



# WATERLOO **CONDITIONING**

## NUTRITION **GUIDEBOOK**



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## WHAT AND HOW MUCH SHOULD I BE EATING

Student athletes have similar nutrient needs to the other healthy students but typically have higher needs for energy (calories) and water. It can be very confusing for an athlete to figure out how much he or she should be eating as it is unique for each individual, depending on your sport, training schedule, body size and gender. If you are happy with your current body composition, energy levels and performance, you do not likely need to concern yourself with nutritional changes. In the interest of keeping nutrition simple and easy to follow we have broken our program into two phases that will meet all student athlete needs whether it be a focus on improving performance and/or energy, altering body composition, reducing stress etc. The goal is to master phase one before moving on to subsequent phases.

Nutritional needs are unique to each individual and therefore we try to provide a variety of different options to see what works best for you. Let's start with something that you are likely familiar with: the Canada Food Guide. The Canada Food Guide, which is produced by the Dietitians of Canada and the Canadian government, is a quality, research-based guide to healthy eating and can be helpful in steering you to make the better choices. Below is a good general guide to help you determine how your nutritional needs would be broken down, based on your caloric requirement. Calorie counting is not recommended; rather an awareness of energy needs and the approximate number of Canada Food Guide servings is a better guide for healthy eating. In addition there are many online calculators that will help you to determine your daily caloric requirement, such as [www.eattracker.ca](http://www.eattracker.ca) or [www.calorieneedscalculator.com](http://www.calorieneedscalculator.com). Remember that these types of calculators are only estimates as each individual is unique.

Table 1 is a general guide **TABLE 1. Recommended Nutrient Intakes at 12 Different Calorie Levels**

Calorie Level	1,000	1,200	1,400	1,600	1,800	2,000
Grains	3 ounces	4 ounces	5 ounces	6 ounces	6 ounces	6 ounces
Vegetables	1 cup	1.5 cups	1.5 cups	2 cups	2.5 cups	2.5 cups
Fruits	1 cup	1 cup	1.5 cups	1.5 cups	1.5 cups	2 cups
Milk	2 cups	2 cups	2 cups	3 cups	3 cups	3 cups
Meat and Beans	2 ounces	2 ounces	4 ounces	5 ounces	5 ounces	5.5 ounces
Oils	3 tsp	4 tsp	4 tsp	5 tsp	5 tsp	6 tsp
Calorie Level	2,200	2,400	2,600	2,800	3,000	3,200
Grains	7 ounces	8 ounces	9 ounces	10 ounces	10 ounces	10 ounces
Vegetables	3 cups	3 cups	3.5 cups	3.5 cups	4 cups	4 cups
Fruits	2 cups	2 cups	2 cups	2.5 cups	2.5 cups	2.5 cups
Milk	3 cups	3 cups	3 cups	3 cups	3 cups	3 cups
Meat and Beans	6 ounces	6.5 ounces	6.5 ounces	7 ounces	7 ounces	7 ounces
Oils	6 tsp	7 tsp	8 tsp	8 tsp	10 tsp	11 tsp (1)

As stated above nutrition is unique to each individual. If this guide works for you and meets all of your needs, perfect! There are however some disadvantages to the guide. First, the guide provides only one macronutrient ratio and not all body types will respond to this ratio in the same way. For example, everyone has differing levels of carbohydrate resistance and this may alter the amount of carbohydrates depending on the body type, sport etc. In addition, the protein recommendations may be too low for some athletes depending on their

sport, body composition requirements etc. Finally there is little discussion on nutrient timing (1). While we do not wish to discount the Canada Food Guide, we want our athletes to understand that it was created for the average sedentary person, not a top level varsity athlete! It only makes sense that your nutritional needs will be much different from a sedentary person and we are here to help in modifying your nutritional regime to suit your goals. Read on to learn about a more individualized approach.

In an effort to make the nutritional process easy and as a little work as possible we have phased our program into 2 phases. Phase 1 is the transition to clean eating. It is essential to ensure you are eating the proper foods as this will; control your energy balance, provide nutrient density and will help you to achieve health, body composition and performance goals (1). To keep it simple we have created standards for each phase. Below are the conditions of the first phase that you must meet before moving on. Before any nutritional counselling is necessary, three of the following habits should be part of your current eating routine. This is what we would consider level 1 nutrition.

- 90% adherence to the foods below
- Eating a source of protein with every meal
- Eating vegetables with 2/3 meals per day
- Eat a healthy fat source with each meal
- Eat Breakfast
- Eat dinner
- Drink consistently throughout the day
- Eat a piece of fruit/day
- Prepare food 2 days in advance

The first phase of clean eating is essential because unlike what we often hear, a calorie is not just a calorie. Each calorie affects the body differently and interacts with other calories in a unique manner. For example, if you eat 200 calories worth of a Snickers bar and 200 calories of brown rice and chicken breast, these calories are going to have a significantly different impact on the body. Since we do not believe a calorie is just a calorie we have compiled a list of all the best calories available to you! We call this our Superfoods list and we recommend eating from this list as often as possible. These foods pack the most punch in terms of nutritional density.

