



# Good Nutrition for Dancers

The benefits of good nutrition are numerous, and even more so for dancers. Constant training takes a toll on muscles, joints and bones. Good eating habits can improve the recovery from such strain, and even assist with lean muscle growth and soft tissue repair. Eating the right foods can increase energy, focus and concentration. Finding the proper balance of nutrients not only prevents fatigue and injury, but also supports a long healthy career in dance.

## Before Class, Rehearsal and/or Performance

How can I increase my energy, concentration and focus?

- Eat breakfast
- Combine protein and carbohydrate
- Eat small meals throughout the day

### *Eat breakfast*

Just like your mother said — it's true. Breakfast is the meal that jump-starts your metabolism and gives you energy for the day. Though you may not feel hungry first thing in the morning, it is important to at least eat something small to stimulate the mind and body. Often it is a case of habit that we do not feel inclined to eat breakfast. By simply tempting the taste buds with a little something (fruit or toast), digestive juices will kick in and hunger will awaken. Another way to stimulate digestive juices is to drink a glass of lemon water first thing in the morning (pure filtered water with fresh squeezed lemon in it).

**Eating a small breakfast before morning dance class will invigorate you and help you focus, setting you on the right track for the day.**

How can I sustain my energy longer?

### *Combine protein with carbohydrate*

While carbohydrate is the primary fuel source for the body, protein stabilizes blood sugar levels and maintains steady energy throughout the day. Carbohydrate is the macronutrient that we most easily breakdown for immediate energy. It is therefore essential for dancers to consume enough carbohydrate foods to keep the body fueled. However, eating carbohydrate (or “sugar”) on its own causes an increase of sugar in the bloodstream (or blood sugar). This can give instant energy for a short period of time but is then followed by an energy crash. Drastic spikes in blood sugar levels are strenuous on the body and can lead to disorders including hypoglycemia and diabetes. **Eating carbohydrate is tremendously important for providing energy, but should be combined with protein and healthy fats for optimum performance.**

### *Examples of carbohydrate rich foods:*

- Bread products (bagels, crackers, toast, etc.)
- Fruit
- Pasta
- Rice and other grains (quinoa, oats, barley)
- Potato and starchy vegetables
- Less healthy options (muffins, pancakes with syrup, chocolate, candy, honey)

By combining protein with carbohydrate, the rate at which blood sugar levels rise is slower than when eating carbohydrate alone. Similarly, the rate at which blood sugar levels fall will be slower. That is why eating a breakfast with protein will last you longer than a breakfast without protein— you will not get hungry as quickly.



It is not always easy to find breakfast foods that have protein. Some common choices include:

- Eggs
- Cheese
- Milk
- Meat products (such as bacon or sausages)
- Peanut butter
- Yogurt
- Soy beverage

*Other less common protein foods for breakfast are:*

- Tofu
- Nuts
- Quinoa (a grain found in the bulk section at health food stores, cooks up similarly to rice)
- Other nut butters such as almond or cashew butter
- Meat leftovers
- Beans

*(See breakfast combinations on the back page of this pamphlet.)*

How will protein improve my focus?

Along with its many functions in the body, protein (broken down into amino acids) enters the brain and stimulates it to produce neurotransmitters. Two of these neurotransmitters, dopamine and norepinephrine, promote alertness and activity. Protein awakens the brain and guides and influences the building of nerve cells. It also makes enzymes, hormones and red blood cells and is used to build structures throughout the body.

How can I prevent fatigue?

*Eat small meals throughout the day*

One of the best ways to maintain energy is to provide the body with fuel throughout the day. There are two key ways to stay fueled:

1. Plan ahead and have small meals or snacks between rehearsals and classes (ie. fruits, vegetables, cheese)
2. Include a small amount of protein in each meal/snack

What is wrong with food on the go?

Snacks that are most readily available on the run are not necessarily the best choices for staying healthy and

building a strong energized body. Even foods touted as healthy such as bran muffins and orange juice contain high amounts of sugar and/or fat and **do not** provide dancers with the necessary nutrients for building lean muscle and staying mentally focused over a period of time. Choose meal type foods (“real food”) such as soup, sandwiches, leftovers, sushi instead of “snacky” foods for better nutrition and vitamin/mineral availability. Eat smaller amounts of these foods at one time to avoid the “too full” feeling, especially when having to dance within a short period of time. Try making homemade snacks with healthy foods including vegetable sticks, fresh fruit, nuts and seeds and homemade dips, such as hummus or a low fat yogurt dip.

Make sure you get some protein (even just a little bit) with each snack or small meal. Cheese on a bagel, nuts with fruit, hummus with veggies and tuna on a cracker are just a few ways to combine protein and carbohydrate.

**The nutrients from carbohydrates and proteins combined work as a team to help build lean muscle and keep energy levels sustained.**

### After Class, Rehearsal and/or Performance

Post workout nutrition is the key to recovery for many, if not all, high performance sports, and dance is no exception. Eating the right foods at the right time can be helpful in ways including:

- Muscle repair
- Soreness prevention
- Lean muscle growth
- Ability to bounce back and rehearse the next day

How can I improve my recovery with nutrition?

- Eat within 40 minutes after exercise
- Combine carbohydrate and protein at a 4-1 ratio
- Hydrate
- Eat whole foods

The body becomes depleted of essential nutrients and

stored energy after intense exercise and physical exertion. Replacing these stores as quickly as possible is critical in order to bounce back from the strain being put on the body.

When is the best time to eat after dancing?

