



# Maintaining Optimal Health

## 2010 Update

PHOTO: SLAM Photography

### Acknowledgments

The content of this booklet was researched and written by Dr. Janet McKeown (MD, CCFP, DipSportsMed), Cristina Sutter (Registered Sport Dietitian) and Susan Boegman (Registered Sport Dietitian) with input from Dr. Penny Miller (Clinical Pharmacologist), Dr. Susan Hollenberg (Family & Travel Medicine Physician), and Dr. Reka Gustafson (Medical Health Officer).

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- Keep a 'medical folder' with health records (lung tests, therapeutic use exemption form (TUE), blood work, vaccine records, etc.)
- Cold prevention - Vitamin C 250mg/day, healthy diet, sufficient sleep, handwashing, avoid those who are sick, avoid others if you are sick, no sharing of water bottles.
- Eat a balanced diet – vegetables, fruit, lean proteins, healthy fats, whole grains.
- Vaccines –chicken pox, meningitis, basic childhood vaccines if not done previously and a yearly flu shot.
- Seek medical help EARLY if you experience illness, injury, any mood problems or breathing problems.
- If you use an inhaler follow usage recommendations.
- Vitamin D 1000 IU daily during fall, winter and spring.
- Supplements – if you take supplements, ensure that the products have been tested for banned substances. Canadian Sport Centre Pacific (CSC Pacific) has partnered with INFINIT Nutrition to form the Custom Fuel Program where INFINIT tests all raw ingredients for banned substances. The network of Canadian Sport Centres has also batch tested the COLD-fX we receive for safe distribution to athletes. Other brands may not have been tested rigorously for banned substances.
- Regular sleep, aim for 8-10 hours per night.
- Use **globaldro.com**, a user friendly site for athletes from Canada, the UK and USA to check if your medications contain any WADA banned substances. Medications checked can be both prescription and not.
- Ensure you have enough of your 'routine' medications especially before travelling (eg. inhalers, birth control pills, creams, anti-depressants, etc.)
- Do NOT share medications or supplements. Have a medical exam yearly and have a dental check up 1-2 times yearly.
- If you are over 19 years of age and you consume alcohol, use in moderation. Avoid all 'recreational' drugs (marijuana, cocaine etc.)
- If you are sexually active always practice safe sex.



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### **Common Cold symptoms include any of the following**

- Low grade fever (lasting 1-2 days)
- Sore throat
- Headache
- Muscle aches
- Nasal congestion and sneezing
- Cough

### **Prevention**

- Hand washing before eating and drinking.
- Avoid sharing towels, water bottles, cups etc.
- Keep your distance from people who appear to have a cold or are coughing. The same goes for you when you have a cold.
- Use a saline nasal spray when travelling by air.
- Room sharing may need to be modified if one roommate is ill.
- Vitamin C (250 mg) daily can decrease your risk of getting a cold by up to 50%.
- <sup>1</sup> COLD-fx: (200 mg) take one capsule two times daily.

### **Treatment**

**If you have cold symptoms the following medications may improve your symptoms.**

#### **For Fever and Muscle Aches**

- Advil (600 mg every 6-8 hrs, as needed with food) OR
- Tylenol (1000 mg every 4-6 hours, not to exceed 4000 mg/day)

#### **For Nose and Sinus Congestion**

- Tylenol Sinus Regular or Extra Strength OR Tylenol Cold Regular or Extra Strength - two tablets every 6-8 hours
- Otrivin Decongestant Nasal Spray - one spray each nostril daily
- Cold medications with the active ingredients: phenylephrine, chlorpheniramine, diphenhydramine, or DM are NOT banned, so OK if purchased in Canada.
- PLEASE NOTE THAT AS OF JANUARY 1 PSEUDOEPHEDRINE IS ON THE BANNED SUBSTANCE LIST. CHECK ALL COLD MEDICATIONS USED PRIOR TO 2010 TO ENSURE THEY DO NOT CONTAIN PSEUDOEPHEDRINE.