#### SUPERFOODS LIST

Protein	Vegetables	Fruits	Fats	Carbohydrates
Salmon	Anything green	Berries	Fish Oil	Sweet Potatoes
Tuna	Kale	Blueberries	Avocado	Rice
Tilapia	Broccoli	Raspberries	Olive Oil	Corn
Haddock	Spinach	Strawberries	Coconut Oil	Kidney Beans
Cod	Mixed Greens	Oranges	Whole Eggs	Black Beans
Chicken	Wax Beans	Kiwi	Flax seed oil	Chickpeas
Turkey	Peppers	Peaches	Nut Butters	Quinoa
Lean Beef	Onions	Pears	Peanuts	White Potatoes

Whey Protein	Asparagus	Plums	Cashews	Bananas
Cottage Cheese	Celery	Apples	Almonds	Oats
Greek Yogurt	Peas	Tomatoes	Walnuts	
Egg whites	Cucumber	Mangos	Brazil Nuts	
Milk	Cauliflower	Pineapple		
Shrimp	Carrots	Watermelon		
Pork	Zucchini			
	Cabbage			
	Pumpkin			
	Squash			

There is a large misconception that eating healthy is expensive. While it can be, it certainly does not have to be, as long as we are creative. We recognize that cost is a factor in the nutritional choices you make and this can act as an added stressor. Fear not! In addition to our Superfoods list we have shared a “Top Bang for your Buck” food list. These foods will pack the most nutrient density and energy for the least amount of money, we know this because we eat a lot! You should be consuming these foods regularly.

### **TOP 10 BANG FOR YOUR BUCK VARSITY ATHLETE FOODS**

**Eggs** – Packed with protein and good fats, eggs are perfect for meals or snacks. Each egg is also like a mini multi-vitamin... read the nutritional label and it may surprise you with how many nutrients you get per egg!

**Oats** – Awesome carbohydrate source. They are slow digesting so it provides a constant supply of energy to help fuel you throughout the day. In addition, they also come with a hefty dose of fibre, are very easy to prepare and can be taken anywhere!

**Peanut Butter** – Source of monounsaturated fats which are good for slow sustain energy as well as the heart (source). Peanut butter also has bit of protein and some fiber. Make sure it’s the all-natural kind as the processed stuff has added sugars and other ingredients not conducive to health. The jar should have 1, possibly 2 ingredients: 100% freshly roasted peanuts and salt. That’s it!

**Tuna** – Cheap portable source of protein. Doesn’t require refrigerating and can be stored at room temperature. Good snack option while you’re on the run!

**Apples** – Packed with anti-oxidants and fibre, apples are a great snack. Add some PB to them and you have a pretty complete snack.

**Rice** – As athletes you need some carbohydrates. Rice is a nice complex carbohydrate which when combined with veges and some protein provides a slow release of sugars into the bloodstream, giving you steady supply of energy. It is also gluten free so those with gluten sensitivity are good to go!

**Ground Beef** – Calorically dense and relatively cheap, ground beef has some slow digesting protein and lots of iron. It’s quick to cook and can be added to many things such as rice, pasta, vegetables etc.

**Broccoli** – Takes 2 minutes to cook in boiling water and packed with indols (cancer fighting compounds). Broccoli has loads of fibre keeping you regular and also delivers a hefty dose of vitamin C; an excellent vegetable.

**Avocados** – Plenty of heart healthy monosaturated fats along with a huge serving of fiber. Avocados can be blended into shakes, turned into guacamole or just eaten on their own. Usually a \$1 apiece and provides you with enough food for at least 2 meals!

**Green Tea** – Although not a food, green tea has a magnitude of anti-oxidant properties and a calming effect on the mind; great to drink after a hard day of training helping you to wind down and relax.

Once we have mastered our clean eating principles we can move to Phase 2, nutrient timing. Nutrient timing will help to further improve energy levels as well as performance and body composition if it is still a concern after the completion of Phase 1. It is here we can improve recovery times for an intense physical training schedule. Nutrient timing is going to be different for each athlete as we must consider the sport and the schedule of each athlete. If you have mastered Phase 1 and are interested in nutrient timing read below for some tips and tricks! If you are confused and need some additional guidance make an appointment with the Conditioning Coordinator.

**PRE-EXERCISE FUELLING**

Pre-Fuelling Concepts

There are some general recommendations that an athlete should keep in mind when thinking about fuelling before training. The term training will refer to practice, conditioning or a game. There are two time frames an athlete has to work with; Table 2 will help you to guide the athlete to make the appropriate individual choices.

**TABLE 2. Timing of pre-game meals**

<b>3 to 4 hours</b>	<b>30 minutes</b>
Contact sport athletes who are at risk of injury or being hit in the stomach	Those who feel uncomfortably hungry during competition
Athletes who feel sick to their stomach shortly before training or competition	Those who feel weak or shaky
Athletes who suffer from pre-competition anxiety and as a result suffer from diarrhea	Those who participate in aerobic endurance events (long distance running) and need to maximize carbohydrate store (1)
Athletes who exercise in the heat	

Wildman recommends that athletes choose foods that are well tolerable and have minimal indigestible material, such as fibre (2). As an alternative if you only have about 2 hours before your training you need to eat a

carbohydrate that is high on the glycemic index. The glycemic response is the ability the specific food has to contribute glucose to the blood stream. A lot of factors contribute to the glycemic number of a food including amount of fibre, serving size, added fat, how the food is prepared etc. This index can be helpful to an athlete because it aids in proper food choice at the proper time. A high glycemic food enters the blood stream quickly and is therefore best both pre- and post-training. The pre-training intake will elevate blood glucose levels for energy production and the post-training intake will allow for a quick uptake of the nutrient to quicken the recovery process. Low glycemic foods enter the blood stream slowly. These are ideal if eaten 3-4 hours pre-exercise and are also ideal for an endurance athlete because they will provide sustained energy (4). An exhaustive list of the glycemic index of foods can be found with a quick Google search. As stated above, however, we wish to make this nutritional journey as painless as possible! We have added in a chart from John Berardi, PhD. This chart gives an idea of carbohydrate nutrient timing for athletes and gives a quick and easy guideline to follow.

