



# NUTRITION

Kirov Academy of Ballet

Summer 2016—week 1

## Fueling the Dancer

The goal for most dancers is to become leaner and stronger. Because as harsh as it may seem, you either cut it or you don't in the dance world. The demands of the dance world, ballet in particular, for the very thin aesthetic can put great strain on a dancer who in trying to be thin severely restricts calories in order to be able to perform but who's performance may falter from suffering fatigue, weakness and even injury due to inadequate intake.

This constant pressure of going between restricting calories to be thin and eating enough for energy can be frustrating. But, it is possible. A dancer must find a good balance in order to perform at their peak. The more understanding a dancer has the better control you can have over your own health and wellbeing in addition to your performance.

Did you know that when you go on a crash diet or a very low calorie diet, the majority of the initial weight loss comes from water and muscle and not fat. Additionally, the muscle lost will be from areas least used so not from legs, butt or thighs but it will mainly come from shoulders, face, and upper body.

Dancers need to eat for strength and energy, as well as to heal from injuries. It is important to know that food is an ally in the journey to be a better dancer. General Dietary Recommendations for Dancers are as follows.

- 55-60% of calories should come from complex carbohydrates
- 12—15% of calories should come from protein
- 20—30% of calories should come from Fat

*International Association for Dance Medicine and Science*



**Myth**— *reduced caloric intake will easily and effectively allow you to lose weight*

**Fact**—*the body naturally tends to resist weight changes and will adapt to reduced caloric intake in order to help maintain weight.*

*When you go on a starvation or very low calorie diet first the body uses up its own muscle tissue (both organ and skeletal) in order to supply needed sugar to the brain.*

**Myth**—*dance burns a lot of calories.*

**Fact**— *An average 1 hour technique class uses about 200 kcal for women and 300 kcal for men.*

*Chmeler and Fitt  
"Diet for Dancers"*



Photo Caption

## What is What?

**Carbohydrates** are molecules made of carbon, hydrogen and oxygen, including monosaccharide, disaccharides and oligosaccharides (sugars), polysaccharides (starches) and cellulose (fiber).



**Proteins** are polymer chains of amino acids linked together by peptides. There are 9 essential amino acids that must be gotten from food (phenylalanine, valine, threonine, tryptophan, methionine, leucine, iso-leucine, lysine and histidine).



**Fats** are esters of 3 fatty acid chains and a glycerol. There are 7 types of fat categorized by the number and bonding of its carbon molecules (omega-3 fatty acids, monounsaturates, polyunsaturates, saturated fatty acids, medium chain triglycerides, omega-6 fatty acids, trans fats/partially hydrogenated oils)



## Are You Getting Enough Fuel?

Studies show that there is an exceptionally wide range of caloric intake among female dancers, even though body weight relative to height and percent body fat did not really vary. The average caloric intake reported by Hamilton et al, was 1,894 kcal for girls and 2,400—2,700 kcal for boys.

### Sample 2000 Kcal Day Breakfast - Lunch - Dinner

A



B



## Identifying Needed Nutrients

Examples of Carbohydrates -

- All Vegetables
- All Fruits
- Grains & Starches
- Beans / Lentils/ Peas
- Dairy

Examples of Protein-

- Eggs
- Fish & Shellfish
- Meat
- Fowl
- Game
- Dairy
- Beans / Lentils /Peas

Examples of Fat

- Wild Fish & Flax Oil = Omega 3
- Olive & Canola = Monounsaturated
- Vegetables oils = polyunsaturated
- Grass fed Animal meats, milk and dairy = Saturated
- Palm & coconut oil = medium chain triglycerides
- Farm raise animals and fish (fed corn and soy) = omega-6 fatty acids
- Synthetic fat found in processed foods only = trans fats/partially



## Supporting Energy and Developing Lean Muscle Mass

Muscle gain requires that you fatigue as many muscle fibers as possible, because they strengthen and grow in response to stress. Lifting light weights four times a week with a day off in between sessions is recommended.

Cross training with aerobic, resistance training and stretching along with other body therapies (Gyrotonics, Alexander, Feldenkrais, Rolfing or Pilates) can help reshape the body. If done correctly, It can also reduce fatigue and injuries while improving the muscular shape of the body.

Regular class is essential to excel in a specific dance technique,. However, it bypasses certain muscle groups and it does not raise the heart rate sufficiently. According to Hamilton, 85 percent of technique class is not up to the stamina required to perform on stage.

Cross training is only effective if the workouts complement your dance schedule. It is key to get qualified instructors.

**Aerobic Conditioning**— will help dancers to perform for longer periods by reducing the buildup of lactic acid which causes the burning sensation and muscle fatigue. Examples (biking, spinning, swimming, power walking, jogging, climbing stairs, jumping rope.

**Resistance Training**— strengthening muscles helps you move more easily with less effort. It also helps strengthen bones. Examples (using light weight, resistance—bands,

**Stretching and Range of Motion Training** - important as flexibility tends to decrease with age.



# What About Hydration?

Did you know that lean muscle, blood and your brain contain about 70 percent water. Drinking water is essential for dancers who lose electrolytes in addition to water in order to remain hydrated. Ideally female dancers need to drink about 9 (8oz) cups of fluid per day. Active male dancers require about 13 (8oz) cups of fluid.

## Signs of Dehydration

- Dizziness, minor cramps during exercise
- Fuzzy thinking and mild headaches

## Avoid Over-hydration

- Feeling ill (nauseated and groggy)
- Weight gain after exercise

## Dancer Facts

- Many dancers have what is considered to be normal or below normal body weights, but still may not meet the aesthetic standards demanded by dance.
- Fat content is usually very high in dancers in prominent ballet companies, accounting for up to 50% of their diet. Much from high fat and protein sourced foods such as cheese.

*Chmeler and Fitt  
"Diet for Dancers"*

# 10 Quick Tips For Healthy Weight Loss and Healthy Weight Maintenance

- Stop drinking ALL juices, sodas, punches or sweetened beverages . Choose a piece of fruit instead or herbal tea sweetened with stevia or cinnamon.
- Any liquid beverage (except for milk) should be 5 kcal or less
- Restrict Sugar . Use Stevia, Lakanto, xylitol, cinnamon, unsulfured unsweetened dried fruit to sweeten dishes and beverages. (if you have IBD or GI upset you may want to avoid lakanto and xylitol)
- Do NOT BUY low or reduced fat products because sugar is almost always added to cover for taste loss due to fat removal)
- Increase FIBER both soluble and insoluble
- Eat whole real foods . Real food does not need a label and Real food spoils
- Limit or avoid processed foods. If it has a label with a nutrition fact sheet it is processed.
- If eating food with a label, find the hidden sugar and avoid it or limit it.
- If you eat real food your weight will take care of itself
- Avoid fast food
- Don't buy food you can eat standing up .
- If eating packaged goods, aim for those with 3 grams of fiber or more per serving

## About Fiber

When fiber is consumed with a meal, it forms a gelatinous barrier between the food and the intestinal wall.

This delays the intestine's ability to absorb glucose, fructose and fat.

This slower glucose absorption reduces the amount of insulin released by the pancreas.

Less insulin means less conversion of energy to fat.

*From the book  
"Fat Chance"  
by Robert H LustigMD*

This is Why Whole Grains are better. Fiber is found in fruits, vegetables, whole grains, and legumes. It is part of the plant that the gut is unable to digest.