Nutritional Education for Wrestling Coaches (MHSAA, NWCA)

Adapted from
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Provided by the
Genesee Intermediate School District

Program Goal

To educate and inform wrestling coaches

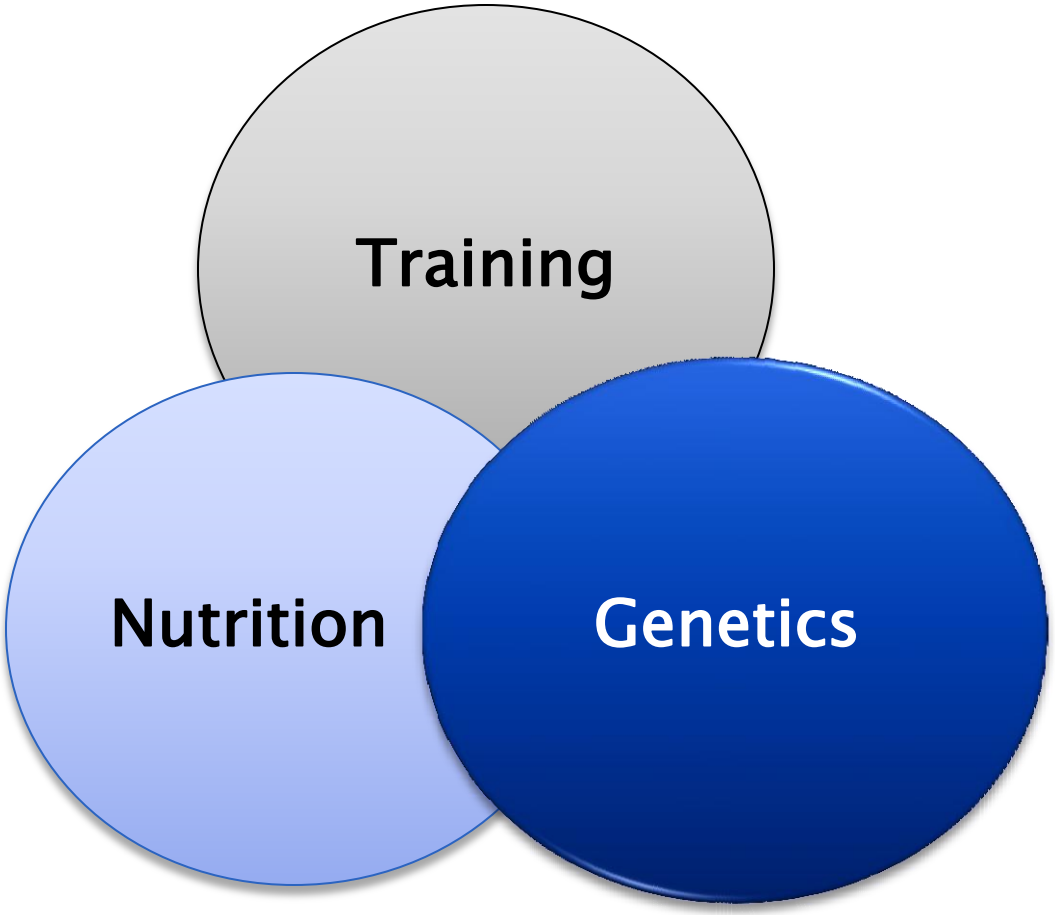
Help coaches to develop a resource on nutrition

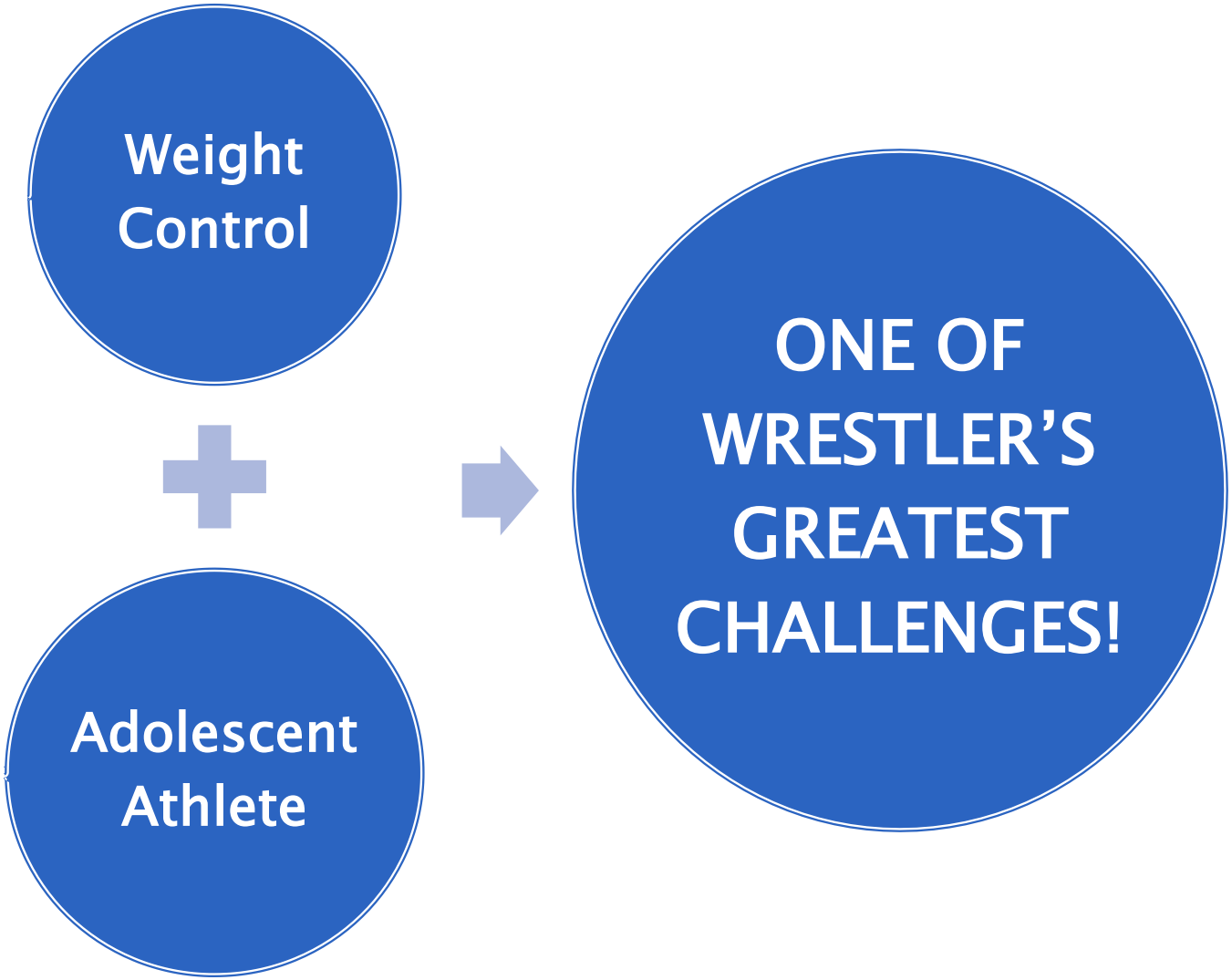
To promote optimum performance for wrestlers through safe and healthy nutrition.

Content

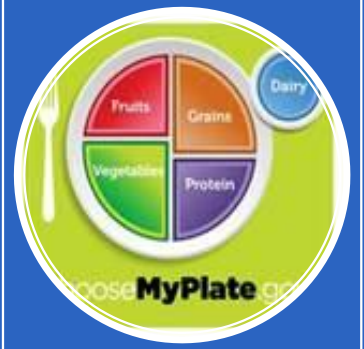
- Over view
- Hydration
- Nutrients
  - Carbs
  - Proteins
  - Fats
  - Vitamins and minerals
- Supplements
- Putting it all together

What is involved?




Weight Control
Adolescent Athlete
ONE OF WRESTLER'S GREATEST CHALLENGES!

How have wrestlers initially made weight?



