

A Women in IFAA Workgroup Initiative

*Eat Right
For Archery Success*



Characteristics of the Sport

• Overview

- Skill-based sport.
- Long hours of training and competition - aerobic requirements of the sport are low.

• Training

- Majority of training is skill-based.
- Focuses on perfecting technique. Archers are required to consistently and accurately shoot over various distances for long periods of time. May involve 250+ arrows.
- There is a focus on core strength training for archers – Gym Sessions
- Aerobic fitness is also encouraged - perform at their best both physically and mentally.

• Physical characteristics

- Since the sport is largely skill-based, No particular body type.
- Strength, concentration, accuracy and consistency are far more important virtues for an archer than aerobic endurance capacity.
- Athlete ages also range considerably.

Common Nutrition Issues

- **Competition**

- Food and fluid intake.

- During competition the main nutrition goals are based on sustaining energy supply and concentration, and ensuring physical comfort.
 - As in training, small sips of fluid consumed regularly should help meet an archer's fluid losses.
 - Appropriate, nutrient dense snacks may be difficult to find at some competition venues. Archers should become used to packing their own snacks and fluids for competition. This will ensure appropriate snacks are available to the archer and are ones they feel comfortable and confident consuming during competition.

- **Travel**

- Competition takes place all over the world.
 - Environmental conditions may not be a major limiting factor for archery performance, **comfort is important for an athlete to compete at their best.**

Understanding Nutrition

- For every physical activity, the body requires energy and the amount depends on the duration and type of activity.
- Energy is measured in calories and it is obtained from the body stores (reserves) or the food we eat.
- Glycogen is the main source of fuel used by the muscles to enable you to undertake both aerobic and anaerobic exercise.
- If you train or compete with low glycogen stores, you will feel tired constantly; your performance will be lower and you will be more prone to injury and illness.

The Glycemic Index Concept

The Glycemic Index (GI) is simply a ranking of foods based on their immediate effect on blood glucose levels.

It is a physiological measure of **how fast, and to what extent, a carbohydrate food affects blood glucose levels.**

In the past, it was assumed that complex carbohydrates (starches) such as potatoes and bread, were digested and absorbed slowly, causing only slight rise in blood glucose levels.

Simple sugars, on the other hand, were believed to be digested and absorbed quickly, producing a large and rapid rise in blood glucose. We now know that these assumptions were incorrect.

Nutrient / Energy Balance

Carefully planned nutrition must provide an energy balance and a nutrient balance!

- Protein
- Healthy Fats
- Carbohydrates
- Minerals
- Vitamins
- Water (fluids)
- Roughage

Protein



Used to produce, maintain and repair cells

Constructed from long chains, containing up to all 8 essential amino acids



Healthy fats

- Supply of energy
- Muscle build-up
- Absorption of certain vitamins and antioxidants
- Supply of essential nutrients

Carbohydrates

Main source of energy



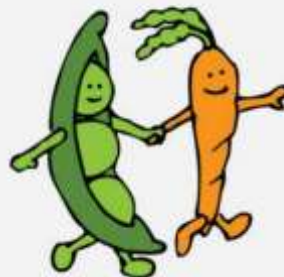
Water 60% of our body weight
Carrier of nutrients



Roughage

The indigestible portion of food derived from plants

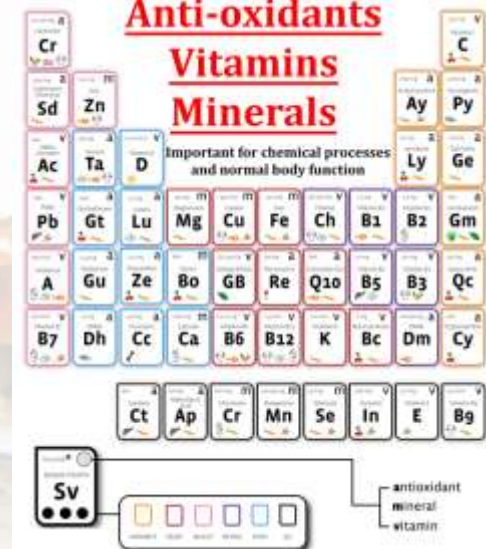
Essential to the health of the digestive system.



Anti-oxidants

Vitamins Minerals

Important for chemical processes and normal body function



Balanced Meal



LOW GI – slow release of energy

- Low GI foods and drinks can also be called sustained release or slow release foods.
- They are digested slowly and can therefore still supply energy 1-2 hours after consumption.
- If low GI products are consumed 1-2 hours before competing, blood glucose will be maintained at a healthy level for the duration of the day's shooting.

Oat bran

Hi-Fibre Bran, Bran Flakes

Pasta (Durum wheat)

Sweet Potato

Citrus Fruits (oranges, grapefruit)

Yogurts (plain)

Whole wheat cereal

Whole wheat crispbread

Brown rice

Apples/Pears/Grapes

Vegetables

Milk, Milo, Nesquik and similar others



READING FOOD LABELS (1)

The Nutrition Facts label provides you with detailed nutritional information about the food or product you are considering. Here you will understand how different foods and products stack up against one another so that you can choose **healthier options**.