### **For a Cough**

- Robitussin Cough Gels - two capsules every 6-8 hours if needed
- Cough medications with the active ingredients: DM and Guaifenesin are NOT banned. Honey is also a proven cough suppressant.

### **For a Sore Throat**

- Herbon's Zinc Lozenges, Jamieson Zinc Lozenges with Vitamin C or Cepacol Lozenges.

### **You should follow up with a physician if the following symptoms are present:**

- fever above 40°C
- fever lasting more than three days
- fever with a rash
- only symptoms are sore throat, fever and aches (this may be strep throat/mono)
- fever following recent overseas travel
- fever that starts or returns more than seven days after cold symptoms begin (this may be bronchitis, pneumonia or sinusitis)
- cold symptoms lasting more than 10 days
- chest wheezing
- sudden onset of headache, fever and aches

***Exercise is not recommended if you have a fever. It's ok to exercise if you only have a cold.***

<sup>1</sup> NOTE: The Canadian Sport Centres have conducted batch testing for banned substances of the COLD-fx we provide to minimize the risk of inadvertent doping. It is recommended that you obtain batch tested COLD-fx from your Canadian Sport Centre.



Susan Boegman & Cristina Sutter – Registered Sport Dietitians

Creating a weekly meal plan will ensure that you eat well, even when you are tired or in a time crunch due to a busy training schedule. Menu planning is a simple process and will take the last minute scramble out of mealtime. Planning will help you reduce trips to the grocery store and will help you avoid the need to turn to fast food in a pinch. High quality nutrition is all about planning ahead and being prepared.

## 5 Steps to Create a Winning Diet

- **Look at your schedule** – On days when you know you won't have time to cook, either plan to use leftovers or meals that you can make ahead of time, or plan to make portable meals that can be eaten on the run.
- **Make a menu** – Keeping your schedule in mind, decide on three or more main meals you can easily make during the week. Choose healthy snacks for before and after training. Use the “Let’s Make a Meal” menu planner form to record your weekly meal plan (link below).

[www.dietitians.ca/public/content/eat\\_well\\_live\\_well/english/menuplanner/weekly\\_planner.pdf](http://www.dietitians.ca/public/content/eat_well_live_well/english/menuplanner/weekly_planner.pdf)

- **Write a grocery list** – Prepare a shopping list with the basics including vegetables and fruit, high fiber cereals, wild rice, quinoa, barley, sprouted grain bread and multigrain pasta, dairy, lean meat, fish, poultry, eggs, beans and nuts, seeds and other high quality fats. Add any other items that you will need to make your meals and snacks for the week.

*TIP: You can use convenience foods like pre-washed greens, frozen vegetables, canned fish or rotisserie chicken to save time.*

- **Shop** – Stick to your grocery list. Avoid the cookie, candy and chip aisles.

*TIP: Aim for at least two whole fruits and at least three cups of vegetables every day. This equals 14+ pieces of fruit and at least 21 cups of vegetables in your grocery cart every week!*

- **Start cooking** – Refer to your menu plan posted on the fridge. You can be flexible about which meal you choose on a given day. Make extras and store the leftovers in the fridge or freezer for consumption at a busier time.

For further clarification and questions please speak to your personal or team dietitian. Susan Boegman has also provided her email address as a resource if required:

sboegman@cscpacific.ca



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One important way to help stay healthy is to make sure all your vaccines are up to date. Below are basic vaccines that all athletes should have. You may require more if you are travelling outside of North America or Europe. Check with your MD, Team MD or a travel clinic. For a list of travel clinics in Canada go to:

[www.phac-aspc.gc.ca/tmp-pmv/travel/clinic-eng.php](http://www.phac-aspc.gc.ca/tmp-pmv/travel/clinic-eng.php)