<b>FOOD TYPE</b>	<b>EXERCISE RECOVERY DRINK</b>	<b>SIMPLE SUGARS AND HIGHLY PROCESSED STARCHES</b>	<b>WHOLE FOOD, MINIMALLY PROCESSED STARCHY CARBOHYDRATES</b>	<b>FRUITS AND VEGETABLES</b>
<b>FOOD TIMING For muscle gain</b>	During and after exercise	Immediately after exercise (if at all)	Eat soon (within 3 hours) after exercise	Eat within each meal
<b>FOOD TIMING For fat loss</b>	During exercise only	Minimize intake	Eat soon (within 1-2 hours) after exercise	Eat within each meal (with emphasis on veggies)
<b>Examples</b>	Sugary, protein-rich drinks such as Biotest Surge, Endurox R4*  Student version: banana, oats and milk/greek yogurt**	Sugary sports drinks Breakfast cereals Soda Fruit Juice Table Sugar Sugary deserts Ice Cream Muffins Bagels Other carbohydrate rich snacks	Bread (whole grain preferred) Pasta (whole grain or spelt preferred) Rice (whole grain, unprocessed preferred) Potatoes Oats (whole oats preferred) Cereal grains (wheat, rye etc.)	Spinach Carrots Tomatoes Broccoli Cauliflower Apples Oranges Avocados Berries

From: The Essentials of Sports and Exercise Nutrition, John Berardi

\*do not feel as those you REQUIRE an expensive exercise recovery drink, we have provided an inexpensive student option in addition

\*\* if you are interested in protein please read the supplement section below or come speak with us.

## POST-EXERCISE FUELLING

Training as an elite athlete places extensive demands on the body. The training regimen is often a minimum of 6 days per week with some sessions lasting hours and for some training twice a day. Physiologically an athlete must think 24 hours in advance in order to ensure adequate energy for subsequent top performances. At the end of a training session each individual has a window of approximately 30 minutes where glucose is more readily absorbed in the body; this is a crucial step in muscle glycogen recovery (Wildman). If the athlete waits for the 2 hour window uptake is slowed by 50% (3). To give specific numbers, Wildman recommends that 1.5g/kg of body weight is an optimal amount of carbohydrate in the 30 minute window and a 2:1 ratio of carbohydrate to protein is also recommended. (3) According to a review done by Rossi and colleagues a 2:1 ratio is optional for strength/power athletes, a 3:1 for team athletes and 4:1 for endurance athletes (13).

## FUELLING DURING EXERCISE

Fuelling during exercise can mean two different things; 1. Fuelling during continuous exercise and 2. Fuelling during intermittent exercise, for example tournaments. When considering fuel for either, the most important piece is ensuring adequate intake of fluids. After fluids ensuring, carbohydrate intake, in the form of fluid or food, is important. The carbohydrate source must only be 6-8% carbohydrate (3). Food sources above this amount of carbohydrate will have the opposite effect on the body; the body will need to draw water out to help the breakdown of the carbohydrate and allow for absorption. Therefore, food intake of 30-60g of carbohydrate is appropriate and will be optimized with an intake of 600-1200mL of water (3). Sports drinks are a good option as they are formulated in the proper way to ensure hydration.

## HYDRATION

The biggest battle is to avoid dehydration. Sounds simple enough, right? This means drinking fluids throughout the day and not waiting until you are thirsty. Dehydration comprising 2% of your body weight can in fact decline performance by 15-20%. You can monitor your hydration levels easily through the colour of your urine. If your



urine is dark it is a positive sign that you need to increase your fluid consumption. Once your urine has returned to a pale yellow colour (no darker than level 3 on the chart) your body has returned to normal. Note that your urine can sometimes change colour if you are taking vitamin supplements. Other signs of dehydration may include fatigue, headaches, or lethargy (4).

Fluid intake pre exercise can be any type of non-alcoholic beverage including milk, juice, carbonated or non-carbonated soft drinks, sport drinks etc. Since there is a 2 hour window for absorption of fluids the rate of absorption of these fluids is irrelevant and makes them acceptable choices. In the past it was believed that caffeinated beverages

did not count as a “fluid” and for every cup of coffee one should drink an additional cup of water. Caffeine can increase urine production slightly in athletes who are not accustomed to ingesting it but does so less so in those who typically consume it (4). Health Canada has taken the stance that up to 400mg of caffeine is an acceptable amount, this equate to 3-8oz cups of brewed coffee or 3 cups of Tim’s medium coffee!



The 2000 National Athletic Trainers' Association (NATA) position stand on Fluid Replacement for Athletes states that "the onset of significant dehydration is preventable, or at least modifiable, when hydration protocols are followed to ensure all athletes the most productive and safest athletic experience" (14). Minimizing dehydration is the simplest, yet the most effective step athletes can take to protect both health and performance. So how can they do that? Knowing their sweat rate is integral to maintain hydration during training and competition. The sweat rate can be calculated by weighing oneself pre and post exercise. For each kg of body weight lost the athlete should drink about 1.5 L of water (4). For example, if an athlete loses 2 kg the athlete will need to take in approximately 3 l of fluids. Your body will adapt to an uptake in fluids, an athlete should try to replace their fluids throughout the training sessions, up to 80%, even if they are not feeling thirsty.

Fluid replacement can often be difficult during exercise as we are focused on the task at hand and often simply forget to drink. Additionally, the thirst mechanism is often impaired when large volumes of water are lost. Ensure throughout the workout/practice that a sufficient number of drink breaks are taken. If the exercise is lasting less than 1 hour the ideal fluid choice is water.

Often athletes will ask if they should be drinking a sport drink. A sport drink can come in the form of Gatorade or homemade drink made from diluted juice and a pinch of salt. The NATA position stand also addresses this issue, stating that "consuming water alone decreases osmolarity, which limits the drive to drink and slightly increases urine output. Including sodium in the rehydration beverage or in the diet allows fluid volume to be better conserved and increases the drive to drink" (14). If a sports drink is available then studies generally show that it is a better option for rehydration. For those athletes who are exercising intensely for over an hour, it is essential they drink a sports drink, homemade or otherwise, that will help to balance electrolytes and provide glucose necessary for the muscles to work optimally. Essentially the choice of fluid is individual and depends on factors such as preference, budget and the type of event (4). It is important to understand that there is an optimal ratio of carbohydrate to fluid in sports drinks. If an athlete is going to make their own sports drink they should ensure that they are getting 40-80 g/L of carbohydrates. Anything above this standard will work to dehydrate the muscle as water is pulled from the muscle to aid in the digestion of carbohydrate to allow for absorption.