RESTRICTED FOOD INTAKE

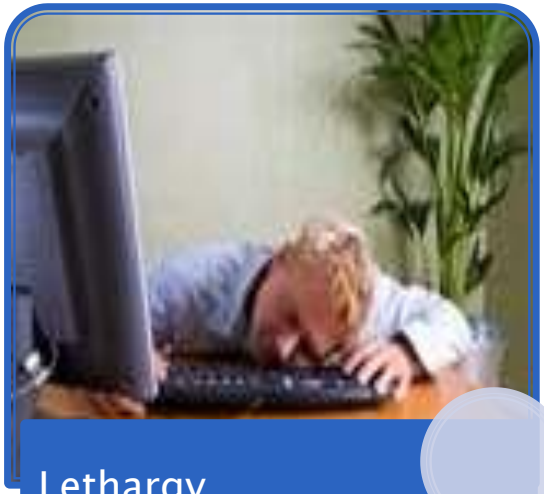
DECREASED FLUID INTAKE

STARVATION DIET

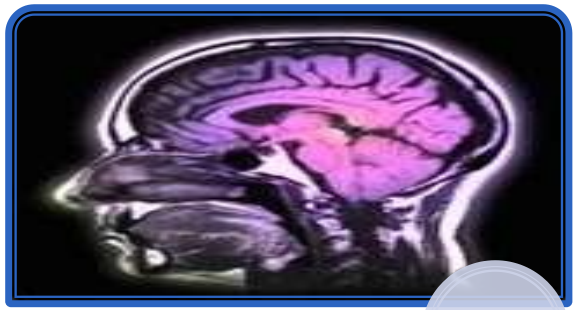
STRENUOUS EXERCISE

Performance outcomes

Weakness



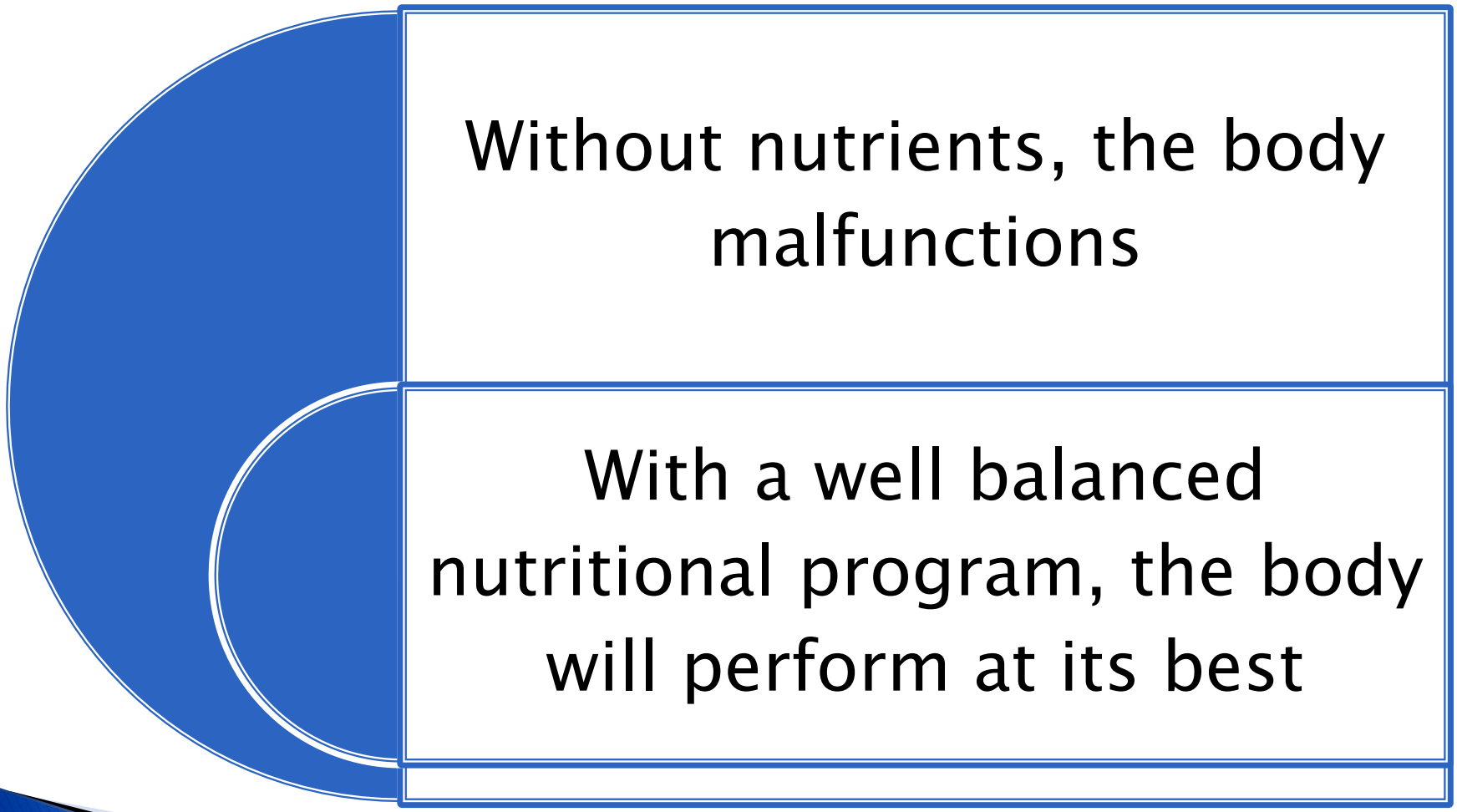
Lethargy



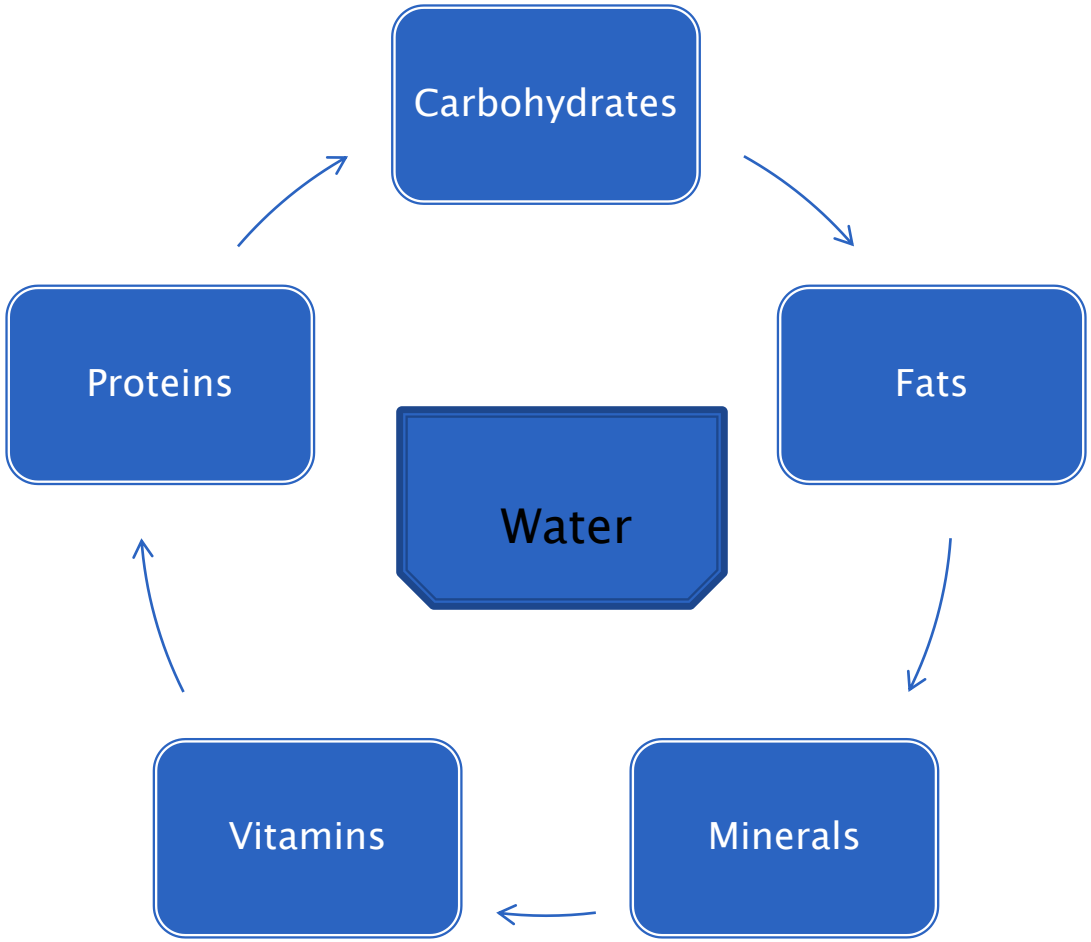
Decreased Concentration

SEMISTARVATION

Nutrition and Why is it important?



Components of nutrition



Hydration

Without food?
months

Without Water?

Lucky to last 2 weeks

Water is the most important nutrient for your body

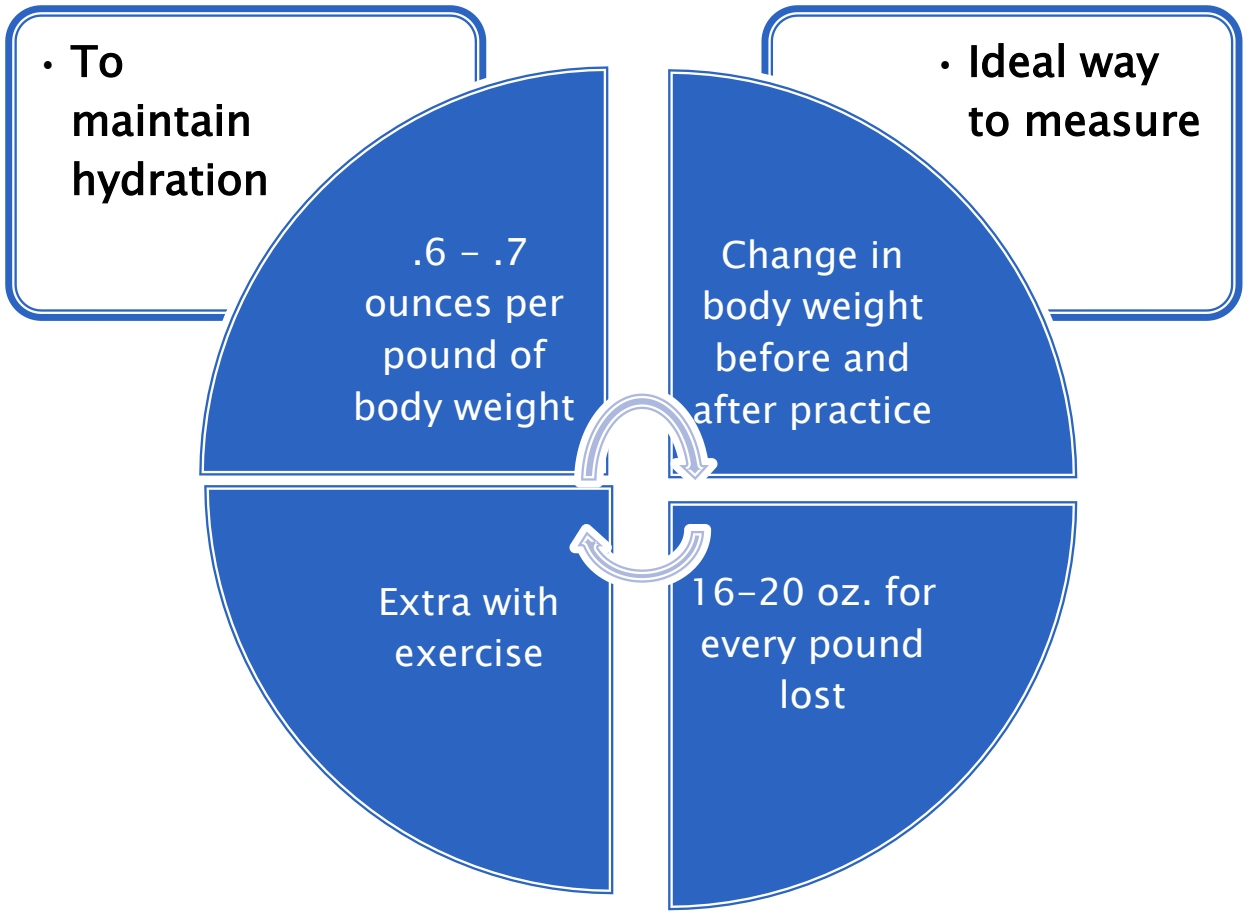
You must have water to burn calories

You will decrease your metabolism if you do not drink enough fluids

Water lost

- 2 cups through breathing
- 2 cups through perspiration
- 6 cups through urine and bowel movement
- 10 cups through exercise

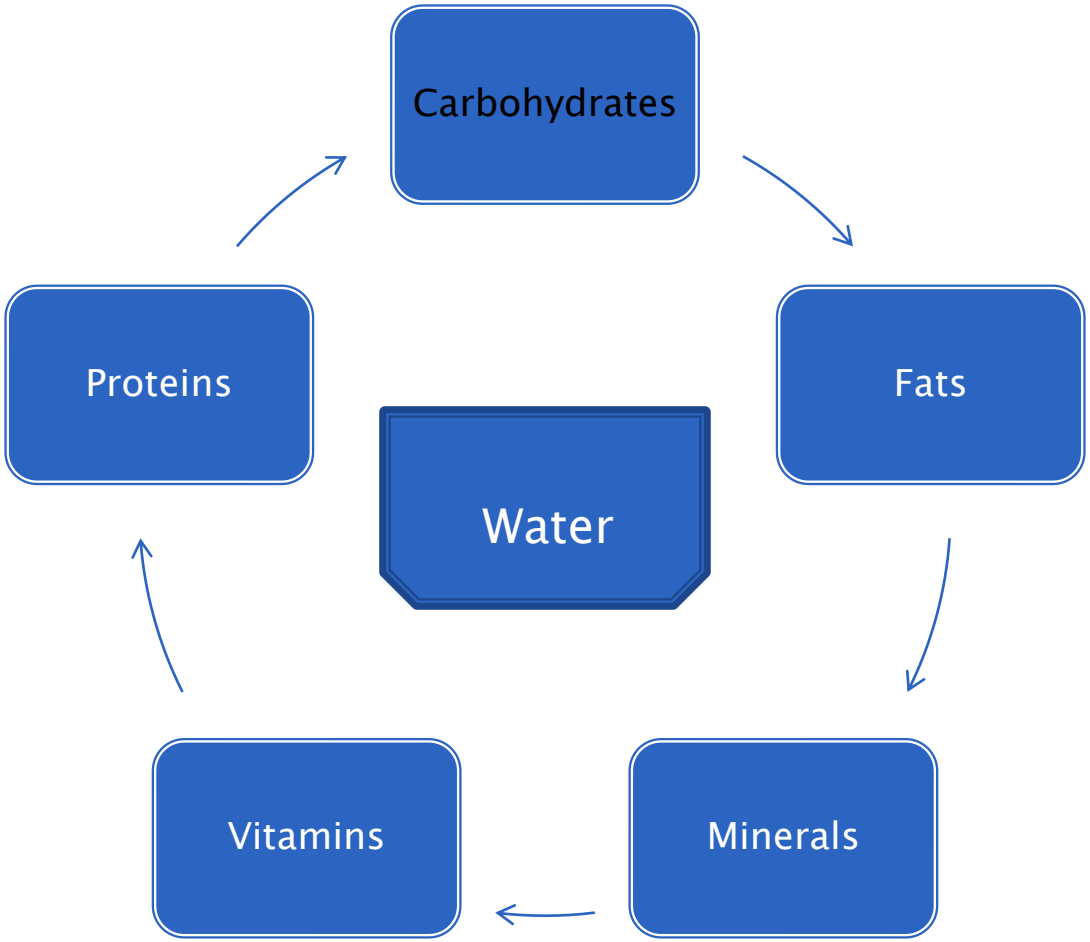
How much water?



When to drink

Rarely can one get too much water		
Drink before you are thirsty	Drink after activity	Water has no adverse effect on performance

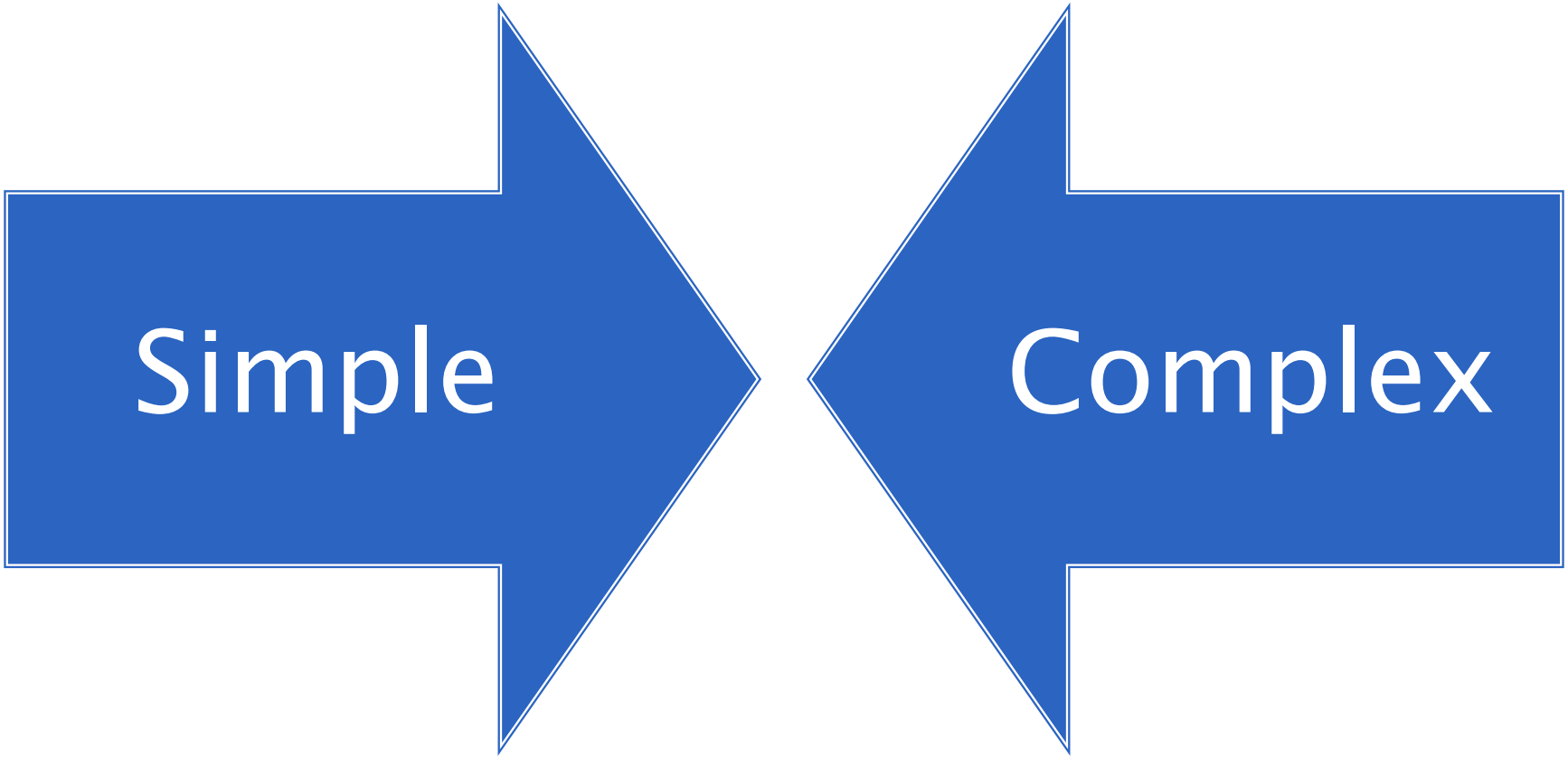
Components of nutrition



Carbohydrates 1gram=4calories (Most misunderstood)