- **Tetanus & diphtheria** – needed once every 10 years. It is routinely given in school at age 14, so due again at 24 years of age. The recommendation now is to include pertussis (whooping cough) once with the booster either at age 14 or 24.
- **Measles, Mumps and Rubella (MMR)** – two full MMR vaccines need to be given to those born after 1970. If your second dose was just Measles or just Measles and Rubella then a full MMR needs to be given now. (For those born before 1957 no vaccines are needed. For those born between 1957 - 1970 one MMR needs to have been given).
- **Chicken Pox/Varicella** – the vaccine highly recommended if you have never had chicken pox. This will protect you and your team mates especially when travelling.
- **Hepatitis A** – highly recommended in two doses and good for life (this is not routinely given at school). Hepatitis A is not covered by provincial health care.
- **Hepatitis B** – highly recommended in three doses and good for life (those born after 1982 would have received this in school).
- **Flu shot** – highly recommended annually. This year, the H1N1 vaccine is also highly recommended.
- **Meningitis C** – given routinely in school and recommended if not previously given. Alternatively Menactra is a meningitis vaccine that covers more strains that you may be exposed to with international travel. Menactra is approximately \$130, and is not covered by provincial health plans.



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### Prevention

There are things that can be done to *reduce* the risk of Traveller's Diarrhea (TD). It is not possible to eliminate the risk altogether.

#### If in a high risk area:

- "Boil it, Cook it or Leave it"!
- Drink purified water or commercially bottled beverages (with seal intact) and pasteurized milk.
- Wash your hands frequently with soap or a sanitizing agent especially before eating or drinking.
- Do not eat food from street vendors.
- Caution with seafood, especially shellfish as it spoils very quickly.
- Fruits and Vegetables: "If you can peel it, you can eat it" (caution on water melon as it may be injected with tap water).
- Caution with buffet dishes as they are often left at room temperature.
- The Dukoral oral vaccine taken two weeks prior to departure to a developing country reduces your risk of TD by approximately 25%. The vaccine only provides protection for three months.
- Hepatitis A vaccine given as two injections six months apart gives protection for life.

#### Optional

- Pepto-Bismol taken two tablets four times daily reduces the risk of TD by 40-60%. This should be sampled for a few days before it is used to ensure it's well tolerated. Side effects include black stools, dark stained tongue and occasional ringing in the ears. These all disappear after Pepto is stopped.
- Probiotic, *saccharomyces boulardii* (Florastor): can be taken in a dose of one capsule twice daily three days before your trip, and continued during the length of your stay. Florastor offers some protective effect against TD and has been shown to help treat TD. The reduction of TD is up to 30% and varies depending on location of travel. This should be sampled before use. The side effects are negligible. It is not a prescription medication and can be purchased at most pharmacies in Canada. It is not advised to purchase Florastor outside of Canada.
- Occasionally antibiotics need to be taken preventatively when travelling to a developing country if a known infection is circulating amongst the team/hotel/dorm etc. *It is not advisable to take antibiotics frequently because of side effects and resistance can easily develop.*



- Azithromycin and Ciprofloxacin are both currently recommended antibiotics for prevention (and treatment) of TD. Recommended preventative/prophylactic dosing: Ciprofloxacin: 500 mg once daily or Azithromycin: 250 mg once daily.