Once the work in the gym has been done we need to work to refuel the body so it is ready to perform optimally again, whether it's in an hour or two days. Monitoring body weight is an effective way to ensure the proper amount of fluid replacement. Athletes will see a reduction in weight post- exercise and can follow the guidelines below to recover a specific amount of fluid. Some of the best choices for replacing sweat losses are:

Juices, which provide carbohydrates, vitamins and potassium

Watery foods such as grapes, watermelon and soups.

Sports drinks that are high in carbohydrates

Water, which is convenient and less expensive (1).

## QUICK REFERENCE FUEL & HYDRATION CHART

Before Activity	16 fl oz (0.5 L) of fluid 2 hours prior to activity (this should allow for optimal hydration and allows enough time for urination of excess fluid)
During Activity	Drink frequently, 6-8oz (177-237 ml) every 15 min
After Activity	16 fl oz (0.5 L) for every pound of body weight lost. Weight should be regained (3).

## ALCOHOL INTERACTION

Each athlete should take careful consideration before the make the decision to consume alcohol, especially in season. Often teams will make the choice to have a dry season, or a 48 hour pre-game rule. Alcohol is contraindicated to performance for a couple of reasons. First it stimulates fluid loss via hormones from the brain that influence the kidneys and therefore contributes to dehydration. It was discussed earlier that keeping hydrated as an athlete is tough; alcohol intake will just exacerbate this difficulty. Another important aspect of recovery, as mentioned above is the required protein to aid in protein synthesis. Alcohol is in fact carried to the liver to be detoxified, this slows protein synthesis, especially immune system proteins. As an athlete it is critical to keep the immune system functioning at an optimal level. There are times through the season when you are feeling over-trained, exhausted and stressed with school; a poor immune system increases the chances of the becoming sick. In terms of recovery nutrition, alcohol slows carbohydrate metabolism and low blood sugar levels can result. This has a negative affect refuelling the glycogen stores for subsequent performances. If you decide to hit pub night on Wednesday, your fuelling and hydration for your game on Friday may suffer. Last but not least, when alcohol is digested it becomes the primary source of fuel for the body, which means carbohydrates and fats in the blood stream are likely going to be used for fat storage as opposed to energy. Essentially alcohol puts your body into a fat storing mode as opposed to a fat burning mode. Now not all alcohol is bad (red wine reference); for example red wine has a compound called resveratrol which acts as an anti-aging compound. Just realize that there is a time and a place for consumption of alcohol and there is a large difference between having a single beer/glass of wine and having enough to leave you spinning and likely making poor nutritional choices as a result. We just ask you to be smart!

## DIETARY SUPPLEMENTATION

This section will focus on dietary supplements and will not address the use of performance enhancing drugs as a supplement as their use is banned within the CIS and OUA and it is the position of the University of Waterloo that use of these substances is unacceptable.

There are however, many dietary supplements that are widely available and utilized both by elite and recreational athlete. It is important to understand that the supplement industry is an unregulated industry and

therefore their products are not tested and do not need to be approved by the FDA or Health Canada. While these dietary supplements are not banned for use in the CIS or OUA and are not illegal to purchase there have been studies that have proven that many can be laced with substances that are banned by these sporting organizations.

Below is an overview of common dietary supplements used by many athletes.

*Note: Supplements of any kind can potentially contain banned substances, heavy metals, and other ingredients not mentioned on the label. **The FDA or Health Canada do not regulate or approve the claims made on any supplements**, and therefore they may not even be effective or contain the ingredients they claim. There is always an inherent risk when taking supplements, regardless of how reputable the company appears (5). If an athlete is unsure of whether a supplement or even medication contains one or more banned substances they should check the WADA prohibited list (2), the CIS Therapeutic Use Exemption (TUE) (3), and when in doubt **do not take the supplement or medication. Refer to the [DRO global self check](#) for more information about medications and any other substances. Please be advised they do not cover supplement information.***

*In addition, the Athletic department at the University of Waterloo recommends that each athlete takes the extra precaution of contacting the company of the supplement to request a letter confirming there are no banned substances contained in the substance being used.*

### **Vitamin and Mineral Supplements**

Vitamins and minerals are sold as a 'health product' rather than a performance enhancer, and taking a multi-vitamin once daily can help ensure that the recommended daily intake (RDI) of essential vitamins and minerals is met (4). There are claims that taking more of certain vitamins may increase performance, but supplementation does not show any benefits except in athletes with inadequate nutrition (6). Furthermore, mega dosing of many vitamins can cause adverse effects and do not show any benefit for the athlete (4, 6).

### **Protein and Amino Acid Supplements**

It is difficult to prove or disprove whether protein and amino acid supplementation is beneficial as total caloric intake can greatly affect an athlete's performance. It is known that amino acids with exercise increase protein synthesis more than exercise or amino acid intake alone, but there is still debate about type of protein, timing of intake and any the rest of the diet as whole. It is recommended that athletes engaging in strength and conditioning programs ingest 0.5g to 0.7g of protein per pound of body weight (4).