Number one source of energy for all bodily functions			
Body storage	Liver	Blood	Muscles

Types of Carbohydrates



Simple Carbohydrates

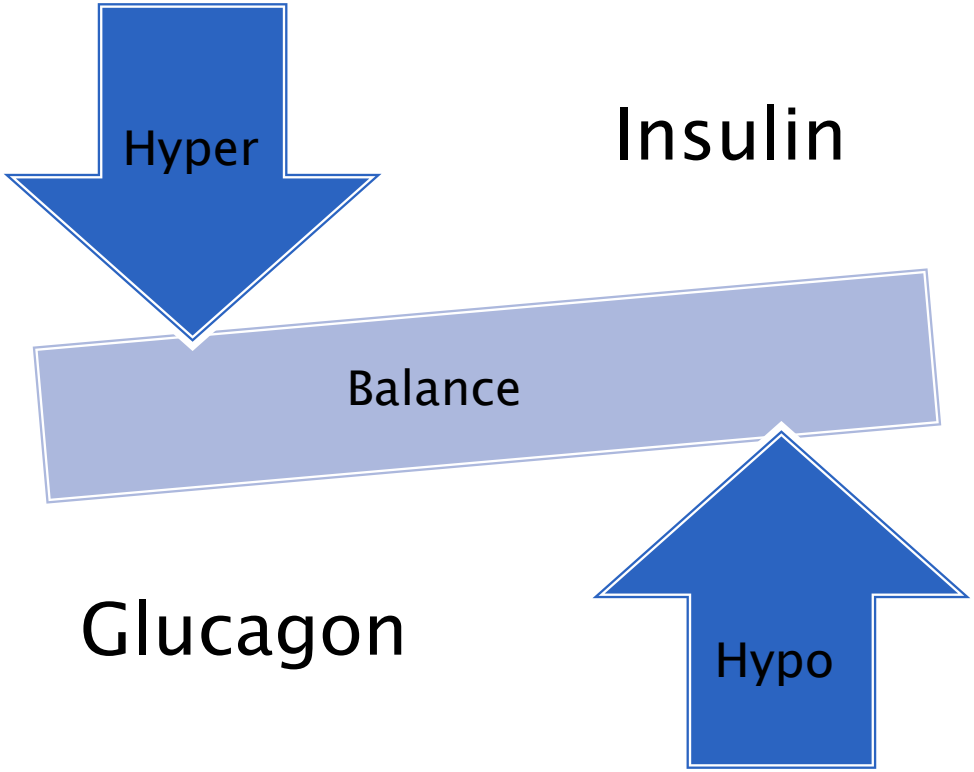
Too much can be bad

Hyper-glycemia

Hypo-glycemia

Little nutrient value

Time and Balance

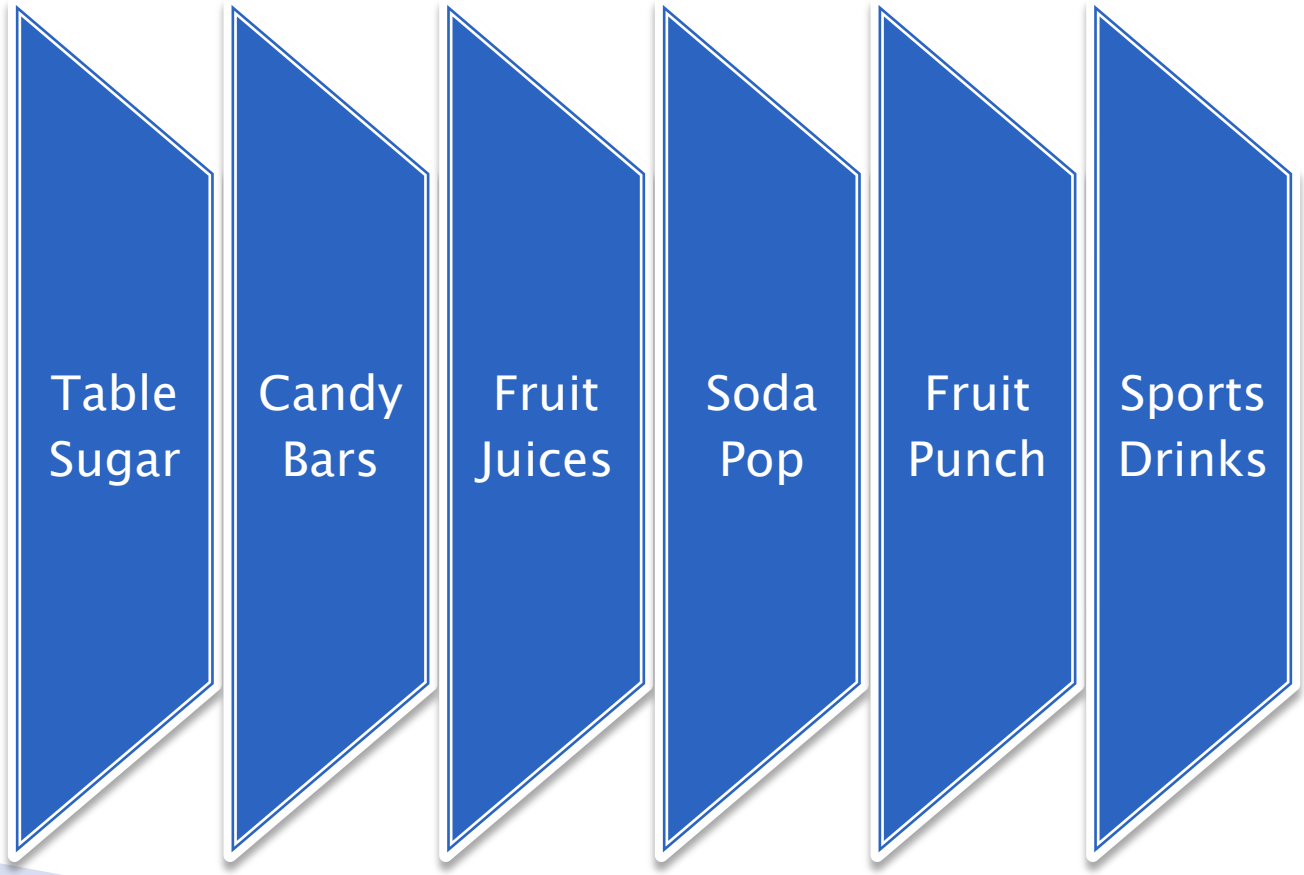


Simple Carbohydrates

Glucose	Artificial Sugars	Sucrose	Maltose	Fructose	Galactose
Used for energy Stored as glycogen	Saccharin Aspertame Aciculate Sucralose				

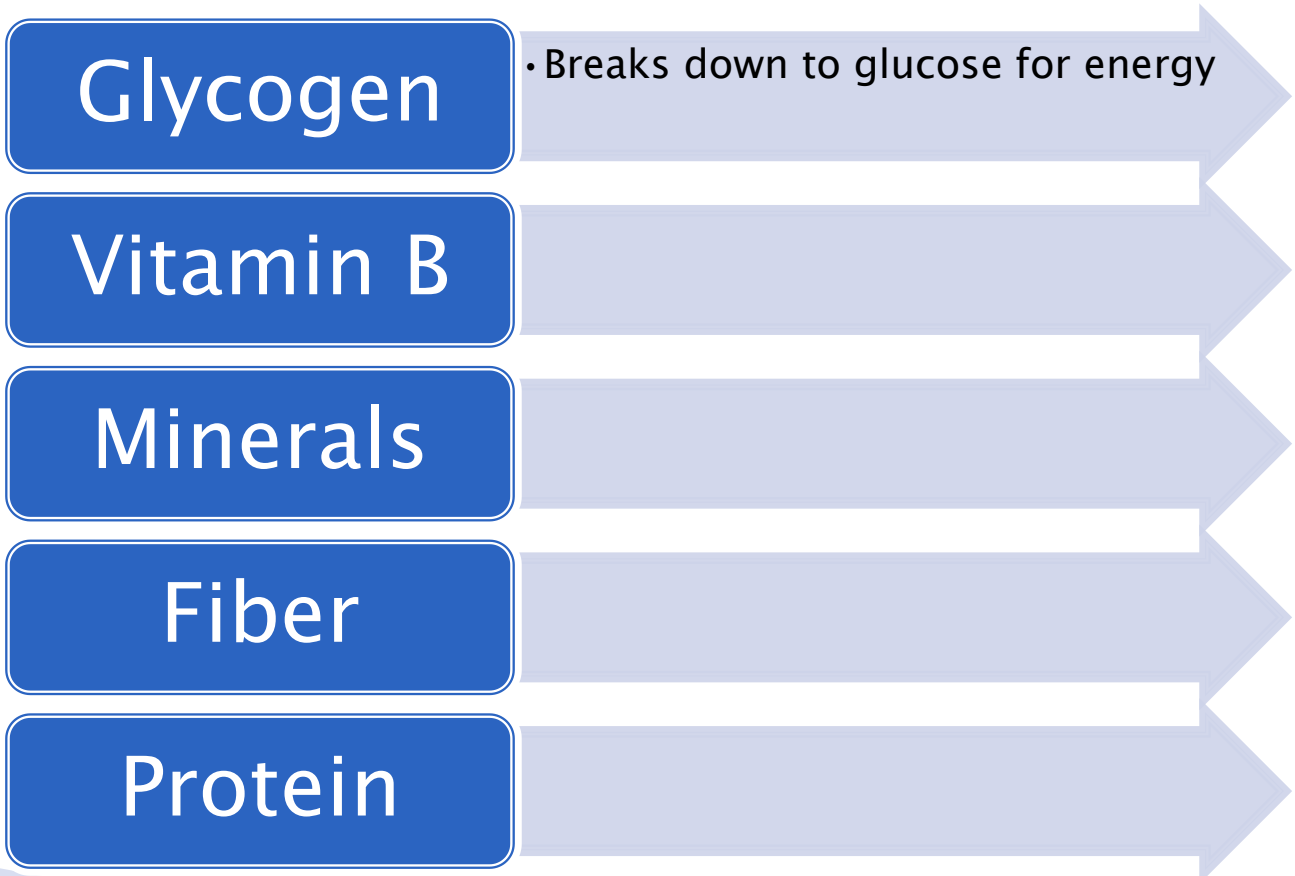
Simple Carbs(cont.)

- Where can we find these items?