## **Treatment**

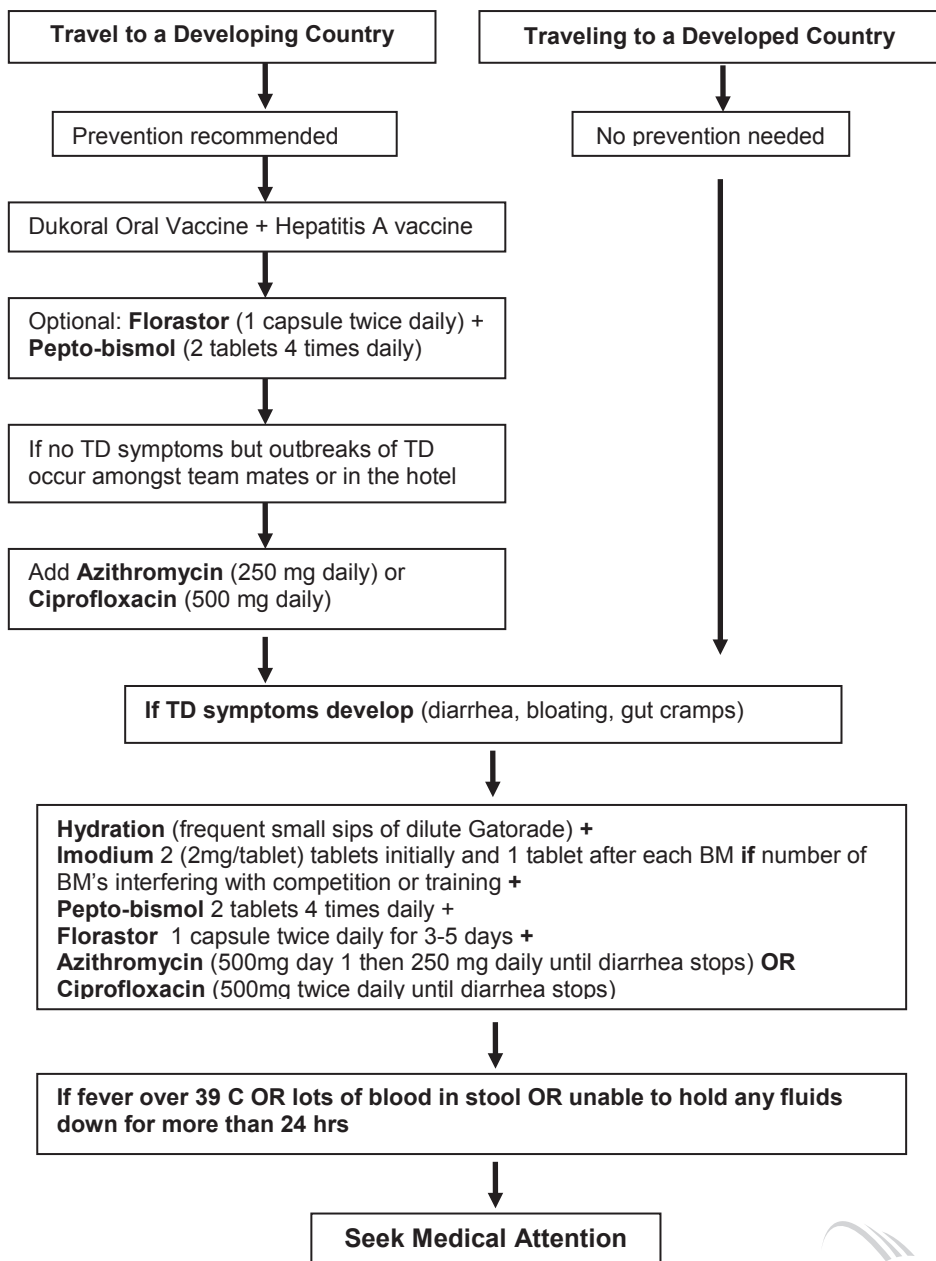
- **Hydration** Frequent small sips of an electrolyte containing solution such as gastrolyte or dilute gatorade, 50:50 with water.
- **Imodium:** two tablets initially followed by one after each bowel movement (BM). This should only be started if more than six BMs occur each day OR if the number of BMs are interfering with competition or training. An MD should be seen if a fever or bloody diarrhea is present before starting imodium.
- Other medications that may be beneficial include Pepto-Bismol, Probiotics and/or Antibiotics





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## Traveler's Diarrhea Prevention and Treatment Flowsheet



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- Asthma or Exercise Induced Bronchospasm (EIB) or Airway Hyper-Responsiveness (AHR) is a condition causing narrowing of the small airways in the lungs. Many things can predispose certain individuals to these lung conditions. These include: a family history of the condition(s), having a history of seasonal allergies or eczema, poor air quality (eg. chlorine by-products, pollution), cold dry air, anti-inflammatory pills (for some people), cat or dog dander, pollens, or the common cold.
- As of January 1 2010 changes have been made regarding which inhalers require a TUE form and which inhalers require Declaration of Use forms. Please see below for details.
- If you use a spray inhaler (as opposed to powdered) it is strongly recommended that you use an aerochamber with your inhaler to improve delivery to your lungs.