### **Fish Oils (Omega 3) Supplementation**

Commonly known as fish oil, omega-3 supplementation is extremely popular among athletes and non-athletes alike. DHA and EPA are the primary omega-3 fatty acids found in most fish oils, and can reduce inflammation in joints and help prevent chronic inflammatory pain in the future (8). Omega-3's can also reduce the chances of heart disease (9), combat asthma (8, 10), as well as possibly prevent age-related cognitive disorders, improve brain function (9,10) and promote weight loss (11). Due to the elevated levels of omega-6 fatty acids in the modern western diet, which contribute to inflammation, and the decreased levels of omega-3 fatty acids (8) it

may be difficult to ingest adequate omega-3s through diet alone (it is recommend to eat cold-water fish twice weekly (11) and supplementation could be beneficial.

### **Creatine Supplementation**

Creatine is another common muscle building supplement and sometimes is viewed very negatively. A surprising amount of people do not know that creatine occurs naturally in human bodies, and is consumed when meat and fish are eaten (12). Creatine is an essential part of human metabolism, working in the ATP-PC system to produce ATP during short, intense anaerobic activity. Athletes supplement with creatine because it can improve recovery time with intense anaerobic activity (i.e. weightlifting) and stimulate protein synthesis (4); Usually use is associated with a weight increase, primarily due to the athlete retaining more water or due to muscle gain over longer periods of time (4) Creatine can potentially cause some gastrointestinal and kidney problems (5) and potential muscle cramping, however the evidence is anecdotal and not well supported (4).

The choice to using a dietary supplement is a risk each individual athlete must decide to take on their own. The industry does have independent drug testing companies that an athlete can use as a resource. NSF International is a public health and safety company that is not-for-profit and non-governmental. They have a Certified for Sport program that tests and certifies products to ensure they contain the identity and quantity of dietary ingredients declared on the product label but do not contain unacceptable quantities of unwanted contaminants for the recommended serving size listed on the product label. Exceeding recommended serving sizes may increase risk, so athletes should be sure to follow the serving size instructions indicated on the product and check with their health care provider before taking any sports supplement. An athlete can go to the website below for more information and to access a list of supplements that have been tested and passed the requirements above. ***We caution each athlete that the supplement industry relies highly on marketing!*** Many of the supplements out there claim to boost your training, improve your recovery, etc. These supplements are also an EXPENSIVE piece of the athlete's diet. Before purchasing a supplement we recommend you do your research or come to speak to us. There is likely to be a cheaper, food based way to provide you with the same benefits the supplement is claiming.



<http://www.nsf.org/>

## 10 EASY MEAL IDEAS

**B**eing short on time, money or cooking experience doesn't have to mean falling short on nutrition. With a little imagination, basic cooking equipment and some simple ingredients, anyone can prepare quick, tasty and healthy meals. Here are a few ideas to get you started: no previous experience required!

### 1 GOURMET KRAFT DINNER

- Add 2 cups of frozen vegetables (try broccoli or mixed veggies) to the boiling pasta during the last two or three minutes of cooking. Drain mixture, return to pan and stir in contents of cheese sauce packet, ½ cup milk and a drained can of tuna.

### 2 TEX-MEX KRAFT DINNER

- Brown lean ground beef in a large pan. Stir in raw macaroni, 1 cup water and an un-drained 28-ounce can of chili-style stewed tomatoes. Let boil, turn down heat to medium-low, cover and cook for 15 minutes. Stir in 1 can of corn (or 1-2 cups frozen corn) and cheese sauce packet. For flavor and extra nutrition, top with chili powder and shredded cheese. For a vegetarian version, substitute a drained can of kidney beans or black beans for the ground beef.

### 3 PITA PIZZAS

- Top a whole grain pita with canned pasta sauce, shredded low-fat mozzarella, chopped deli ham or smoked turkey and your choice of veggies. Bake on pan in oven (375°) until cheese melts, 5 - 7 minutes.

### 4 QUICK QUESADILLAS

- Mix some salsa with canned low-fat refried or black beans and spread on one side of a tortilla. Top with veggies (chopped green and red peppers, tomatoes, green onions, etc.) and shredded cheese. Fold tortilla in half and toast in ungreased frying pan until cheese melts and tortilla is lightly browned (about 2 minutes each side). You could also replace the beans with sliced chicken.

### 5 TUNA OR SALMON MELT

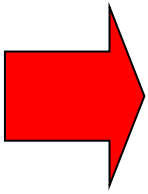
- Mix drained canned tuna or salmon with a spoonful of light mayo. Add chopped celery, onion and a little pickle relish if desired. Spread on a sliced bagel or English muffin half. Top with shredded cheese slice and bake in oven (375°) for 5 – 10 minutes or until cheese melts.

### 6 SIMPLE STIR-FRY

- Lightly brown thinly-sliced beef, chicken or cubed firm tofu in a little oil in a frying pan. Add your choice of bite-size fresh or frozen veggies (try the Asian blends) and cook until vegetables are tender but still a little crunchy. Season with bottled stir-fry sauce or soy sauce, ginger and garlic. Serve on instant brown rice, whole grain pasta or noodles.

### 7 PRONTO PASTA

- Brown lean ground beef, chicken or turkey in a pan with chopped onion, garlic, mushrooms and green pepper. Add a can of pasta sauce and cook on low heat. Meanwhile, cook pasta according to package directions, drain, and top with sauce. For vegetarian version, add red lentils with an equal amount of water to sauce or try soy ground "meat" or texturized vegetable protein (TVP) from the bulk store.



- Check your cupboards and try to use ingredients on hand, then make a list of other foods you need and take it with you to the grocery store.
- Include vegetables and fruit (especially the colorful ones!) and low-fat milk products to your meals for balance and variety.

## 8 BREAKFAST FOR DINNER OMELET

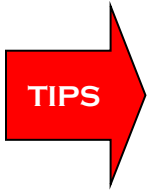
- Beat 2 eggs with 2 tablespoons of water. Heat a medium size non-stick frying pan until just hot enough to sizzle a drop of water. Add a little margarine if desired. Pour in egg mixture - it should start to set immediately. Cook, lifting sides of omelet with a pancake turner to let the uncooked egg flow underneath, until almost set (about 1 minute). Add desired filling on one half of omelet and fold plain side over top. Cook for another minute and invert onto plate. **Filling ideas:** mushrooms, onion, green onion, red or green pepper, cooked broccoli, tomatoes, asparagus, salsa, diced ham or cheese.

