

FUELING FOR HIGH PERFORMANCE

FIRST make sure your “machine” runs **efficiently** and digestion is good.

Some symptoms that should make you question your digestive health:

- | | | |
|---|---|--|
| <input type="checkbox"/> Sinus congestion | <input type="checkbox"/> Allergies (dust, animals etc.) | <input type="checkbox"/> Cramping |
| <input type="checkbox"/> Acne | <input type="checkbox"/> Itchy ears | <input type="checkbox"/> Low energy |
| <input type="checkbox"/> Frequently sick | <input type="checkbox"/> Asthma | <input type="checkbox"/> Fullness/Stretching |
| <input type="checkbox"/> Frequently injured | <input type="checkbox"/> Anal itching | <input type="checkbox"/> Excess gas |
| <input type="checkbox"/> Eczema | <input type="checkbox"/> Post-nasal drip | <input type="checkbox"/> Bloating |
| <input type="checkbox"/> Rosacea | <input type="checkbox"/> Bad breath | <input type="checkbox"/> Poor recovery |
| <input type="checkbox"/> Psoriasis | <input type="checkbox"/> Irregular bowel movements | <input type="checkbox"/> Headache |
| <input type="checkbox"/> Seborrhea | <input type="checkbox"/> Hemorrhoids | <input type="checkbox"/> Yeast infection |

NUTRITION FOR HEALTH

Fuel Composition: Protein, Carbohydrate, Fat, Vitamins, Minerals, & Water
When making fuel choices pay attention to **quantity** and **quality**

Quantity

Quality

Fat

20-30%

√ “Good” unsaturated → anti-inflammatory
(typically vegetable source and fish)
liquid
X “Bad” saturated → inflammatory
(typically animal source)
solid
■ generally in protein unless added to food

Protein

20-30%

0.8-2g/kg

-beef, **chicken**, **turkey**, **fish**, **egg white** , **legumes**, **nuts**, **seeds**,
cheese
(best are bolded)

Carbohydrate

40-50%

√ Coloured vegetables
√ Whole fruit
√ Sprouted or whole grains
√ Fibre –soluble and insoluble
X White vegetables
X Refined grains
X Straight (simple) sugar

Food samples generously
donated by Lifestyle Markets
180.2950 Douglas St. 384.3388



“Health from the inside out”

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Importance of Minerals

Many acids are a consequence of metabolism –such as lactic acid production during anaerobic states. Minerals buffer acids. Fruits and vegetables are high in minerals. Foods can contribute to acidifying or alkalinizing the system –thus hinder or help recovery. Minerals that alkalinise are: Sodium, Potassium, Calcium, and Magnesium. Electrolytes are charged minerals.

Water and Hydration

- The **weight you lose** during training and games is largely **water**. This must be minimized and/or recovered for optimal performance, training, and health.
- Where glycogen goes ... water follows
- Weigh yourself in dry clothes before a workout or training session, then again, in the same dry clothes after the session. The difference is the amount of sweat you lost: **1 kilogram weight loss = 1.5 litres water to be replaced**.
- If hydrating well, you want your post-session weight to be within 2% of your pre-session weight (post-exercise weight/pre-exercise weight should be 0.98 or greater).

Weight before training: _____ **Kg**

Weight after workout - _____ **Kg**

Weight lost during workout	_____ Kg
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_____ **X 1.5 litres**

Fluid to be replaced	=	_____ litres
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NUTRITION FOR GAMES

In the week prior

- Clean nutrition
- Balanced macro nutrients
- Rich in micronutrients
- Maintain fluids
- Consider salting food (particularly for tournament or hot weather play)

Trends

As competition time draws near:

↓ portion

↓ fibre

↓ fat

↓ protein

Remember to take an
individualized approach

Day before game

- Easy to digest
- Decent serving size
- 25%protein and 75% "clean" starchy carbohydrates

3-4 hours before game (ideal):

- Light Meal: mostly carb (at least 300g), small protein, less fat and fibre
- Fluid

Examples: Small well-tolerated balanced meal (i.e. leftovers)
Sprouted bread with nut butter spread, lean protein
Fruit, yogurt, and granola
Protein shake
Oatmeal (or other whole grain) with nuts and good oil (opt.)

1-2 hours before game (if needed i.e. tournament, hungry, need boost):

- Snack: carb (100g), with a little protein (30-50g), little to no fat or fibre
- Fluid
- Consider caffeine (test in training) -benefits can be within 15 minutes, peaks at 1-2 hours ... and half-life 6 hours -advantages measured at 3-9 (12) mg/kg consumed 1-2 hours before activity

Examples: Sport gel
Sports drink
Sports bar
Yogurt, apple sauce
Fruit (peeled if sensitive digestion)
Simple lite protein drink. carb/protein drink

During game

- Go into the game having ingested 500ml of fluid (can include carb) in the 20-30 minutes before
- Water and carbohydrate replenishment
- Ideally hydrate at 10-20 minute intervals during the game –taking in 2-4 ounces at a time (with your individual hydration rate in mind) and more at half time
- Consider electrolytes more carefully if hot or tournament style games
- Consider a small amount of protein to sustain you



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Sports Drinks and Gels

- Consider whether you need or are obtaining: carbs, electrolytes and/or water
- High concentrations of carbohydrate can cause stomach upset; best kept at a 6-8% concentration or gastric emptying is delayed. The source is also important –fructose (usually from corn) is typically the worst for this. Glucose and glucose polymers (maltodextrin) are thought to be the best
- **If you use these before or during game/ session you must continue until the activity is over otherwise, you risk “bonking”**

NUTRITION FOR RECOVERY

- ✓ Essential preparation for the next session or game.
- ✓ Includes food nutrients, water, vitamins and minerals
- ✓ Electrolytes are important as they determine fluid balance and “buffer” the system
- ✓ Most important replenishing time is the first 24 hours after.
- ✓ Water goes with glycogen so keep fluids up.