*Eat within 40 minutes after exercise*

Or as soon as possible. Sport nutrition research shows that a window period exists within 30-40 minutes after intense activity when the body is at its peak for absorption. At this time, glycogen stores (stores of energy in muscles) need to be replaced and cells are ready for nutrient uptake. **Getting food into the body during the window period will help prevent soreness, improve the recovery of muscles and tendons and encourage the growth of lean muscle tissue.**

The quality of recovery is dependant on what foods are eaten during this 40 minute window period.

What should I eat to maximize my recovery?

*Combine carbohydrate and protein in a ratio of 4-1*

The ideal ratio for combining carbohydrate to protein during the window period is **four parts carbohydrate to one part protein**. Carbohydrate (broken down into glucose) raises insulin levels and allows the transport of protein into muscles and cells so they can repair damage and increase muscle growth. Getting carbohydrate quickly into the bloodstream allows:

1. glycogen stores to be replaced — preventing fatigue and making energy available for future rehearsals
2. protein to enter the cells — for building lean muscle and repairing damaged cells

High performance athletes go to great lengths to find foods that raise glucose levels as quickly as possible. Sport nutrition companies have engineered post workout drinks and powders that aim to achieve this. Because the body is so sensitive at this time, it makes sense that what

is consumed should be nutrient dense as well as easy to digest. High glycemic whole foods that will allow for a quick release of insulin are potatoes, rice and rice cakes/crackers, fruit and fruit juices, bread products and pasta. All of these combined with protein foods are ideal for helping muscles and tissues recover from intense exercise.

How can I prevent soreness, decrease inflammation and stay healthy?

*Eat a variety of whole foods*

Whole foods generally grow in the earth or on a tree and do not come packaged from the grocery store. They generally do not have added preservatives and chemical colourings or flavourings. Eating whole foods is important not only because they have enzymes that are useful for digesting, but also because they are full of nutrients, antioxidants and phytochemicals that help us stay healthy and fight the strain and wear on our bodies.

Some of the top nutrients from whole foods that are essential for dancers to stay healthy, especially after extreme training and performing, include:

- Essential fatty acids
- Antioxidants- Vitamins A, C, E
- Minerals such as calcium and magnesium

*Essential fatty acids (EFAs)* come from oils in foods such as fish, flax, avocado, nuts and seeds. They are essential because the body does not produce them. Some EFAs have been proven to decrease inflammation. Foods containing the omega 3 fatty acids EPA and DHA such as salmon and flaxseed have shown to be most effective for this purpose. Eating a balanced diet with foods that contain omega 3 fatty acids or getting these EFAs from a supplement (as a secondary option) will contribute to the repair of joints and overworked muscles.

*Antioxidants* are naturally occurring chemicals in foods that prevent oxidation (food turning brown or going rancid) and are important for dancers and athletes be-

cause of their ability to rid the body of excess damaging by-products that circulate in the blood (known as free radicals). Intense training increases the abundance of free radicals in the body. By consuming foods high in vitamin C, in particular, as well as vitamins A and E, you will have a better chance to ward off these free radicals and be better protected from getting sick and feeling too sore.

*Examples of foods high in antioxidants:*

- Citrus fruits (lemons, oranges, grapefruit, etc)
- Brightly coloured fruits and vegetables (red peppers, tomatoes, squash, beets, carrots, blueberries, etc.)

How can I prevent muscle soreness?

*Hydrate*

In addition to over training, the two major nutritional factors that contribute to muscle soreness are lack of hydration and electrolyte imbalance. Our body fluids are like seawater in that they are primarily water and salt. We generally lose up to two litres of water each day in perspiration and moisture loss from basic body functions. It is important to consume fluid throughout the day and not wait until you feel thirsty—a sign that it is too late!

The amount of water needed varies between people. One way to calculate your approximate required fluid intake for the day is to first know your body weight in kilograms, and then match one ounce of water per kilogram of body weight. For example, if I weigh 64 kilograms, I need on average 64 ounces of water in a regular day. That would be eight 8oz glasses of water.

Along with consuming water throughout the day, a pinch of good quality Celtic sea salt can be added to a full litre of water to stabilize electrolyte levels. This can be especially important in hot weather and during increased physical activity. It is at these times when you need to drink more water—and the salt will help your body to retain it.

*Recipe for my personal sport drink:*

- 400-450 ml filtered water
- 50-100 ml Happy Planet Extreme Green drink
- a pinch of Celtic sea salt
- lemon juice from 1/4 of a lemon

*Energy, antioxidants, electrolytes and fluid all in one!*

Breakfast ideas that combine protein and carbohydrate:

*Blueberry soy shake*

Blend:

- 1 cup frozen blueberries
- 1 cup soy beverage
- 1 banana
- 1 tsp. flaxseed oil (optional)

*Egg (or tofu) scramble with toast*

Saute your favourite veggies (red pepper, zucchini, onions, mushrooms etc.). Set aside. Scramble eggs or tofu. Add spices or fresh herbs as desired. Combine all in the pan and top with grated cheese. Eat with sprouted grain toast.

*Yogurt and fresh fruit*

Topped with nuts or seeds. Add ground flaxseeds for fibre and essential fatty acids.

*Whole grain toast with:*

- Almond butter and banana
- Sliced turkey, chicken or cheese and tomato
- Tuna salad, in the toaster oven with cheese and a pickle

*Leftovers*

As long as it has protein—chili, stir-fry, chicken, spanakopita, soup, Paella (rice pilaf), it all works!

*SHAPE would like to thank Registered Nutritionist, Stacey Horton, RHN, BFA, for her assistance in the preparation of this document. Stacey is a professional dancer working in British Columbia. She presents high-performance nutrition seminars and counsels individuals on smart food choices for better health and illness prevention.*