## 9 CHICKEN CAESAR WRAP

- Cook chicken breast strips in a little oil in pan until done, or use pre-cooked chicken slices. Place in middle of large tortilla; add chopped romaine lettuce and your choice of veggies or ready-to-serve “salad in a bag.” Top with shredded mozzarella cheese and a little “light” Caesar salad dressing, tuck in ends of tortilla and roll up.

## 10 TERRIFIC TACOS

- Brown lean ground beef, chicken or turkey in frying pan. Add packaged taco seasoning and cook well. Spoon meat into tortilla or taco shell. Add chopped lettuce, tomato, onion and green/red pepper, shredded cheese and salsa. For vegetarian version, substitute drained, rinsed canned black or pinto beans, rehydrated texturized vegetable protein (TVP) or crumbled firm tofu.



- Wash your hands with soap and warm water before preparing food., after handling raw meat, fish or poultry and before eating.
- Rinse fresh vegetables and fruit thoroughly under running water before using.
- Thaw frozen food in the refrigerator or microwave, not on the counter.
- Always cook poultry and ground meat *thoroughly*, never eat rare or when still pink.

## BASIC COOKING 101

**EASY RICE:** Rinse 1 cup of long-grain rice in cold water. Place rice in a small covered dish, add 2 cups of water and cover. Microwave on high for 4 minutes then on medium for 10 minutes. Easier still, buy quick-cooking or instant whole grain brown rice that can be ready in as little as 10 minutes!

**SCRAMBLED EGGS:** Crack eggs in a bowl. Add 1 tablespoon of milk for each egg and mix with fork until blended. Heat frying pan over medium heat and add a little margarine or cooking spray. Pour egg mixture into pan. Let sit for about 15 seconds, then stir eggs gently, breaking up larger pieces, until set. Eggs should not be “runny” as this increases your risk of food poisoning.

**HARD-BOILED EGGS:** Put eggs in small sauce pan. Cover with cold water and bring to a boil over medium heat. When the water starts to boil, cover and turn off the stove burner. Let the eggs sit in the covered pan for 20 minutes and then rinse in cold water. Crack shells gently to remove.

**BAKED POTATO:** Scrub a potato and pat dry. Prick the potato all over with a fork and place on a paper towel or plate in the microwave. Cook on high for 4 to 6 minutes (cooking time will vary according to potato size and the microwave.) OR, bake in center of oven (375°), directly on oven rack for an hour. For an even more nutritious and delicious treat, try microwaving a sweet potato!





## SNACKING MAKES SENSE

Updated December 2010

**You don't need to look far to figure out that snacking has become a way of life for most students. Whether that's a good thing or not depends on the choices you make. Read on to learn how to use snacks to your advantage...**



Snacking on the right foods can help keep your body and brain well-fuelled during a busy day. Prevent a midday energy crisis or a loss of concentration during that late-night study session by including a power-providing snack to keep you focused.

Sugary or starchy foods, like cookies, crackers or candies will give you an immediate energy boost but can leave you feeling drowsy and sluggish after an hour or two. Instead, choose fibre-rich grains, fruits and vegetables for longer-lasting fuel. Combining these foods with a small amount of protein, which is found in lean meats, eggs, nuts, seeds, beans, milk, yogurt or cheese, will help to give you that "energized" feeling that comes with more stable blood sugar levels.

### Some Energy-Packed Combos:

- Trail mix with an orange
- Baby carrot and hummus
- Sliced apple with almond butter
- Cottage cheese with fresh fruit
- Instant oatmeal with milk and raisins
- Yogurt with berries and granola
- Whole grain crackers and tuna
- Banana and peanut butter in whole wheat tortilla
- Tortilla chips, salsa and low fat shredded cheese
- Whole grain cereal bar and a cheese stick



### Not-Just-Good-For-You-Smoothie

*(It tastes great, too!)*

In a blender, mix a ripe banana or ½ cup of any other fresh, frozen or canned fruit with ½ cup each of nonfat yogurt and fruit juice, milk or soy beverage. For extra fibre, add a spoon or two of bran cereal or flax seed. Blend and enjoy!

that can be hard for on-the-go students to get in just three meals. Choosing most of your snacks from Canada's Food Guide can help you look good, feel great and stay healthy. Save less nutritious choices that are high in calories, sugar and/or fat, like chips, pastries and chocolate bars, for occasional treats.

### Grab 'n Go Energy Mix

In a large bowl, mix equal amounts of nuts or seeds like walnuts, almonds, peanuts, soy nuts or sunflower seeds with raisins or dried fruit mix and a high fibre cereal like Shreddies or Corn Bran. Store in a tightly covered container or portion into zippered snack bags.

**Pay attention to portion size.** Serving sizes of many foods are out of line with what we really need. Thinking about buying that yummy-looking, healthy-sounding carrot muffin? Beware: a large, bakery-style muffin may contain as many as 400 or 500 calories. Share it, save half for later or pack your own snack.

**Choose the right drinks.** That 20 oz. bottle of pop will quench your thirst, but it also contains more than 16 teaspoons of sugar! Carry a bottle of water with you and refill it often. Other beverage choices are real fruit juice, milk and chocolate milk. If you drink coffee, limit yourself to 2 cups/day and add milk not cream.

**Concerned about your weight?** Snacks can still fit. Studies show that people who eat regularly are more likely to be at a healthy weight than those who don't and then end the day by loading up on high calorie, less nutritious fillers. Don't feel guilty about snacking: just make it a point to choose healthy options most of the time.