## Bronchodilator Inhalers (Ventolin, Bricanyl, Oxeze & Serevent)

Bronchodilators work to open up the lung's small airways. Their effects start working within 15 minutes and last up to four hours. This is considered as your 'rescue inhaler'. One puff needs to be taken 15-30 minutes before training sessions, and races ONLY IF:

- you are feeling tight or wheezy
- have a cough with exercise
- if air quality is poor
- if you have a cold

*As of Jan. 1 2010 both Ventolin (Salbutamol) and Severtent (Salmeterol) will be removed from the banned substance list. They will require only the submission of a Declaration of Use form to CCES or your I.F. If you require very high doses (approx. 10 puffs/day or these medications orally) you must also submit a TUE for their use. Bricanyl (Turbutaline) and Oxeze (Formoterol) will require the submission of a TUE to CCES or your I.F. It's important that you discuss the best use of these inhalers with your own MD.*

*Generalizations to follow can be found on the next page.*



*Below are generalizations to follow:*

**IF** you develop a cold you may need to increase your inhaler to one puff three times daily (morning, noon and night) in addition to your training or race puff.

**IF** you find that you need more than your one puff with workouts to keep wheezing and chest tightness under control on a regular basis, it is VERY important that you speak with your doctor because you may need additional treatment.

**SIDE EFFECTS:** This medication may make you feel a bit jittery, like you have had coffee to drink. It can give you tremors and fast heart rate. Most people do not feel this effect with one puff.

*Carry your inhaler in your sports bag at all times.*

### **Glucocorticosteroid Inhalers (QVAR, Flovent, Pulmicort, Alvesco)**

- Glucocorticosteroid inhalers work to settle inflammation down in the airways. Inflammation happens when you have a cold or are exposed to air pollution, poor air quality or allergies. This inhaler takes 3-7 days to become completely effective. (These inhalers are NOT comprised of anabolic steroids and work very differently)
- It is very important that you discuss the use of this inhaler with your own MD.
- IF you are not regularly on a steroid inhaler and are travelling to an area with air pollution, a venue with known poor air quality, or other recognized asthma triggers, you may benefit from taking your steroid inhaler two weeks prior to travel, with a dosage of one puff in the morning and one at night. Continued taking the steroid inhaler until you are away from irritants.

*For further clarification and questions please speak to your personal or team physician. Dr. Janet McKeown has also provided her email address as a resource if required:*

[jmckeown@interchange.ubc.ca](mailto:jmckeown@interchange.ubc.ca)



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### Supplement Strategy

There is always the risk of supplements being contaminated with substances that can cause a failed anti-doping test, but a sound supplement strategy can help athletes make balanced decisions about which, if any, supplements they should take.

The role of this strategy is to provide guidelines, based on the most recent evidence, about which supplements can safely, ethically, and legally support health and performance. It is also intended to help athletes avoid accidental positives through taking high-risk supplements. It does not reproduce the WADA list, and so any rider considering taking a supplement should check with a Sports Dietician or Sports Medicine Doctor before taking anything.

### There are two groups of products to consider:

1. Nutritional Supplements. These will not aid performance unless there is a deficiency in the diet.
2. Nutritional Ergogenic Aids. These may improve performance if taken in sufficient quantities, irrespective of the athlete's nutritional status.

The guide is based on the Australian Institute for Sport's Supplement Group Classification ([www.ais.org.au/nutrition/supp.htm](http://www.ais.org.au/nutrition/supp.htm)), and the Great Britain Cycling Team's Nutritional Supplement Strategy.