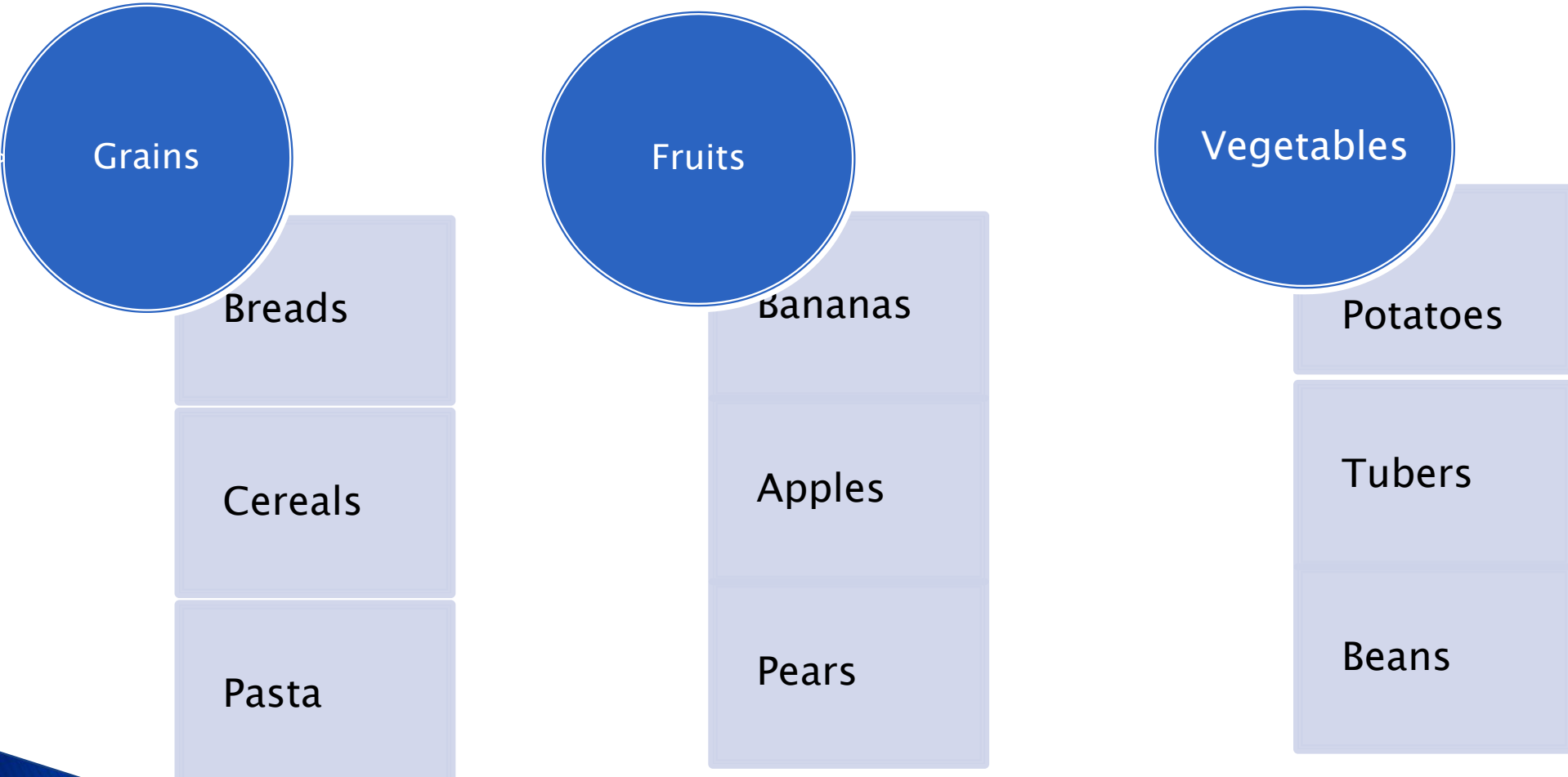


Complex Carbohydrates

- The Best for you



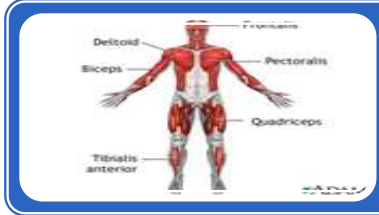
Sources of Complex Carbs



Carb Intake Recommendations

6-8 g/kg/day

- Up to 600 g per day

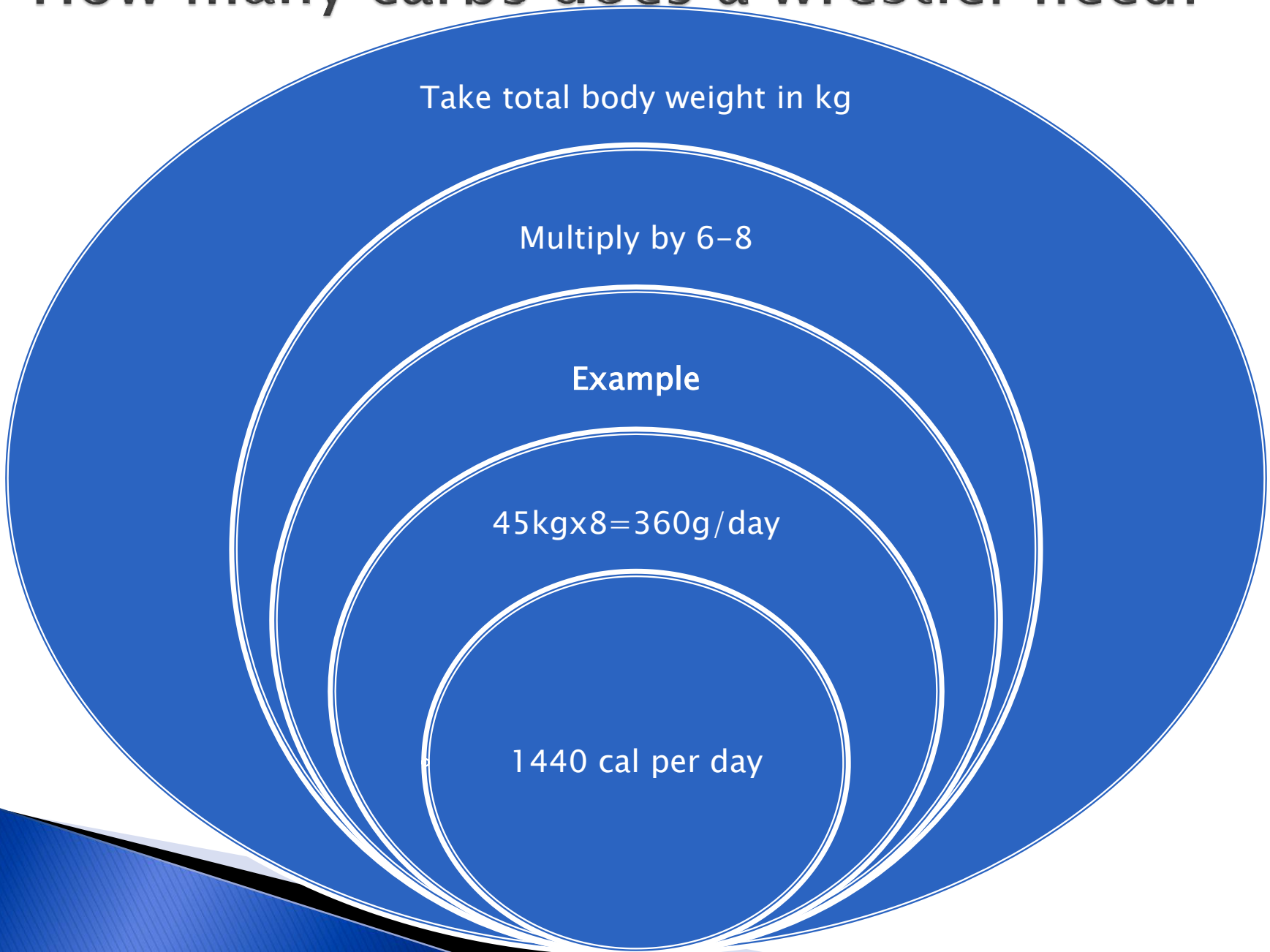


Muscles store glycogen at the highest rate up to 2 hours after exercise

100 g (400 kcal) should be consumed 15-30 minutes after exercise

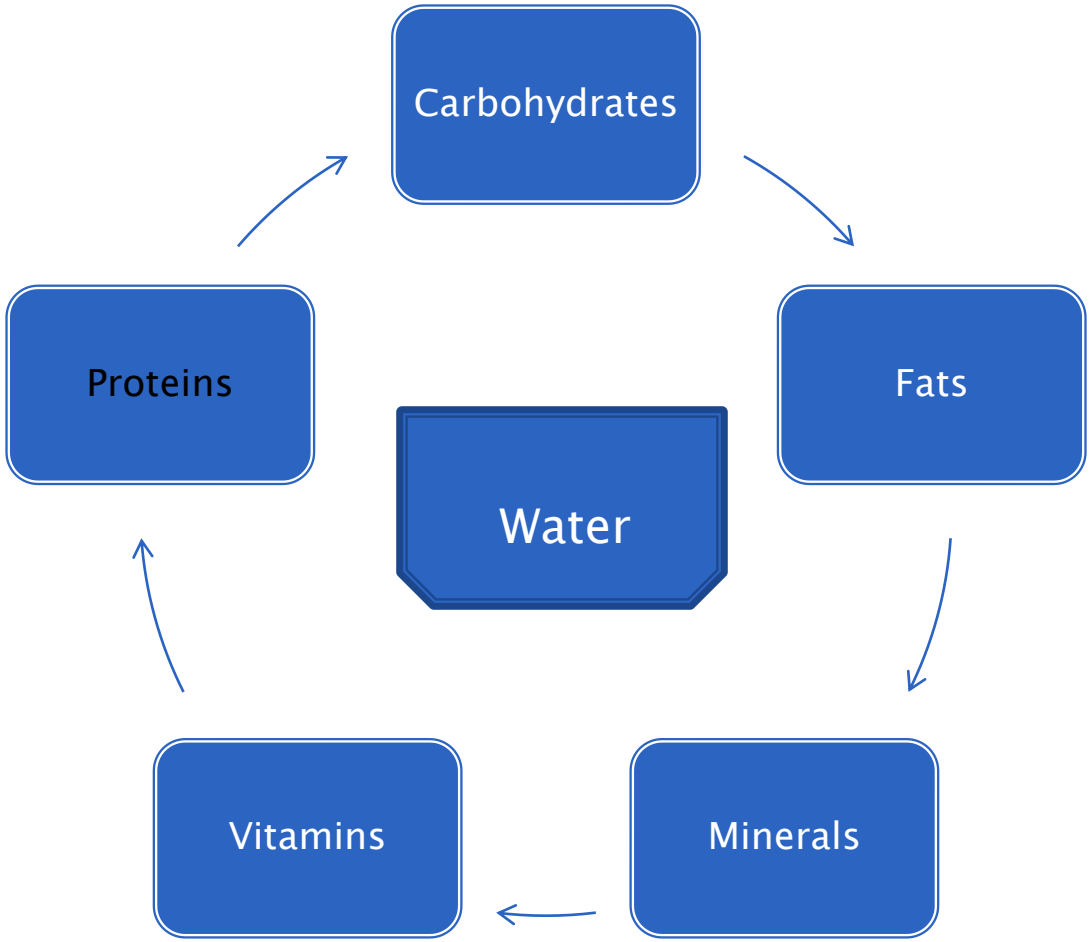
100 g every 2-4 hours there after

How many carbs does a wrestler need?



How may calories are burned during a two hour practice?

Components of nutrition



Protein

Used for fuel when necessary

Used for growth and repair of body tissues

Found in all cell structures in the body*

Excess protein = potential liver and kidney damage, dehydration, loss of calcium into the urine and protein stored as FAT

