabis can occur in people who use regularly and heavily. Tolerance appears to develop in regular high-dose users. Withdrawal symptoms include anxiety, irritability, sleeping problems, sweating and loss of appetite. The psychological craving for the drug combined with these withdrawal symptoms can make it hard for long-term cannabis smokers to stop using the drug. Consequently, long-term cannabis use can lead to cannabis dependence for some people; that is, they use the drug compulsively even though it interferes with family, school, work, and recreational activities.

4. Patterns of use that otherwise reflect a lack of respect for the game (for example, becoming intoxicated immediately following a game or practice)

The Canadian Centre for Ethics in Sport notes that sport, by its nature, constantly demands ethical or moral decision-making. In considering moral questions in sport, the CCES sees the term "Respect" as a useful and powerful concept. Applying the concept of respect in relation to the game, self, opponents, officials and others, such as officials and fans, can help guide moral decisions and actions. If a young athlete uses an illegal substance such as cannabis, or a legal substance like alcohol to the point of intoxication while clearly associated with their sport (for example, immediately following a game or practice, while at the venue or while still in uniform), it would be seen by many as showing a lack of respect for the game (CCES, 1997). The effect may be embarrassment for the team and for the individual.

5. The status of cannabis as a prohibited in-competition substance by WADA and Canadian authorities

The World Anti-doping Agency arrived at its decision to place cannabis on the 2004 Prohibited List on the basis of a extensive consultation process. The decision was based on a recommendation to this effect from an expert committee that reviewed the 2003 Prohibited List of Substances for changes to the 2004 List. This expert committee consulted globally with international sport federations, national anti-doping organizations, the international Olympic committee, national Olympic committees, and governments.

Experiencing one or more positive cannabis tests has the potential to harm a young athlete in several life areas. Typically, a cannabis adverse analytical finding results in an anti-doping rule violation. Such violations carry a number of consequences. First, public disclosure is mandatory under the Rules of the Canadian Anti-Doping Program. Therefore, the incident will be noted in a CCES press release (the athlete is no longer identified by name) and may appear in local newspapers or other media. The penalty for a first violation involving cannabis ranges from a warning and reprimand and no period of ineligibility up to a one year period of ineligibility. In most cases, the athlete's individual results for that competition will be disqualified. Universities or colleges often impose additional consequences based on the school's internal policies. A second violation involving cannabis automatically leads to a two-year period of ineligibility and permanent ineligibility for federal funding.

The issue of passive inhalation of cannabis smoke: It is well documented that individuals can test positive for marijuana after passive exposure to marijuana smoke. However, predicting when the exposure occurred is difficult. Inhaling the passive smoke from 16 joints in an unventilated room is approximately equivalent to smoking one joint. Passive exposure to the smoke of 16 joints over six consecutive days can produce positive tests for cannabinoids in urine samples. Smoking or being passively exposed to this amount can result in a positive test up to 129 hours later. Metabolites of cannabis have been measured in urine 3 to 7 days after light exposure. At least part of the variability that is seen in levels over time is due to differences in the rates that individuals metabolize cannabis (Geiger, 1999).

6. The status of cannabis as an illegal substance according to Canadian law

Confusion and controversy remain around the legal status of cannabis in Canada and other countries. Some Canadians think that cannabis should be legalized or that it is the government's intention to legalize it. Legalizing cannabis would mean selling it through a government-controlled system, similar to alcohol or tobacco - no country in the world currently does that. Even in the Netherlands, which is known to have liberal cannabis laws, cannabis use is against the law but "tolerated" by authorities in the Netherlands, allowing the cannabis cafes to operate since 1972.

Nevertheless, anecdotal evidence suggests that it is effective for pain relief, control of nausea and vomiting, and for stimulating appetite; it appears useful for patients receiving chemotherapy and those suffering from AIDS-related anorexia. Synthesized THC is available in capsule form and has been approved for promoting appetite and reducing nausea and vomiting among cancer and AIDS patients.

Currently, individuals who suffer from terminal illness, multiple sclerosis, spinal cord injury, epilepsy, severe pain and weight loss from cancer or aids and severe arthritis can get access to marijuana through the federal government in Canada (in 2004, under 1,000 people did so). In 2005, Canada became the first country to approve for medical use a cannabis-based product (not synthesized THC); *Sativex*® is a painkiller for patients suffering multiple sclerosis that is administered as a mouth spray (Health Canada).

Conclusion

This paper develops a rationale for why young Canadian athletes need to be wary of using cannabis in association with sport and presents supporting evidence. In summary, the rationale is:

1. when used to reduce performance anxiety, cannabis use is a form of cheating;

2. there are performance and safety compromising effects of being under the influence of cannabis while playing and competing;

3. there are health compromising effects of regular, long-term use of cannabis;

4. cannabis is a prohibited in-competition substance by WADA and Canadian authorities carries potentially severe penalties;

5. cannabis is an illegal substance according to Canadian law.

Beyond these reasons, the paper suggests young athletes have an opportunity to be positive role models or ambassadors for younger athletes and other youth; avoiding cannabis use can be an element of personal goal setting that that reflects self-respect and a respect for the game

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