## STOCK YOUR KITCHEN WITH HEALTHY CHOICES

***How often have you walked into your kitchen in search of something healthy to eat, only to come out empty-handed? Preparing a balanced meal is easier when your kitchen is stocked with basic, wholesome ingredients. This will help you to pull together a no-cook meal, an easy, hot dinner or grab a quick snack. Prepare a shopping list in advance and avoid shopping when you're hungry! Here's a list of suggested ingredients to keep on hand:***



- 100% whole grain bread & bagels
  - Whole grain crackers
  - Regular & instant oatmeal
  - Tortillas & pita bread
  - Whole grain cereals
  - Pasta and rice
  - Whole grain pancake mix
  - Macaroni and cheese dinners
  - High fibre granola or cereal bars
  - Fig bars, oatmeal cookies
  - Popcorn, pretzels, tortilla chips
  
  - Canned tuna or salmon
  - Peanut butter, nuts, sunflower seeds
  - Eggs
  - Canned beans, chick peas, lentils
  - Low-fat refried beans
  - Canned lentil or bean soup
  - Lean sandwich meat
  - Frozen lean ground beef, chicken or turkey
  - Chicken breasts
  - Frozen fish fillets
  - Hummus
  - Tofu
- 
- Bananas, apples
  - Potatoes, onions
  - Carrots, peppers
  - Variety of fresh, frozen or canned fruit
  - Variety of fresh, frozen or canned vegetables (buy what is in season)
  - Ready-to-eat salad greens
  - Spinach
  - Raisins, dried fruit or trail mix
  - Orange juice
  - 100% juice boxes
  - Canned vegetable soups
  - Canned pasta sauce
  
  - 1%, 2% or skim milk
  - Chocolate milk
  - Yogurt
  - Cheese (natural rather than processed)
  - Cottage cheese
  - Ice cream or frozen yogurt
  
  - Salt, pepper, salt-free spices and herbs
  - Salsa, mustard, catsup
  - Balsamic or wine vinegar
  - Vegetable or chicken bouillon
  - Non-hydrogenated margarine
  - Canola oil, olive oil
  - Salad dressings





## STRETCH YOUR FOOD MONEY

If you're a typical, cash-strapped student, eating well on a budget may seem like an impossible challenge. But with a little planning and some savvy shopping, you can cut your food bills while still including lots of healthy choices. Here's how...



**Plan before you shop.** Those mouth-watering, pricey foods you smell before you even get through the doors aren't there by accident! Supermarkets are set up to encourage impulse buying. Avoid this pitfall by:



- making a list and sticking to it
- checking the online store sale flyers
- eating before you shop!

**Shop around the outside aisles.** This is where you'll find most of the healthiest choices in the four food groups: Vegetables & Fruit, Grain Products, Milk & Alternatives and Meat & Alternatives.

**Beware of feature displays.** Did you ever notice how the expensive gourmet salad dressings are strategically placed by the sale-priced lettuce? Or that the large displays of food at the end of the aisles are often not even on sale? Stick to your shopping list and don't be enticed into buying items you don't need.

**Buy fresh vegetables and fruit in season.** Purchase these locally at a Farmer's Market when you can: they are not only cheaper and more nutritious but it helps the environment and local economy. Frozen fruit and vegetables are healthy, convenient and economical choices.

**Choose 100% whole grain breads and cereals.** These

provide better nutrition for your food dollar. Read the Nutrition Facts label to choose the foods with the most fibre, aiming for 25-35 grams each day.



**Try generic or store brands.** They are similar in quality and taste to name brands but cost less.

**Use unit pricing.** Read the unit pricing labels on store shelves and compare the price of different brands or sizes of similar items to figure out which is the best deal. Larger packages usually cost less "per unit" but only buy them if you will use up the food.

**Buy more foods in bulk.** Buying food this way allows you to get only the amount you know you will use. It's a great way to buy baking ingredients, grains, nuts, dried fruit and spices.



**Eat more meat alternatives.** Meat is one of the most expensive items in the store. Use canned beans, chick peas or lentils to make burritos or chili, canned tuna in a casserole or wrap, eggs in a sandwich, omelet or French toast. Peanut butter is cheap and can add a protein punch to a meal or snack.

**Skip the snack aisles.** Avoid aisles containing chips, pop, candy and cookies, or limit your treats to just one or two per trip. These foods are usually expensive and provide few, if any, nutrients.

**Consider the price of convenience.** You pay a lot more for having the salad greens washed and in a bag, the cheese already grated or the chicken breast cooked and pre-sliced. When you can, make time to do these things yourself. If you decide to buy ready to use foods however, it may still cost less than eating out.

### Think what else this money could buy!

Grabbing a daily coffee and bagel at the donut shop can add up to *\$75 each month!* Eat breakfast at home and bring food with you to eat on the go. Some nutritious packable snacks: fruit, raw veggies, trail mix, nuts, hummus, cheese, yogurt, high fibre cereal bars, whole grain crackers, peanut butter sandwiches or even a slice of leftover pizza. Don't forget a refillable water bottle - fill it for free at most campus eateries!

### Penny-Pinching Hummus

- 1 can chick peas
- 1 clove garlic, crushed
- 2 Tbsp lemon juice
- 1 Tbsp olive oil
- 1 tsp ground cumin
- ¼ tsp salt
- Few dashes of hot sauce (optional!)

Drain chick peas and save some liquid. Blend all ingredients with a hand blender or in a food processor, adding



## STUDENT SURVIVAL GUIDE

When your day is packed with classes, assignments, and studying, not to mention a social life and maybe a job, who has time for healthy eating? While sometimes low on the list of student priorities, being smart about food has many benefits. Eating regularly and choosing healthy portions of nutritious foods means having more mental and physical energy, feeling good about yourself and enjoying better health. Here are the basics ...