1 gram give 4 calories

Protein requirements

0.8 g/kg/day

- 56 g for sedentary individual

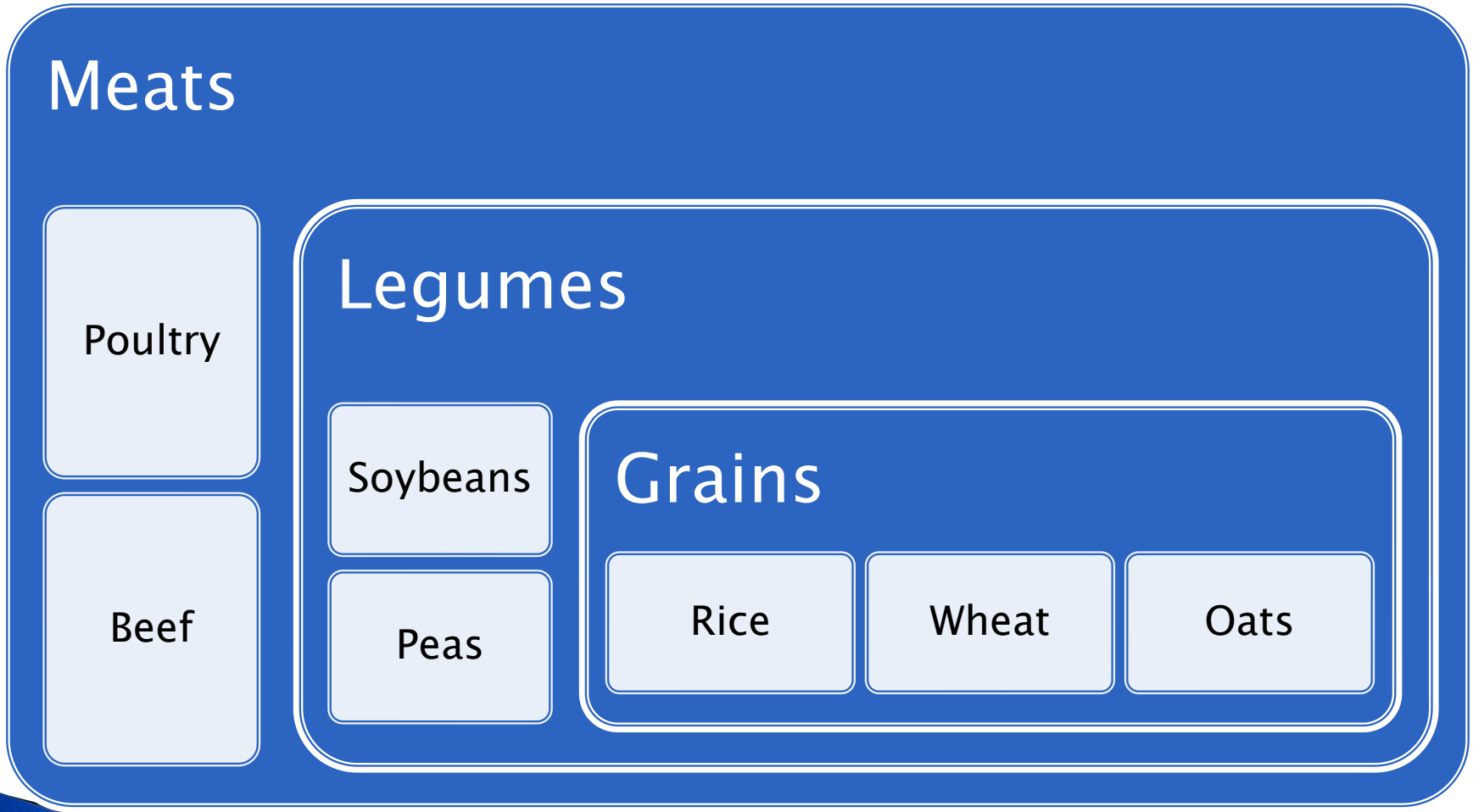
Strength Activities

- 1.4 g/kg/day

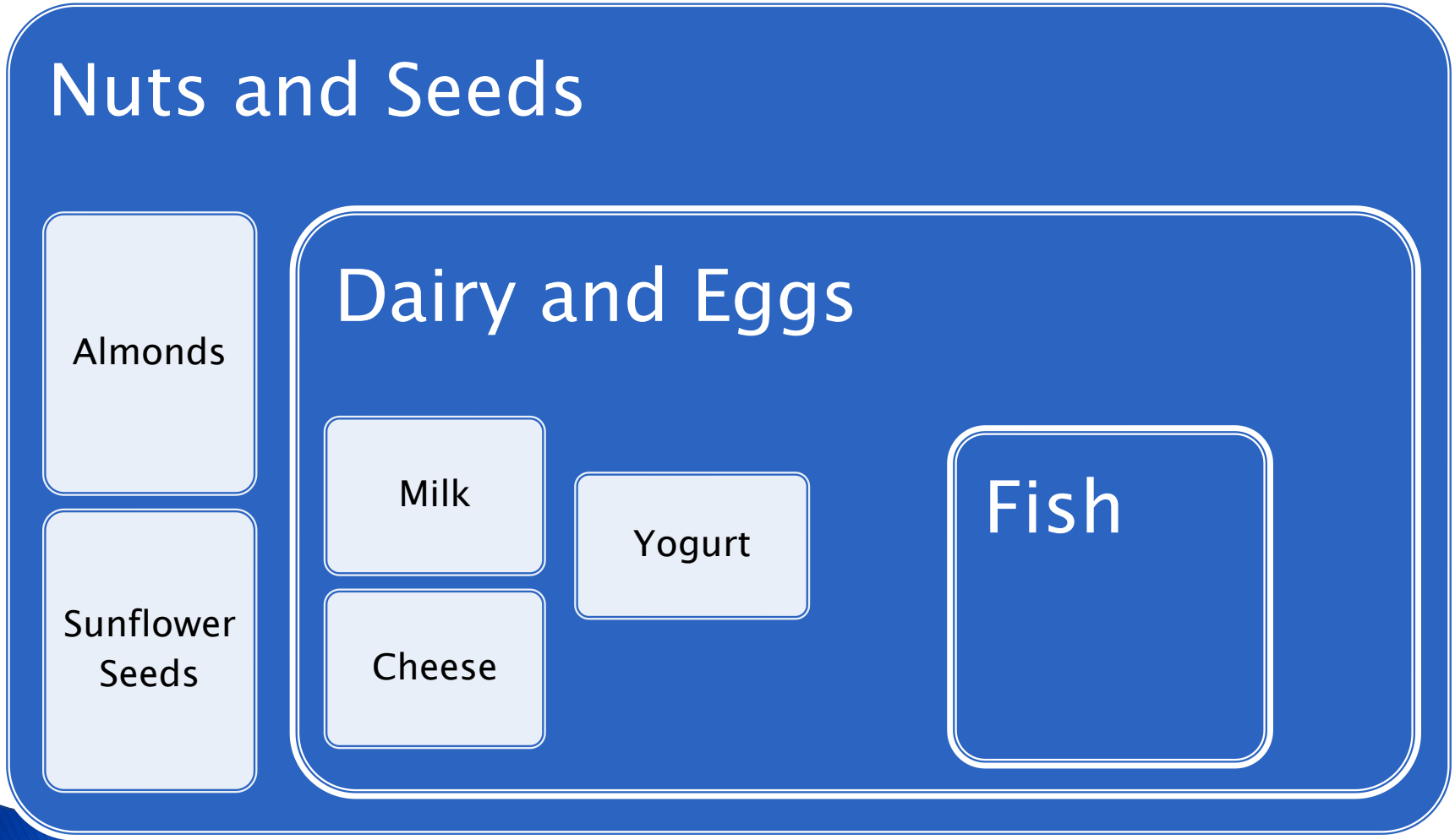
Endurance Activities

- 1.2-1.4 g/kg./day

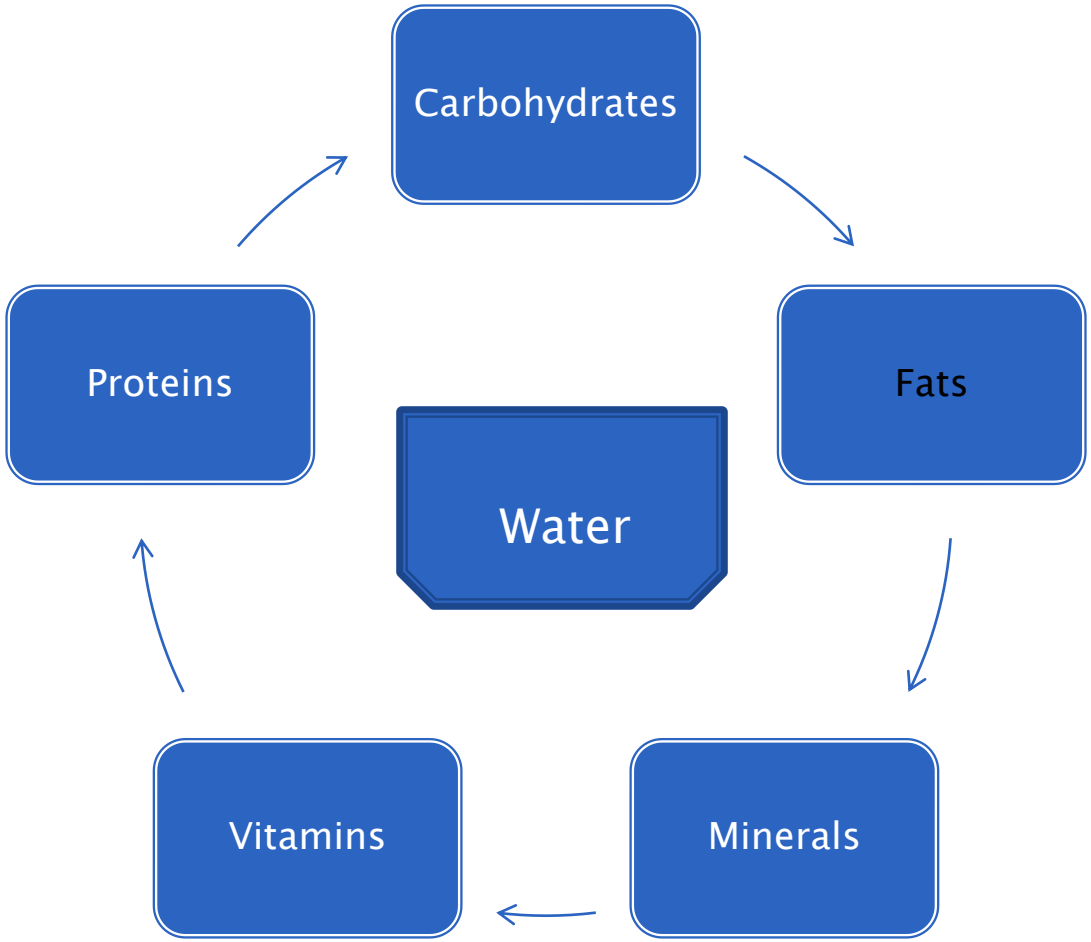
Protein Sources



Protein Sources (continued)



Components of nutrition



Fat

1 g gives 9 calories		
Cushions and protects organs	Carries Vitamins A, D, E and K	Concentrated energy source

Energy Source?