1. **Serving Size:** what is a recommended serving size of the food.
2. **Calories:** how much energy comes from a serving of the food. The number of servings you consume determines the number of calories you actually eat. For instance, if you have two servings of a food, you will have to double the calories listed per serving size to know how many you have consumed. A good gauge to understand if something is highly caloric:
 - 40 Calories is low
 - 100 Calories is moderate
 - 400 Calories or more is high
3. **Calories from Fat:** how many calories of the food are specifically fat. Each gram of fat is worth 9 calories. You should aim to get 10% – 30% of your calories from fat. A good rule of thumb is to eat no more than 3 grams of fat per 100 calories of food.
- 4a. **Total Fat:** Total fat explains how much of both good fats (monounsaturated and polyunsaturated fats) and bad fats (saturated and trans fats) are in the food.
- 4b. **Saturated Fat:** Saturated fat (a bad fat) is found in foods including butter, margarine, fats from beef and pork, full-fat dairy products, eggs, palm and coconut oils and many fast foods. It is best to avoid or limit foods that have saturated fats, especially those that come from animals. Your daily intake should be no more than 10% of your daily caloric intake (less than 1 gram per 100 calories).

Amount Per Serving		% Daily Value**		
Calories 150		Calories from Fat 25		
Total Fat 2.5g			4 %	
Saturated Fat 0.5g			3 %	
Trans Fat 0g				
Polyunsaturated Fat 1g				
Monounsaturated Fat 1g				
Cholesterol 0mg			0 %	
Sodium 0mg			0 %	
Total Carbohydrate 27g			9 %	
Dietary Fiber 4g			16 %	
Soluble Fiber 2g				
Insoluble Fiber 2g				
Sugars 0g				
Protein 5g				
Vitamin A 0%		Vitamin C 0%		
Calcium 0%		Iron 10%		
* Percent Daily values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:				
	Calories	2,000	2,500	
Total Fat	Less than	65g	80g	
Sat Fat	Less than	20g	25g	
Cholesterol	Less than	300mg	300mg	
Sodium	Less than	2400mg	2400mg	
Total Carbohydrate		300g	375g	
Dietary Fiber		25g	30g	
Calories per gram:				
Fat 9	+	Carbohydrate 4	+	Protein 4

READING FOOD LABELS (2)

- 4c. Trans Fat:** Also a “bad fat,” Trans Fats are created during cooking and/or processing. These fats are often found in commercially baked products. These fats should be eliminated from your diet.
- 5a. Cholesterol:** A combined number telling you how much of both good (HDLs) and bad cholesterol (LDLs) are in the serving. It is best to eat less than 300mg per day.
- 5b. Sodium:** The amount of sodium in the serving. It is best to eat no more than 2,400mg per day.
- 6a. Carbohydrates:** The total amount of carbohydrates in the food. It includes simple carbs and sugars, complex carbs and fiber. When foods contain carbohydrates, it is best if those carbohydrates contain some amount of fiber (see dietary fiber).
- 6b. Dietary Fiber:** How much fiber is in a serving of the food. It is found mostly in complex carbohydrates such as whole grains, fruits, vegetables and beans. Try to eat between 20 and 35 grams per day. The higher the fiber content of a product, the lower the sugar content in the food.
- 6c. Sugars:** The number of grams of carbohydrates per serving specifically made up of sugar. It is best to eat packaged foods that are low in sugars. When looking at total carbohydrates, it is preferable that sugars are much lower than the total carbohydrates in grams.

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READING FOOD LABELS (3)

7. **Protein:** How many grams of protein are in a serving. It is always good to maintain a balance of protein, carbohydrates and fats in a meal. If a food doesn't contain protein, try to combine it with another food that has protein.
8. **% Daily Values:** Tells you what percentage of your recommended daily allowance is provided by the serving of food. Note however, It is based on a 2,000 calorie diet. Generally, a value of 5% is considered low and a value of 20% is considered high. If you consume other than 2,000 calories a day to maintain a healthy body weight understand that these percentages may be different. Regardless, it is a good way to compare other products.
9. **Vitamins and Minerals:** How much of recommended vitamins and minerals are in the serving. You should aim to reach 100% for all required vitamins and minerals. To ensure you are getting your required daily intake, take a multivitamin.
10. **Recommended Amounts:** The recommended daily amount for each nutrient for both a 2,000 calorie diet and a 2,500 calorie diet. If you need to consume more or less than 2,000 to 2,500 calories per day to maintain a healthy body weight, the recommended amounts for fat, carbohydrates and protein will change also.
11. **Calories per Gram:** This shows the caloric weight of each macronutrient – Fats, Carbohydrates and Protein. It is best to choose foods that are well balanced, containing all nutrients.