Within 30 minutes of competition

- Begin with food centered around carbohydrate (at least 50-80g) with protein.

Examples: Fruit
Sports bar
Sports drink
Water
Manna bread, bagel
Freshly prepared vegetable juice or homemade vegetable soup

1 hour after competition

Balanced meal (protein, carbohydrate and fats, rich in vitamins and minerals)
Water

After activity: (for each of the first 4-6 hours)

Carbs 1.5g/kg per hour
Protein 0.25g/kg per hour (at least)
Water
Electrolytes



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"Hitting the road"

- ✓ Plan –especially around game day
- ✓ Don't forget you can bring food with you ... invest in good/handy containers
- ✓ Think outside of the box

Ordering made easy:

Dinner plate with meat or fish and vegetables

Salad with meat, boiled egg, avocado

Wrap

Open-face sandwich

Grilled chicken or fish burger with salad

Potato, sweet potato, squash, carrot, parsnip, rice and other grains can supply carbohydrates

Packing it:

Protein and carb bars

Tuna packs, sardines (if you are brave ☺)

Fruit

Nut mix

Protein powder with shaker cup

Homemade muffins or energy bars

Carb and/or electrolyte for competition day

Lesser of the evils –out and about

Real meals –on a plate, raw/baked/steamed, include the colour green and protein

Wrap –turkey, chicken, or fish

Sandwich (multigrain, alternate grains, whole-wheat) –turkey, chicken, or fish

Salad with beans, nuts, chicken, fish, egg

Vegetable or broth-based soup

Pizza with chicken or fish (reduced cheese)

Stir fry (no oil) on rice

Chicken or bean burrito –no cheese or sour cream –add guacamole and salsa

Sweet potato > white potato > French-fries

Colourful starchy vegetable/brown rice/quinoa > brown rice or buckwheat pasta > white rice/potato/ kamut pasta > wheat pasta

Raw nuts (then roasted)

Yogurt or unsweetened apple sauce (can add slivered almonds)

Granola bar

Fig Newtons

Boiled eggs

Sushi (be careful with raw fish if you don't know the source)



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Fuelling on a Budget

Low Cost:

Vegetables and Fruits
Whole grains
Legumes (beans and lentils)

Some High Cost:

Packaged food
Grain products
Prepared meats

Strategies

Note prices and shop around
Turkey/chicken and fish are better choices than too much beef –watch for sales and stock up on these proteins –freeze food
Befriend a fisherperson ... and hunter ☺
Focus on whole foods (unprocessed and unrefined)
Learn some vegetarian dishes
Eat local and in season
Buy “family packs” of protein and divide into Ziploc bags and freeze
Fresh is best but frozen vegetables and fruits are OK and better than canned
Choose which foods you want to spend money on –i.e. good quality bread (not ice cream)

Some ideas for your Shopping List :

Egg
Potato
Yam/Sweet Potato
Carrot
Apple
Banana
Pear
Cabbage (cooked in strifry or raw for salad)
Broccoli
Squash
Yogurt
Tuna
Lean beef
Brown and/or wild rice
Large flake (or steelcut) oats
Bulk nuts
Bulk cereal or homemade granola



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Food Prep strategies

Baking meat –fats drip away and you can bake vegetables at the same time
Steaming vegetables
Crock pot
Double recipe and freeze
George Forman style Grill
Freezing portions of raw food or the dry components of recipes for baking
Cut vegetables and then meat (one board)
If boiling water i.e. for pasta then can steam vegetables over the boiling water
Consider making multiple or large portions at one time for several days consumption



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Protein

Grams of protein per 100g (3 ounce) serving* Vegetarian Sources

Fruit

All (0.2-2)

Vegetables

Carrot (1)

Broccoli (4)

Brussel sprouts (5)

Cabbage (1)

Kale (4)

Cauliflower (3)

Parsley (4)

Grain

Rice (7)

Rye (9)

Oats (13)

Amaranth (16)

Barley (8)

Millet (10)

Red wheat (14)

Quinoa (18)

Corn (9)

Buckwheat (12)

Spelt (15)

Nuts and Seeds

Hazelnuts (13)

Sunflower seeds (24)

Almonds (19)

Sesame seeds (19)

Legumes

Adzuki beans (22)

Soybeans (35)

Dry peas (24)

Lentils (2)

Ferments

Amasake (3)

Tempeh (20)

Tofu (8)

Miso (15)

Algae and Dried Seaweeds

Hijiki (6)

Kelp (16)

Chlorella (55)

Kombu (7)

Dulse (22)

Blue-green algae (60)

Wakame (13)

Nori (35)

Spirulina (68)

Yeast

Nutritional (50)

Animal Sources

Dairy

Whole milk (3)

Cheese (25-31)

Yogurt (9-15)

Cottage cheese (14)

Fish

Oysters (9)

Cod (18)

Anchovies (19)

Tuna (29)

Clams (14)

Bass (18)

Mackerel (19)

Herring (17)

Abalone (18)

Sardines (24)

Meat and Eggs

Eggs (10)

Beef heart (20)

Fowl (16-24)

Beef liver (20)

Beef/red meat (17-21)

Chicken liver (21)

** From "The Complete Athlete" by John Winterdyk PhD and Karen Jensen ND. Alive Books. 1997.*



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