Requires High amount of Oxygen to burn

- Can not be converted to energy as easily as carbs

Not a significant source of energy for wrestling

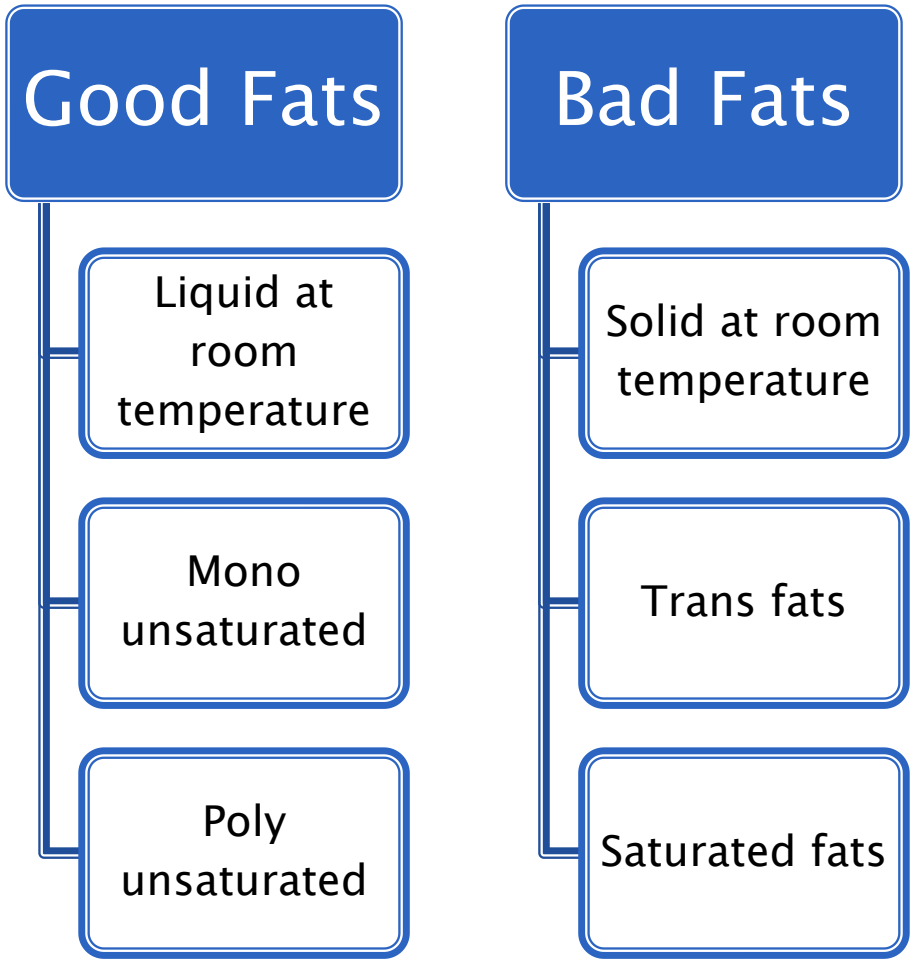
- Short term
- High Intensity exercise

Recommended intake for Wrestlers

- 20-30% of Total Calories

- 3100 x .20=620 Calories

Good Fats vs. Bad Fats



Good Fats vs. Bad Fats

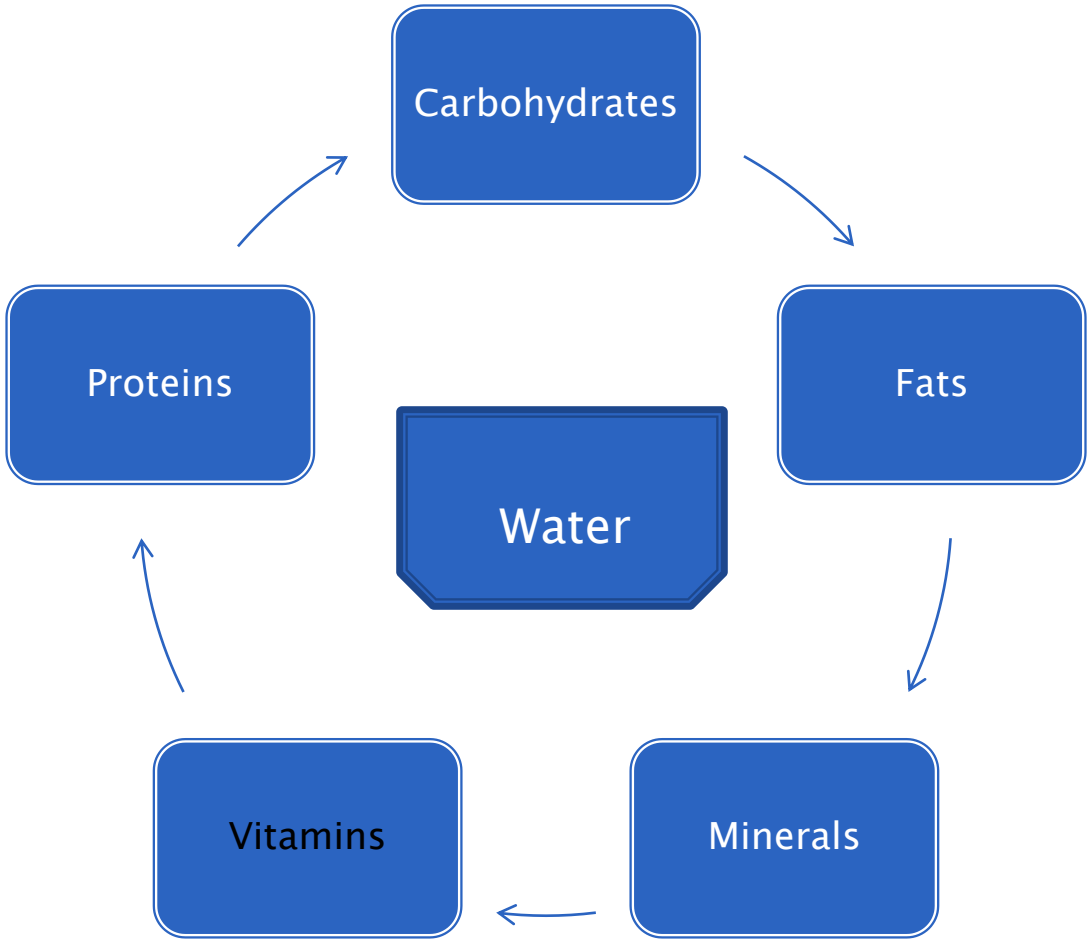
Good Fats

- Natural Oils
- Omega 3 and 6

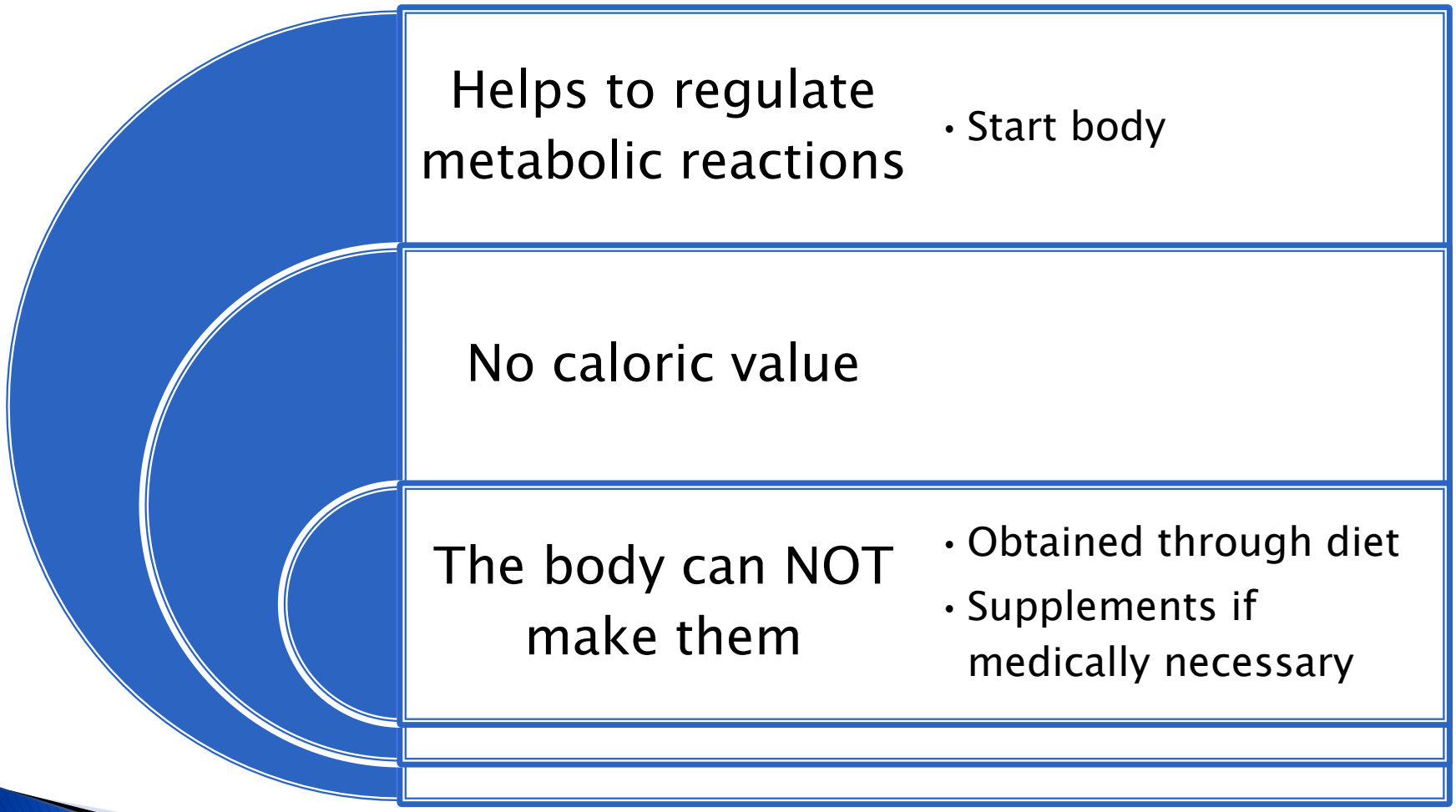
Bad Fats

- Hydrogenated oils

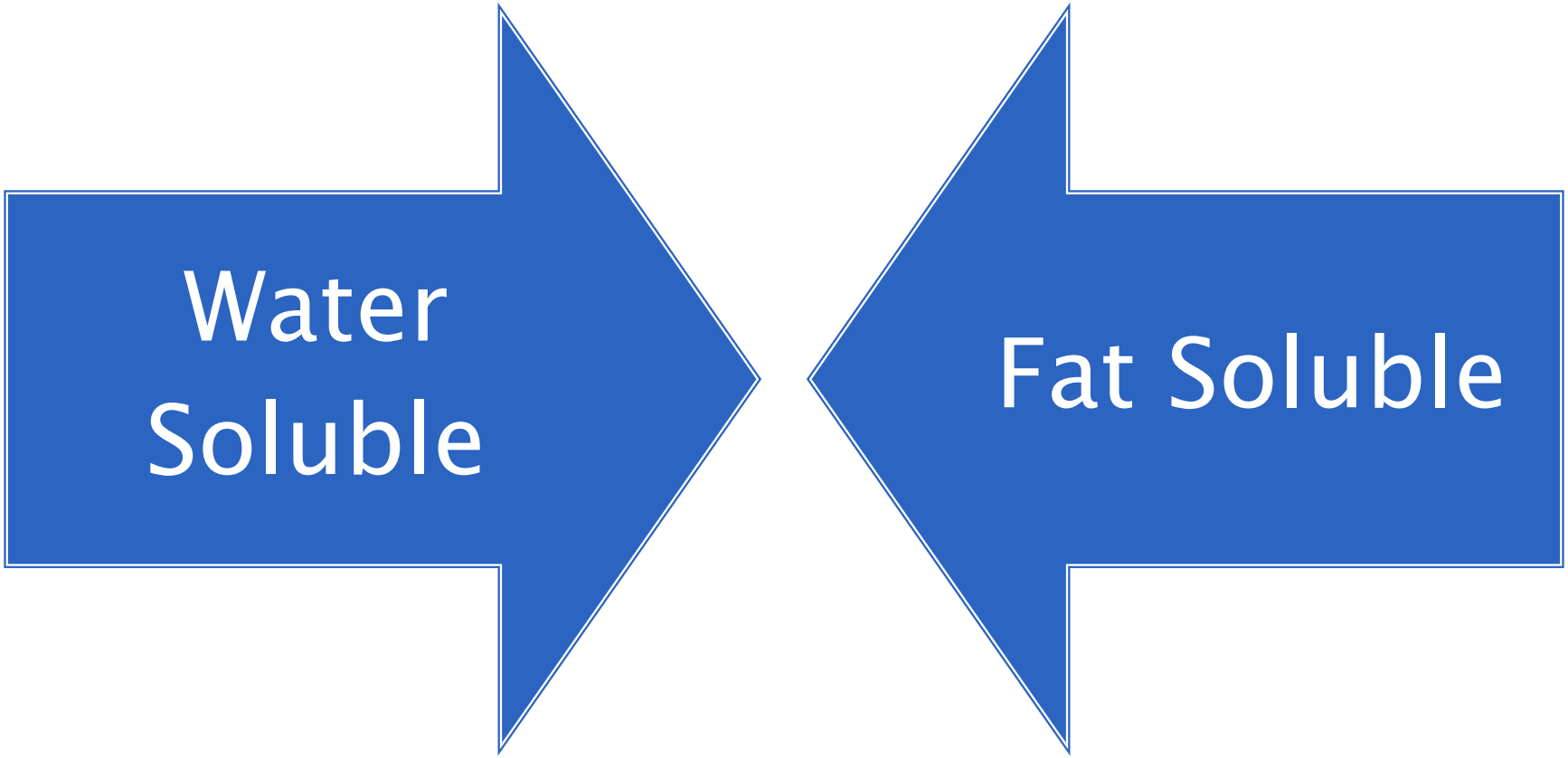
Components of nutrition



Vitamins


Helps to regulate metabolic reactions
• Start body
No caloric value
The body can NOT make them
• Obtained through diet
• Supplements if medically necessary

Vitamins



Water soluble Vitamins

- Absorbed directly into the bloodstream
- Not stored in the body
- Must be replenished daily or within several days

Water soluble Vitamins

Vitamin B Complex

- Thiamin
- Riboflavin
- Niacin
- Pyridoxine
- Cobalamine
- Pantotheic Acid
- Folic Acid
- Biotin

Vitamin C

Fat Soluble Vitamins

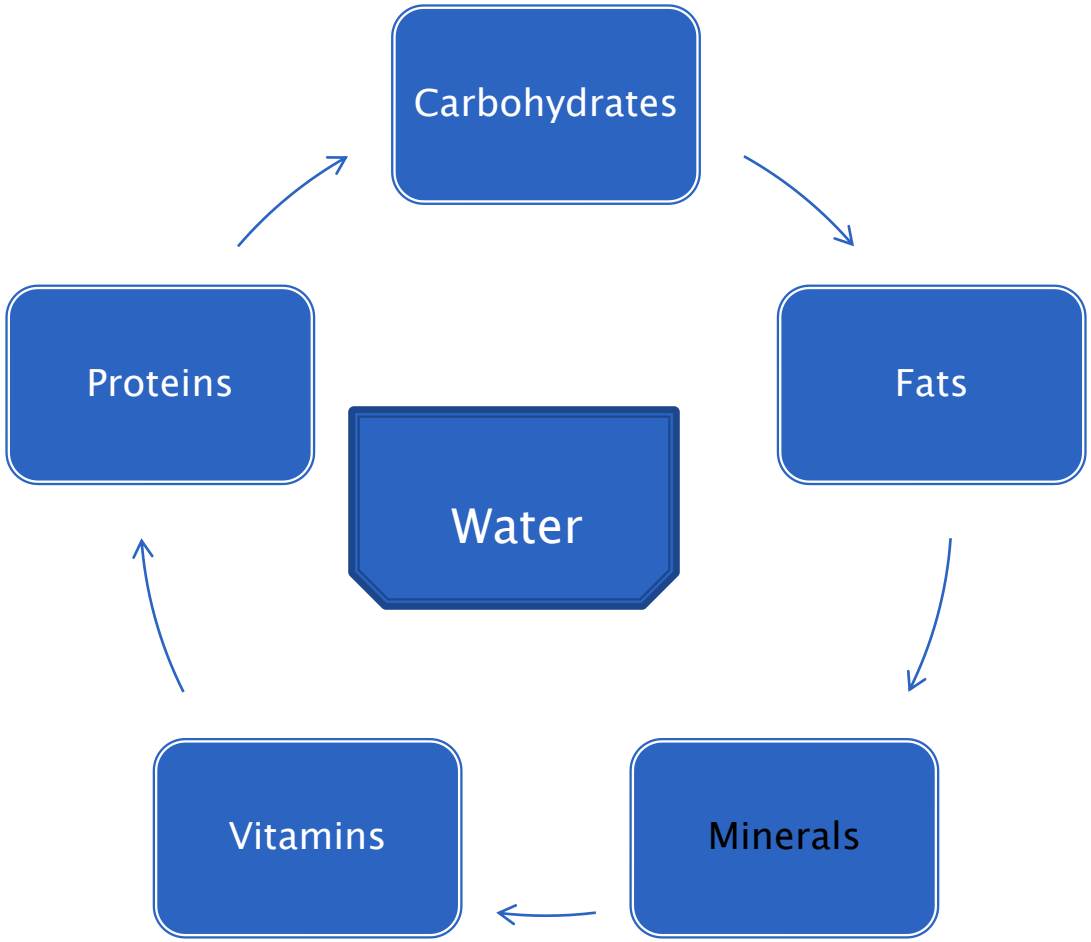
Requires fats/oil to be absorbed

Not needed on a daily basis

Vitamin A, D, E, K

Stored in the liver and fat cells

Components of nutrition



Minerals

Major Minerals

- Requirement 100 mg/day or more

Trace Minerals

- Requirement 100 mg/day or less

Building materials for bones, teeth, tissue, muscles, blood and nerve cells

Assist enzymes in all body functions

Chemical elements that can not be synthesized by the body

Supplements

Unregulated by the FDA		
Billion Dollar industry	Not intended for use by individuals under 18	No studies done on this age group