### The guide is divided into three categories:

GROUP A - LIKELY/POSSIBLE SUPPORT FOR HEALTH OR PERFORMANCE  
GROUP B - LITTLE/NO EVIDENCE OF BENEFIT ON HEALTH OR PERFORMANCE  
GROUP C - PRODUCTS TO BE AVOIDED

### GROUP A: Likely/Possible Support for Health or Performance

Some supplements from within this Group are recommended to be taken daily by all athletes, to support health and performance:

- Vitamin D (recommended dosage 1000 IU per day, year-round)



Other Group A supplements:

These supplements are recommended only for some athletes in specific situations and can cause problems if used incorrectly. It is strongly recommended that any athlete considering the use of a supplement meet with a Sport Dietician.

- Caffeine \*
- Calcium
- Carbohydrate (glucose polymer) drink
- Cherry Juice (concentrate of Montmorency tart cherries)
- Cold-FX (sourced through Canadian Sport Centres, during cold season)
- Creatine\* (when using a tested 'clean' product only)
- Energy bars
- Ferrous sulphate or gluconate\*\*
- Fish Oil (1-3g per day)
- "Greens" products
- Glucosamine Sulphate (maximum dose 1,500mg per day)
- Liquid Meal Replacement
- Whey protein
- Melatonin\*\*\*
- Multivitamin and minerals (at doses no greater than 100%RDA)
- Probiotics
- Recovery drinks
- Sodium bicarbonate\*
- Sodium citrate \*\*
- Sport drinks
- Vitamin C (maximum 250mg per day)
- Vitamin E (maximum 400 IU per day) (only when used short-term for recovery)

\*/\*\*/\*\*\*These supplements are recommended only for some athletes in specific situations and can cause problems if used incorrectly.

\* = only after discussion with coach

\*\* = only on the advice of Doctor/Dietician for specific dosages and protocols

\*\*\* = only after discussion with Doctor or Sleep Specialist

### GROUP B: Little/No Evidence Of Benefit on Health or Performance

- B-alanine
- Beetroot juice (more evidence needed)
- Bee pollen
- Branched chain amino acids (and other free-form amino acids)
- Carnitine
- Chromium picolinate
- Coenzyme Q10
- Colostrum



GROUP B *Continued:*

- Cordyceps
- Cytochrome C
- Garlic
- Ginkgo biloba
- HMB (contamination with steroids caused an accidental positive last year)
- Inosine
- Nitric oxide supplements
- Oxygen boosters
- Pyruvate
- Rhodiola rosea
- Ribose
- Vitamin B12 injections
- ZMA

**GROUP C - PRODUCTS TO BE AVOIDED**

Supplements containing any of the following are very high risk for producing a positive doping control test. THIS IS A QUICK REFERENCE LIST OF HIGH-RISK PRODUCTS, ALWAYS CHECK THE WADA LIST AS WELL (or ask for help):

- Androstenedione
- Ginseng (except the purified extract used in batch-tested COLD-FX, which is Group A)
- DHEA
- Ephedra
- Geranamine
- 19-norandrostenedione
- 19-norandrostenediol
- Strychnine
- Tribulus terrestris and other herbal testosterone supplements

**\*\* NOTE:** Products that provide a "money guarantee" that they are clean are not a good choice - any positive doping test that results will still be valid, and you may be banned. Money from the manufacturer won't help. **\*\***

**Canadian Centre for Ethics in Sport**

The information provided below has been taken from the CCES "FAQ Supplements" publication. Please refer to the following website to view the entire document:

[www.cces.ca/pdfs/CCES-PUB-SupplementFAQ-E.pdf](http://www.cces.ca/pdfs/CCES-PUB-SupplementFAQ-E.pdf)



- **Why are there risks of inadvertent doping due to supplements?**

In many countries, the manufacturing of dietary supplements is not appropriately regulated by the government. This means that supplements can contain prohibited substances. For example, the ingredients on the inside of the bottle may not match those listed on the outside label or package. In some cases, the undeclared substances found in the supplement can include one that is prohibited under anti-doping regulations.

- **Where can I get advice about taking nutritional supplements?**

Team physicians and sport nutritionists are excellent resources and can be contacted through your sport organization or your Canadian Sport Centre.