**Breakfast – don't leave home without it!** If you have been skipping breakfast because you “don't have time” or “aren't hungry,” you have been missing the day's most important meal. While it's tempting to get an extra ten minutes of sleep, not eating breakfast will cost you in other ways. Studies have shown that breakfast skippers have poorer concentration, more fatigue, less healthy weights, and eat less fibre and other needed nutrients. Eating within an hour of waking up jumpstarts your metabolism and provides the fuel you need to get through a busy morning.

### “No time” is no excuse:

#### 10 minute breakfast Ideas



- cold cereal, milk, dried fruit
- frozen whole wheat waffles, yogurt
- leftover pizza and an apple
- whole wheat toast, cheddar cheese, OJ
- instant oatmeal with raisins, almonds
- whole grain bagel, peanut butter, banana
- bran bar, chocolate milk, grapes
- yogurt topped with berries and granola
- sandwich with lean deli meat and cheese

**OK, you've eaten breakfast, now what?** Even if you can't eat at the same time everyday, be sure to have breakfast, lunch and dinner. If there will be more than 4 hours between your meals, plan for a snack. Eating regularly keeps your blood sugar levels stable and prevents you from becoming ravenously hungry and filling up on less healthy foods. Carry backpack snacks for healthy eating on the go.

### Backpack food stash Ideas:



fresh or dried fruit

raw cut-up veggies

whole grain crackers

high fibre cereal bars

trail mix, nuts

**Is late night snacking OK?** If you're up late studying and feel tired and hungry, a nutritious energy-containing snack can be just what you need to perk you up. Be careful, though... late nights are a tempting time to indulge in cravings for salty, sugar or high fat treats that contain few nutrients. Better choices provide lasting brain fuel, like an apple with whole wheat toast and peanut butter or carrot sticks and whole grain crackers with hummus.

### Shocking but true...

1 cup of jujubes contains a whopping 55

teaspoons of sugar!

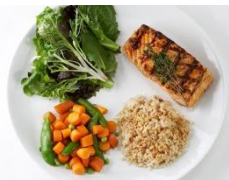
**What makes a good meal or snack?** Plan your meals around colourful veggies, fruits, and wholesome grains - nutritious energy-containing carbohydrates filled vitamins, minerals, fibre, and phytochemicals which enhance and protect your health. Add protein- and iron-rich foods: lean meat, fish, poultry, eggs, nuts, seeds, tofu and beans. Milk, yogurt, cheese and fortified soy drinks contribute protein and bone-building calcium.

## Energizing study snacks:

- fresh fruit • veggies and low-fat dip • cheese •
- light popcorn • frozen or canned fruit •
- individual cans of tuna • hummus • trail mix •



**Think balance...** A balanced diet combines carbohydrates, protein and a little fat and not only provides you with the nutrients you need to stay healthy, but also helps to keep your energy levels up. The term *balance* also means complementing a less healthy meal or snack with nutritious choices the rest of the day. If you usually eat lots of fruit and veggies, whole grains, and lower fat protein-rich foods and milk products, then why not enjoy a candy bar or a couple of cookies? Go ahead and indulge in your favourite treats – just watch how much and how often!



**Include healthy fats.** If burgers, fries and deep-fried foods are staples in your diet, choose these foods less often. Eat foods that are grilled, baked, steamed or broiled and use small amounts of heart-healthy fats e found in canola, olive and soybean oils, non-hydrogenated margarine, salmon and other fish, peanut butter, nuts and seeds.

### Average Energy Requirements (Average daily calorie requirements ages 19-30) Source: *Dietary Reference Intakes, 2002*

Less active female	2000 - 2200
Active female	2400
Less active male	2400
Active male	3000

**What and how much should you eat?** Energy needs depend on many factors including your age, body size, whether you're male or female, and how active you are.

**Canada's Food Guide** can help you develop a personal healthy eating and physical activity pattern. Get your copy at Health Services or visit:

[www.healthcanada.gc.ca/foodguide](http://www.healthcanada.gc.ca/foodguide)

**What about supplements?** Nothing can replace the benefits you get from eating a variety of healthy foods. You may choose to take a multivitamin supplement, but don't take a large dose of any single nutrient without first getting advice from a knowledgeable health professional. Vitamin D is hard to get from food alone, so during the fall and winter, taking a multivitamin will help you to get enough of this "sunshine vitamin." Women who could become or who are pregnant need a daily multivitamin containing folic acid. **Caution:** Use "natural" or herbal preparations with care as the effects of many of these are unproven and need further research.

**What you drink counts, too!** Everyone needs fluids, but drinking too many fancy coffees, a lot of pop or even too much fruit juice can help pack on extra pounds. Alcohol also contains a lot of calories and overindulging may lead to other problems. Water is always a great choice and it's free! Take a refillable bottle with you and aim for at least 6 cups every day.

### More amazing trivia...

A 600 mL bottle of cola contains 266 calories!



**Healthy eating doesn't just happen!** Old habits are easier to break when you make small, gradual changes. If your diet is low in veggies, start by adding 1 serving each day. If you've been skipping meals, rearrange your schedule. If you're used to eating most meals out, learn how to cook some simple foods for yourself. No cookbooks needed...the internet is a great place to find easy, nutritious ideas (look for "light" or heart-healthy recipes). If you do dine out, go for healthier meals like wraps, salads (go light on the dressing!), grilled foods and stir fries. Restaurant portions are often enormous, so share a meal with a friend or take the leftovers home and refrigerate for tomorrow's lunch.



When you keep nutritious foods around, you're more likely to eat them, so shop for groceries regularly. Take a few minutes to make a shopping list to help save time and money. Changing how you eat takes a bit of effort, but you're worth it!

Heal+h Services offers **FREE** nutrition counselling to students.

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