Supplements

Multivitamins

- Ephedrine products
- Caffeine

Protein Powder

- Creatine Monohydrate
- HMB BetaHydroxy Methylbutyrate
- Glutamine

Reading Nutritional Labels

Serving size

Servings per content

Fats

Carbohydrates

Protein

Calories to gram conversion

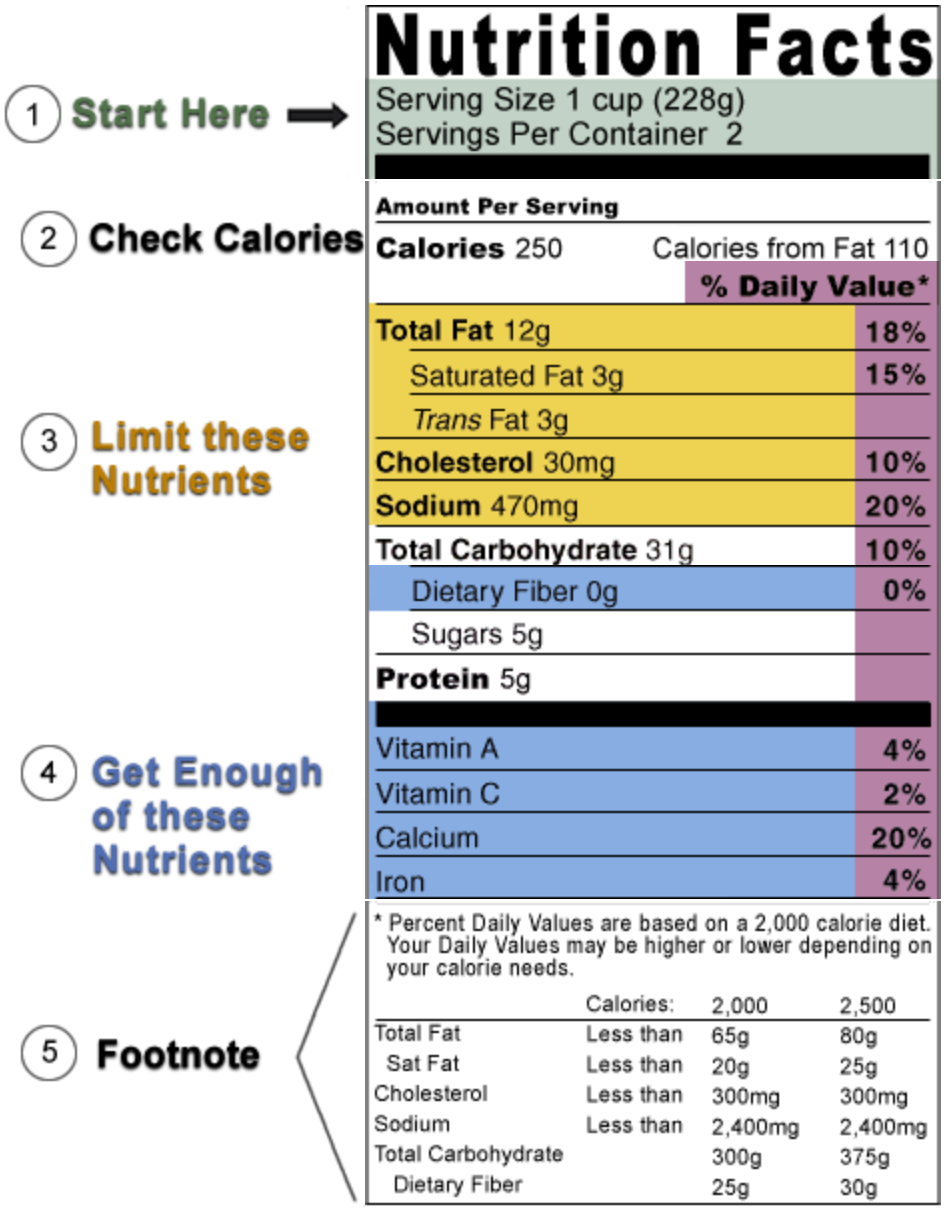
Calories to gram conversion

Fat = 9 calories

Carb = 4 calories

Protein = 4 calories

Sample label for
Macaroni & Cheese

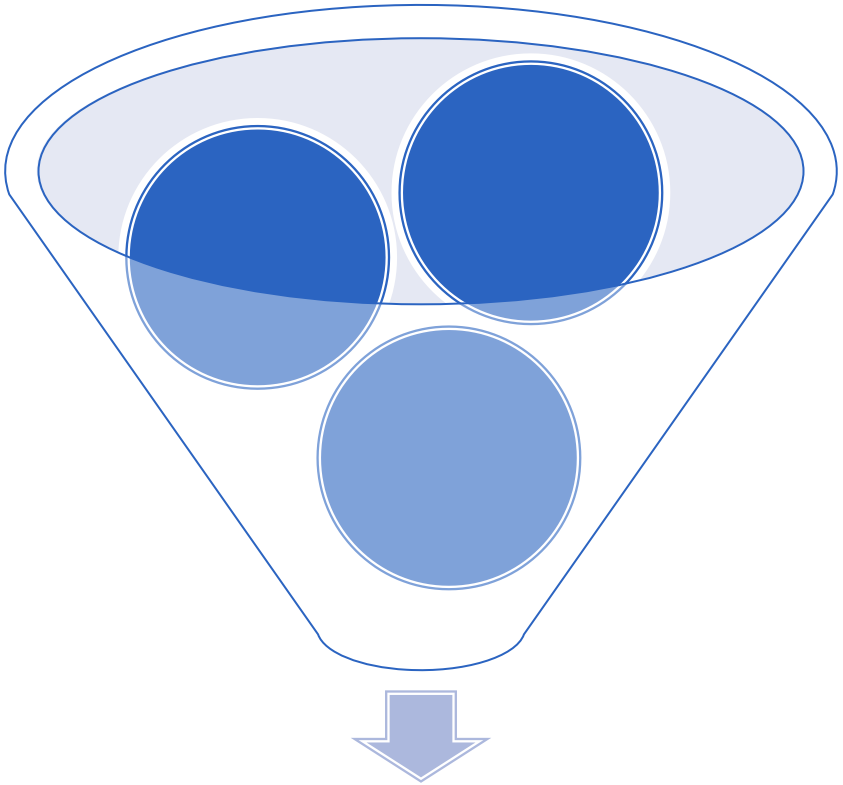


1. **Start Here**
2. **Check Calories**
3. **Limit these Nutrients**
4. **Get Enough of these Nutrients**
5. **Footnote**

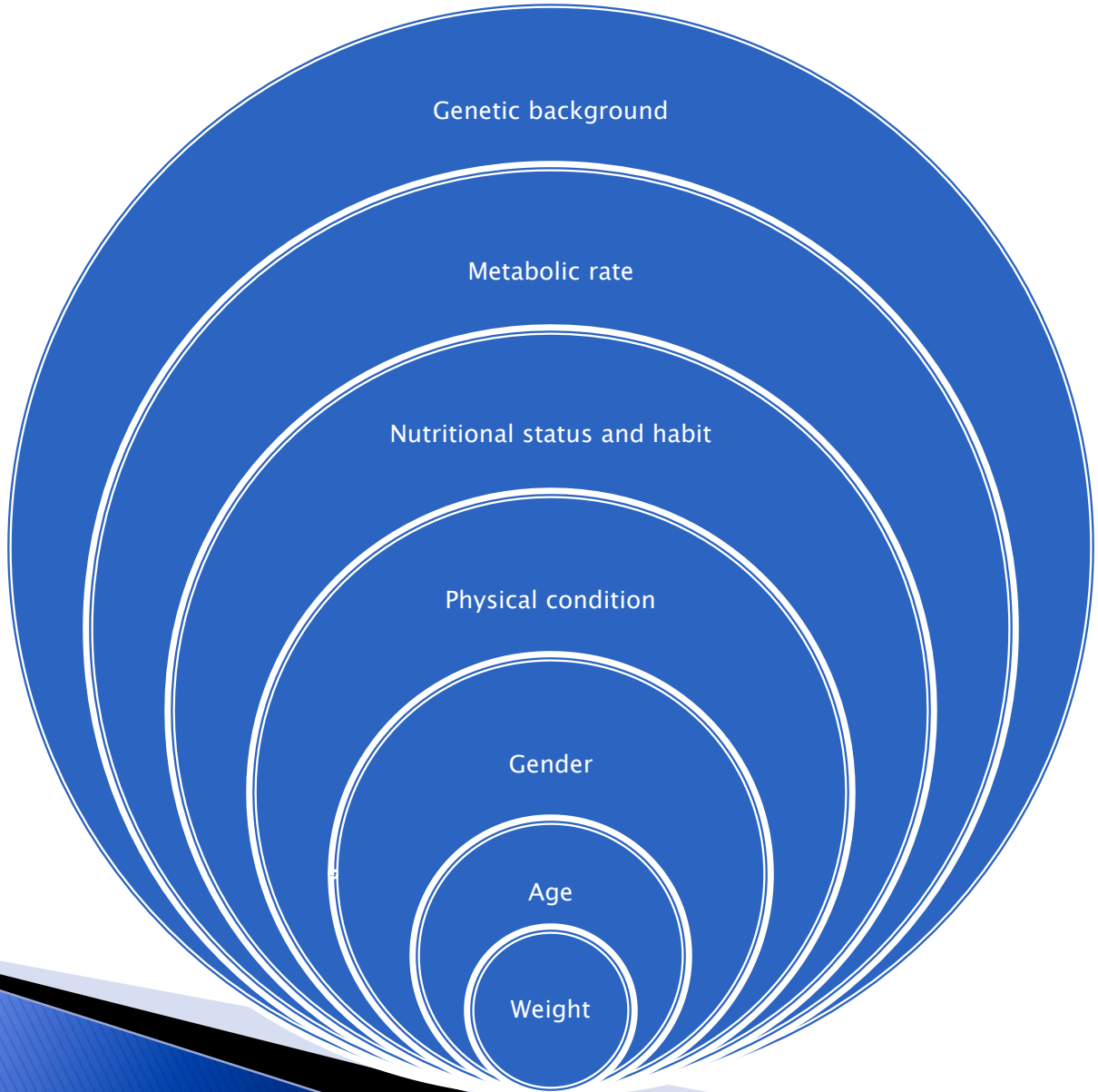
Quick Guide to % DV

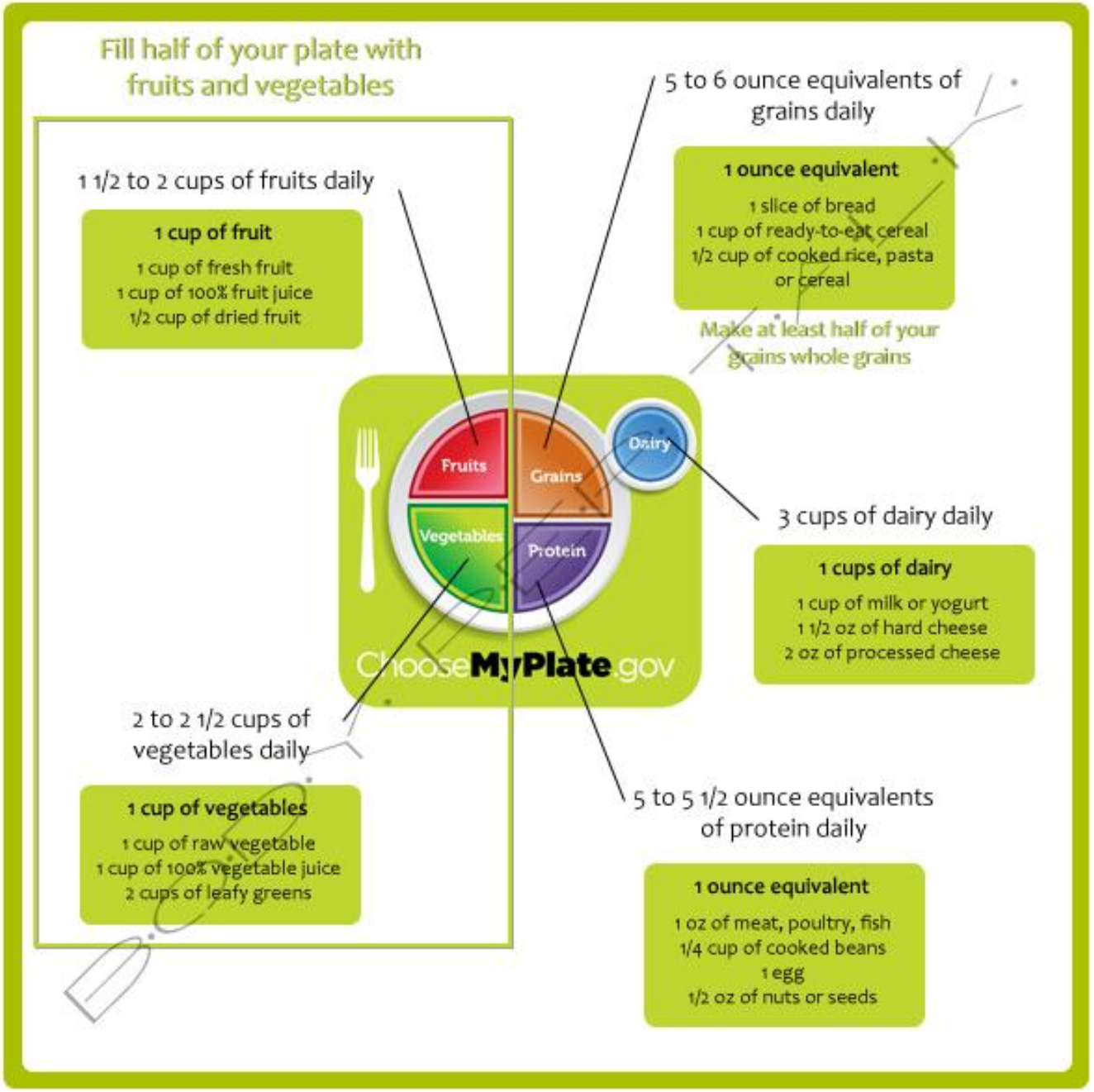
- 5% or less is Low
- 20% or more is High

Putting it all together



Many Factors to Consider




Fill half of your plate with fruits and vegetables
1 1/2 to 2 cups of fruits daily
1 cup of fruit
1 cup of fresh fruit
1 cup of 100% fruit juice
1/2 cup of dried fruit
5 to 6 ounce equivalents of grains daily
1 ounce equivalent
1 slice of bread
1 cup of ready-to-eat cereal
1/2 cup of cooked rice, pasta or cereal
Make at least half of your grains whole grains
Fruits
Grains
Dairy
Vegetables
Protein
ChooseMyPlate.gov
3 cups of dairy daily
1 cups of dairy
1 cup of milk or yogurt
1 1/2 oz of hard cheese
2 oz of processed cheese
2 to 2 1/2 cups of vegetables daily
1 cup of vegetables
1 cup of raw vegetable
1 cup of 100% vegetable juice
2 cups of leafy greens
5 to 5 1/2 ounce equivalents of protein daily
1 ounce equivalent
1 oz of meat, poultry, fish
1/4 cup of cooked beans
1 egg
1/2 oz of nuts or seeds

Calories, Calories, Calories

Adolescent Male

- 15-19 calories/pound/day
- Uses1200 calories in a 2 hour practice

Adolescent Female

- 12-17 calories/pound/day
- Uses 1200 calories in a 2 hour practice

Total Caloric Needs

Weight x 19 = A

- A= Approximate number of calories your body needs to maintain its current weight

A + 1200 = _____

- Caloric need to maintain current weight

Looking for change?

- Increase calories to gain
- Decrease calories to lose

How much water?