SUMMARY:

Look mostly at calories, fiber, saturated fat and sugars. Look for foods that are 100 to 200 in calories per serving (for a snack), high in fiber, low in saturated fat and low in added sugars.

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5b	Sodium 0mg	0%
	Total Carbohydrate 27g	9%
6a	Dietary Fiber 4g	16%
6b	Soluble Fiber 2g	
6c	Insoluble Fiber 2g	
	Sugars 0g	
	Protein 5g	7
	Vitamin A 0%	9
	Vitamin C 0%	
	Calcium 0%	
	Iron 10%	
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:		
	Calories	2,000
10	Total Fat	Less than 65g
	Sat Fat	Less than 20g
	Cholesterol	Less than 300mg
	Sodium	Less than 2400mg
	Total Carbohydrate	100g
	Dietary Fiber	25g
	Calories per gram:	
	Fat 9	Carbohydrate 4
	Protein 4	11

ATHLETE'S PLATE

MODERATE TRAINING:

FATS

1 Tablespoon



Avocado
Oils
Nuts
Seeds
Cheese
Butter



Grains

Pasta
Rice
Potatoes
Cereals
Breads
Legumes



Lean Protein

Poultry
Beef/Game/Lamb
Fish
Eggs
Low-Fat Dairy
Soy (e.g., Tofu,
Tempeh)
Legumes/Nuts



Raw Veggies
Cooked Veggies
Veggie Soups



Vegetables

Fresh Fruit
Stewed Fruit
Dried Fruit



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages



Tea

FLAVORS

Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup



Meal Planning.....



BREAKFAST
Pre-match meal
(within 1hr of waking up)

2 -3 hours prior to event

Low GI

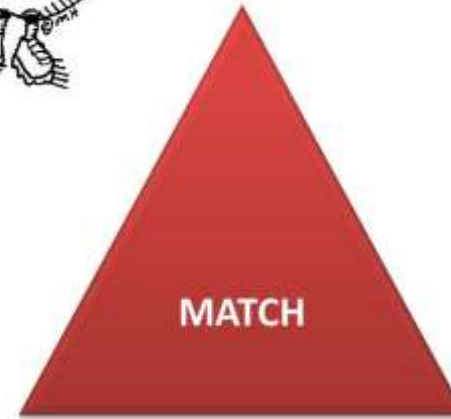
Hydrate

Water / Juice (Fruit)
Cereal (Carbohydrate)
Milk (Protein)

Fluid intake
after warm up



Water / Sports
Drink / Juice



Water

After Match
(Within 30 minutes)

Refuel
High GI
Carbohydrates

Rehydrate
Fluids
Electrolytes

Recover
Protein
Carbs

Sports drink, energy bar, flavoured milk, yoghurt, sandwich

A Typical Range Snack Box



2 boiled eggs
Provita
Low fat cheese
A protein
Raw Almonds
Bananas
Dried mango
Apple
Orange
Water

Importance of Hydration on Performance

The background of the slide features a soft-focus photograph of a healthy meal. On the right, a white plate is filled with a variety of colorful vegetables, including sliced tomatoes, cucumbers, and leafy greens. A silver fork is placed on a light-colored, textured placemat in front of the plate. To the left, a small bowl contains a green salad with fresh herbs. The overall scene is bright and clean, suggesting a focus on nutrition and health.

- Enhances the body's ability to regulate temperature and cool efficiently while avoiding unnecessary elevation in heart rate.
- Improves ability to recover quickly from training and competition.
- Minimizes muscle cramps.
- Enhances mental function, decision making, concentration, and motor control.
- Supports effective immune defences.

The best fluid to consume is **water**, which should be consumed throughout the day, during training, during competitions and at meal times.

Choose a sport drink to help replenish fluids and electrolytes that are lost in sweat.



Water vs Sport Drinks

ENERGY DRINKS ARE NOT RECOMMENDED DURING THE DAY'S SHOOT, BUT CAN BE CONSUMED ON COMPLETION. ENERGY DRINKS DO NOT SIGNIFICANTLY REPLACE THE ELECTROLYTES.

- Make water your “go-to” beverage, followed by limited amounts of sports drinks, diluted juices, flavoured drinks.
- As an archer, limit your caffeine (coffee) intake, and keep the water flowing.

Caffeine can make you jittery and could spoil a shot by reducing your ability to remain calm and focused. Jitters and precision aiming don't go well together.

Also: caffeine is a diuretic, which means it can increase the chance of dehydration.

- Proper nutrition and hydration are two of the best tools you'll have for optimum performance on the archery field.

HYDRATE

HYDRATE

AND

HYDRATE

AGAIN!

Basic Rule of Thumb for Archers:

Eat continuously small amounts throughout the competition day to keep your blood sugar levels up.

Carb-loading the day before and a high protein meal after a competition can be beneficial to give your body the building blocks it needs to repair and recover.

Drink Plenty of WATER!