NSF – Certified for Sport – [nsf.org](http://nsf.org)

InterActive and INFINIT Custom Fuel Program via CSCPacific – [fuelingcanada.com](http://fuelingcanada.com)

HFL – Sport Testing Program – [informed-choice.org](http://informed-choice.org)

Koelner – [koelnerliste.com](http://koelnerliste.com)

If these professionals are not available, seek advice from a pharmacist. Always make sure the professional is aware of the doping risks associated with supplement use and reviews the World Anti-Doping Agency (WADA) Prohibited List before providing advice. The CCES' Substance Classification Handbook applies the WADA list to the Canadian market, and can be downloaded at:

[www.cces.ca/pdfs/CCES-PUB-SubstanceClassification-E.pdf](http://www.cces.ca/pdfs/CCES-PUB-SubstanceClassification-E.pdf).

- **What is the safest source of supplements?**

There is always an increased risk of doping when supplements are purchased through non-traditional means such as: over the internet, through magazines or directly from a non-licensed supplier. Products purchased from a trusted retailer or directly from a reputable manufacturer are likely to be associated with lower risk of inadvertent doping. If possible, determine if the manufacturer produces any products containing substances from the WADA Prohibited List – if so, there will be a higher risk of cross-contamination between products. If you decide to use supplements, you should purchase your products from companies which have a good reputation and use good manufacturing practices, such as major multinational pharmaceutical companies. During doping control sessions it is vital that you declare all medications, including topical creams and supplements that you are using.



MEDICAL SCREENING	FREQUENCY	2009	2010	2011	2012	2013
		GIVE DATE & MAKE NOTE IF FOLLOWUP NEEDED				
*MEDICAL HISTORY (on Zeus or by your MD)	YEARLY					
*PHYSICAL	YEARLY					
*HEMOGLOBIN AND FERRITIN	YEARLY					
DENTAL EXAMS	1-2 TIMES/YR					
<b>IF USING ASTHMA INHALERS:</b>						
* **TUE faxed to CCES and FINA	EVERY 4 YRS					
Date of Approval						
** DECLARATION OF USE faxed to CCES & FINA	EVERY 4 YRS					
Date of Approval						
<b>VACCINES</b>						
***TETANUS AND DIPHTHERIA, Td ( give date )	EVERY 10 YRS					
		√ IF GIVEN				
FLU SHOT	YEARLY					
MEASLES, MUMPS AND RUBELLA (MMR)	2 IN LIFETIME					
CHICKEN POX VACCINE OR DISEASE	2 vaccines IN LIFETIME					
HEPATITIS A	2 IN LIFETIME					
HEPATITIS B	3 IN LIFETIME					
MENINGITIS (MENINGOCOCCAL)	1 IN LIFETIME					
OTHER TRAVEL VACCINES GIVEN eg. Typhoid, Yellow fever, Dukoral						
* copy must be faxed to Team MD or be entered into CAMP by your own MD						
** re-apply if changing type of inhaler used						
*** one Td at 14 or 24 yrs. should have Pertussis added (aPTd)						
FINA (fax: 011-41213101897)						
CCES - Canadian Centre for Ethics in Sport (fax: 613-521-3134)						
CAMP - Canadian Athlete Monitoring Program (electronic medical record)						



Coaches and Staff Medical Screening Needed for Travel

CSC TRAVELING STAFF MEDICAL RECOMMENDATIONS		2009	2010	2011	2012	2013
<b>MEDICAL SCREENING</b>						
MEDICAL EXAM	YEARLY					
DENTAL EXAMS	1-2 TIMES/YR					
<b>VACCINES</b>		<b>Give Date Given</b>				
TETANUS AND DIPHTHERIA, Td	EVERY 10 YRS					
FLU SHOT	YEARLY					
		√ IF LIFETIME VACCINE COMPLETE				
CHICKEN POX VACCINE OR DISEASE						
MEASLES MUMPS AND RUBELLA	as above					
HEPATITIS A	2 IN LIFETIME					
HEPATITIS B	3 IN LIFETIME					
OTHER TRAVEL VACCINES GIVEN						
eg. Typhoid, Yellow fever, Dukoral						