Pounds of Water Lost

Weight x 0.04

Cups of water needed

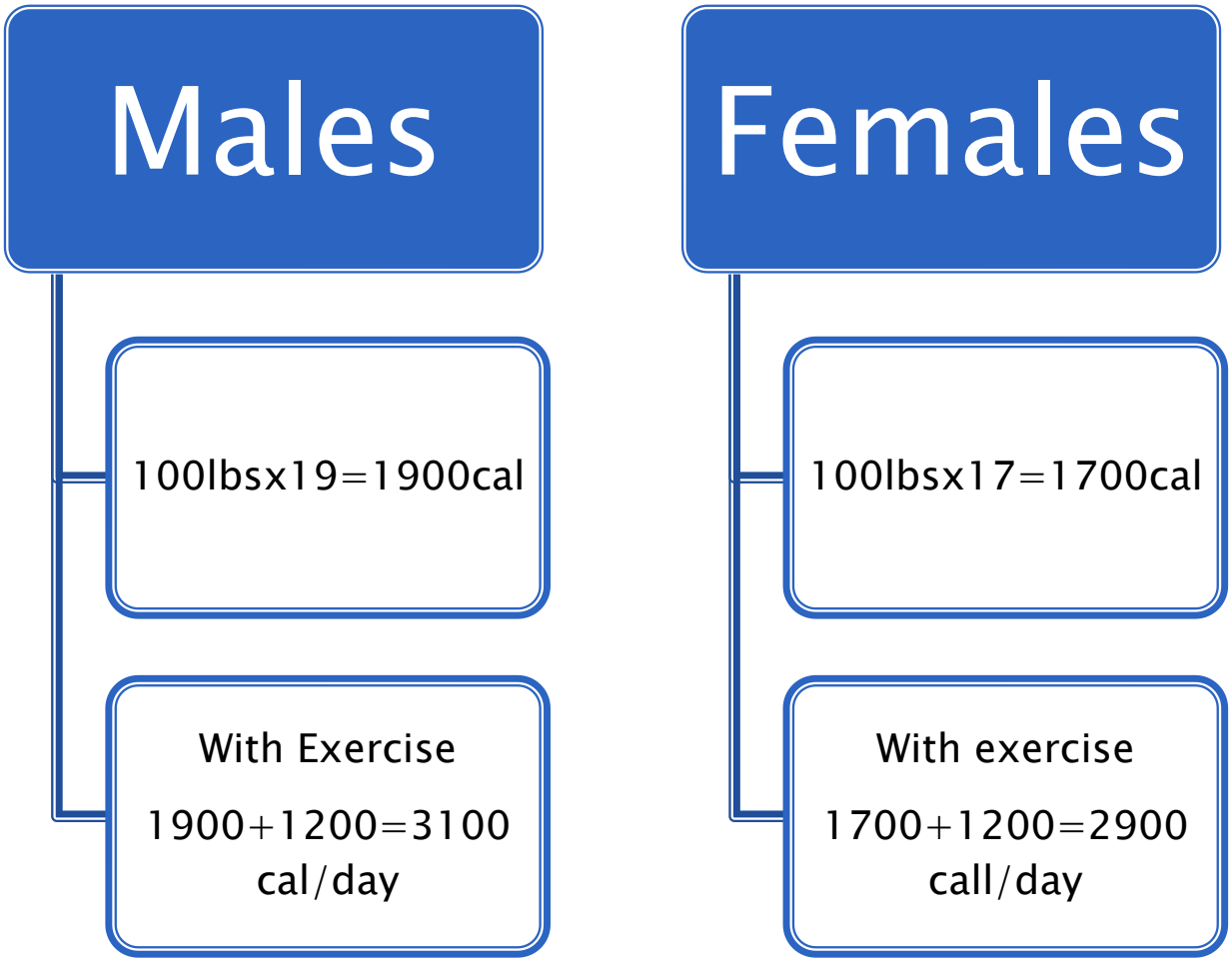
Pounds of water lost x 2

Example

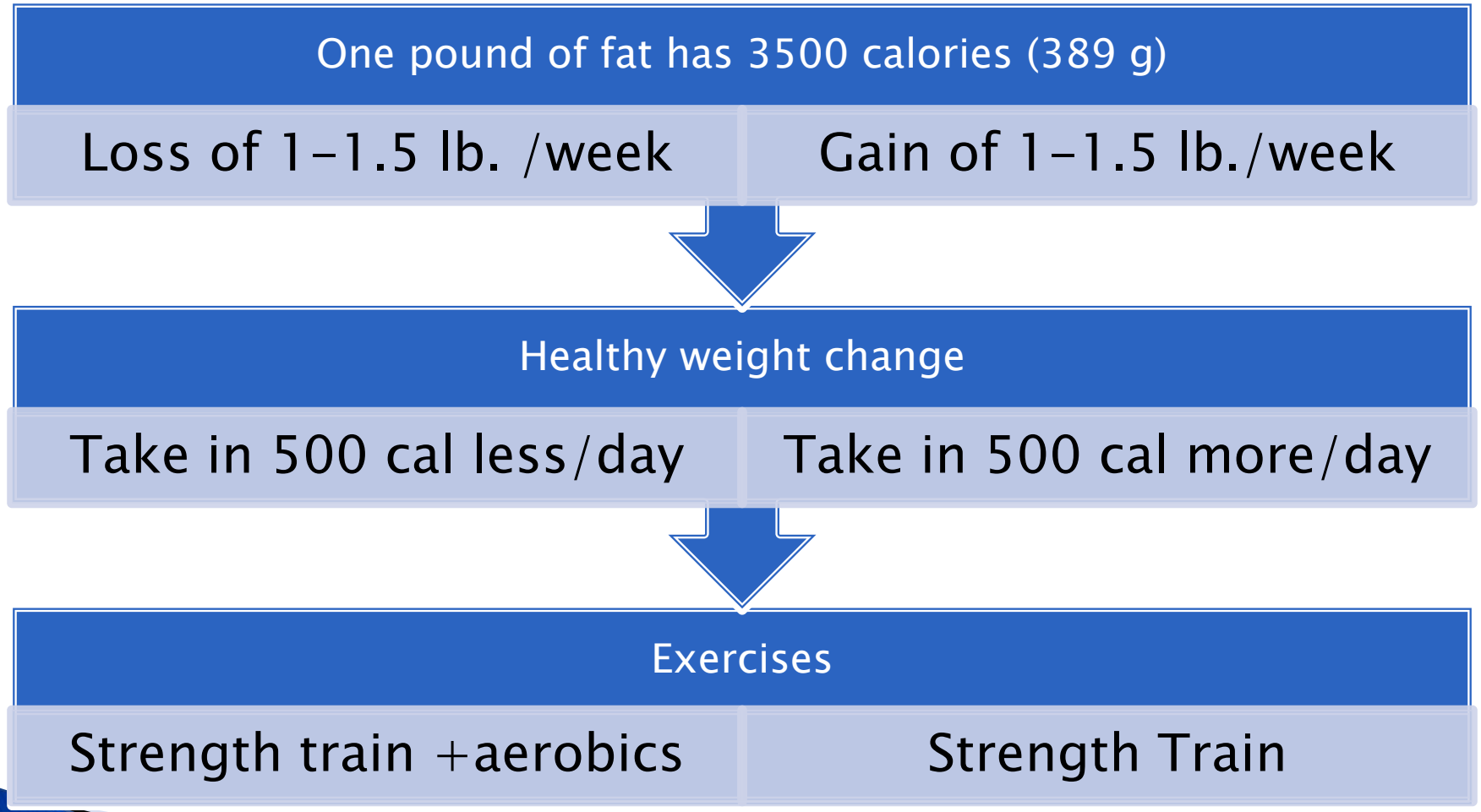
100 x0.04=4

4x2=8cups

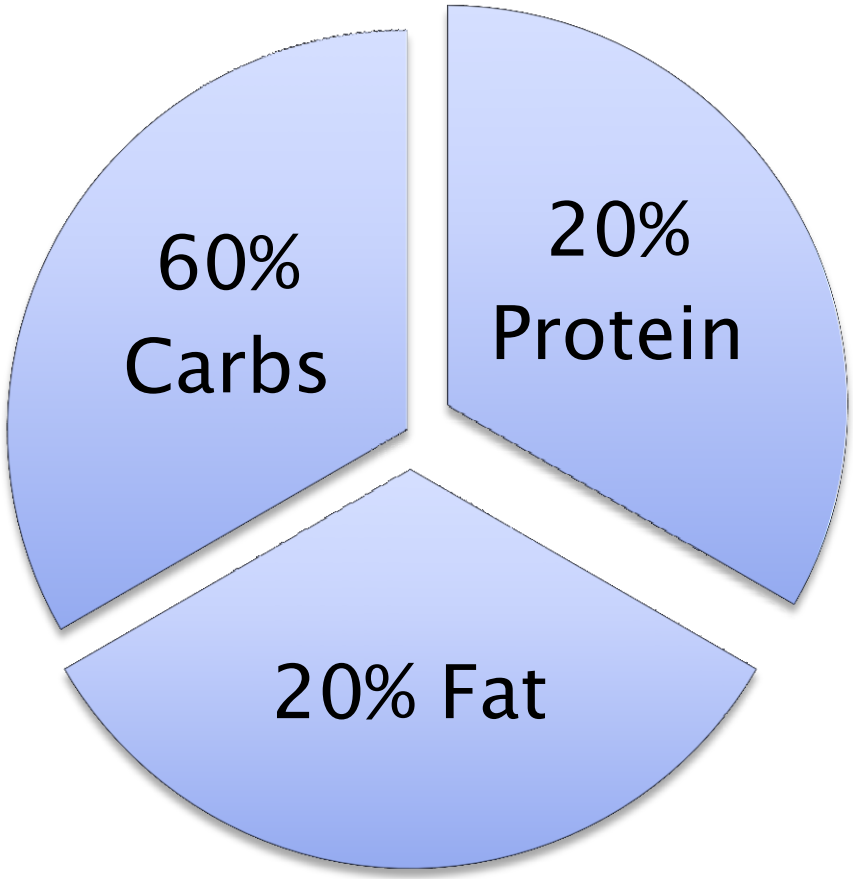
How many calories?



To Gain or Lose



Nutrition Needed



Hydration throughout the day

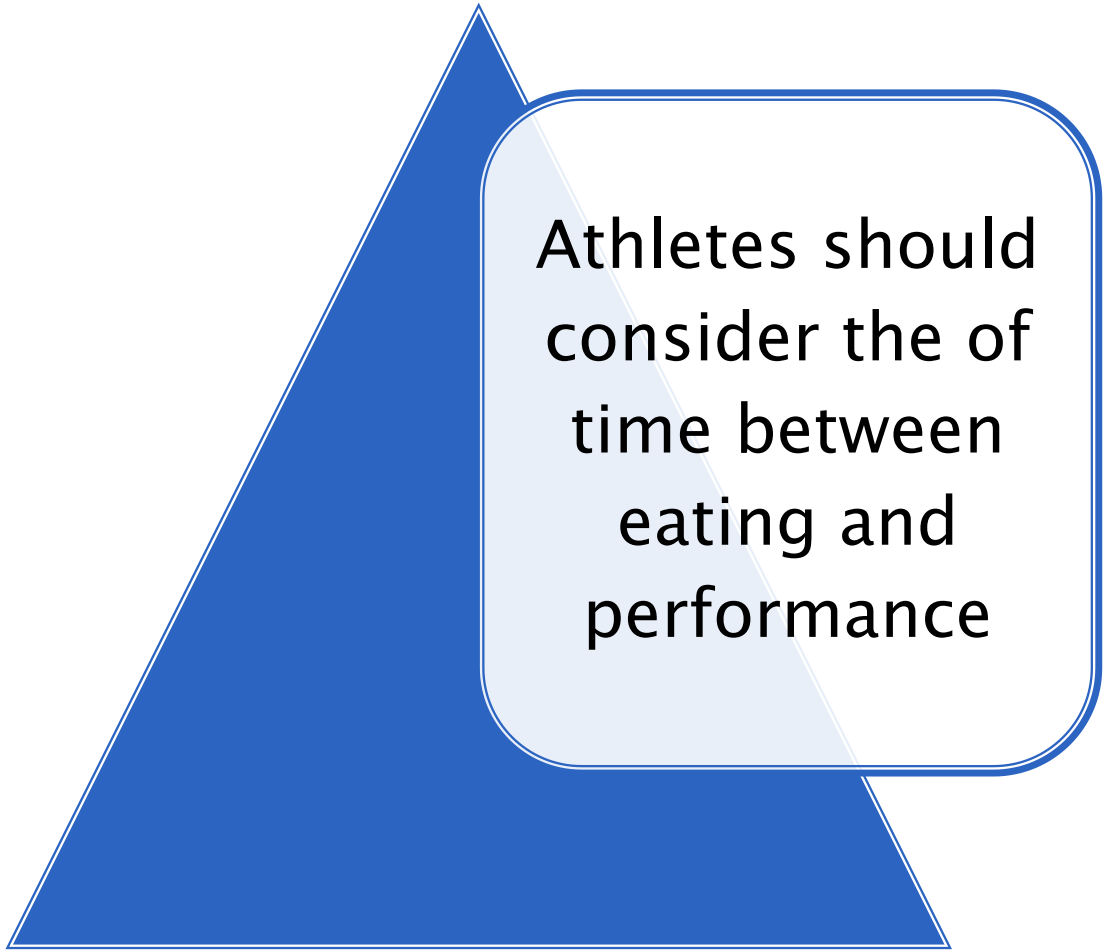
Guidelines for Optimal Performance

- Education
- Start Early
- Gradual Progression
- Consistency
  - Eating habits
  - Training routine

Guidelines for Optimal Performance

1. Eat a balance breakfast
2. Drink plenty of water
3. Eat a variety of Foods
   - MyPyramid.gov
4. Avoid eating too much fatty foods
5. Eat foods with adequate complex carbs and fiber
6. Avoid too much sugar

All Day Events



Menu Plans

- **One Hour Or Less Before**
- fruit and vegetable juices such as orange, tomato or v-8 juices,

- fresh fruit such as
  - apples,
  - watermelon,
  - peaches,
  - grapes or
  - oranges.

Menu Plans

- **Two To Three Hours Before**
- □ fruit juices and fresh fruit, and/or

- □ breads, bagels or muffins, with a limited amount of butter or cream cheese

Menu Plans

- **Three To Four Hours Before**
- □ fruit juices and fresh fruit, and
- □ breads, bagels or muffins, and
- □ a light spread of peanut butter or
- □ slice of cheese for breads, or a
- □ light spread of cream cheese or
- □ butter for bagels and/or
- □ bowl of cereal with low fat milk

Menu Plans

- **Four Hours Or More Before**
- □ sandwich with 2 slices of bread
  and 2 ounces of lean meat, and
- □ fresh fruit, and
- □ fresh vegetables, and
- □ low fat milk

Training Program

Strength	Endurance	Hydration
• 3 days/week	• 2-3 times/week	• Adequate amounts

Commitment

The decisions you make will affect your Lifestyle forever!

Wrestling

Sauna

Sweat boxes

Rubber suits

Starving Athletes

Maintaining Optimal Performance

A victory not only on the mat but off the mat


Wrestlers can
wrestle,
eat and
win!

References

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- 2. American Heart Association Low-Salt Cookbook: Edited by Rodman D. Starke and Mary Winston. Times Books, 1990.
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- 4. N-Squared Computing: Nutritionist IV Program : 3040 Commercial St. SE, Salem, OR, 97302 .

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- 2. Exercise Physiology: Energy, Nutrition. and Human Performance: McArdle, William; Katch, Frank; and Katch, Victor. Lea and , Febiger. Malvern, PA, 1991.
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- 4. Helping Athletes with Eating Disorders: Ron A. Thompson and Roberta Trattner, Sherman, 1993.
- 5. Power Foods: Applegate, Liz, Rodale Press, Emmans, PA, 1991.
- 6. Sports Nutrition: Sports and Cardiovascular Nutritionists (SCAN):American Dietetic Association: Chicago, 1993

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- 10. Fuel for Young Athletes: Essential foods and fluids for future champions: Litt, Ann, Human Kinetics, Champaign, IL 2004

Best of luck for the upcoming season