



# NUTRITION, WEIGHT MANAGEMENT & FITNESS -A DELICATE BALANCE

By: Canon Dr. P.J. Pelham-Hazeley  
PJ's Primary Medical Center

# OVERVIEW

- **WHAT IS NUTRITION?**
- THE PROCESS OF PROVIDING OR OBTAINING THE FOOD NECESSARY FOR HEALTH AND GROWTH
- FOOD OR NOURISHMENT
- THE BRANCH OF SCIENCE THAT DEALS WITH NUTRIENTS AND NUTRITION PARTICULARLY IN HUMANS

# HEALTHY WORKPLACE DEFINED

- A HEALTHY WORKPLACE INTEGRATES THE FOLLOWING THREE ELEMENTS TO ACHIEVE OPTIMAL HEALTH OF ITS PEOPLE AND ITS BUSINESS:
  - HEALTH AND LIFESTYLE PRACTICES (AVAILABILITY OF RESOURCES AND SUPPORT OF EMPLOYEES' EFFORTS TO ADOPT AND MAINTAIN HEALTHY LIFESTYLE PRACTICES)
  - ORGANIZATIONAL CULTURE (ATTITUDES, VALUES AND BELIEFS DEMONSTRATED IN THE WORKPLACE ON A DAILY BASIS THAT IMPACT THE WELL-BEING OF EMPLOYEES)
  - PHYSICAL WORK ENVIRONMENT

# WHY IS A HEALTHY WORKPLACE IMPORTANT?

- MORE THAN 4 MILLION ADULT ZAMBIANS SPEND HALF OF THEIR WAKING HOURS AT WORK — THE ENVIRONMENTS IN WHICH PEOPLE LIVE, LEARN, WORK AND PLAY HAVE A SIGNIFICANT IMPACT ON HEALTH
- HEALTHY EMPLOYEES HAVE HIGHER MORALE, ARE MORE PRODUCTIVE, AND REPORT HIGHER LEVELS OF JOB SATISFACTION
- ABSENTEEISM COSTS ARE IN EXCESS OF MILLION KWACHAS A YEAR IN ZAMBIA

# BENEFITS TO EMPLOYEES

- IMPROVED FITNESS, HEALTH, AND LIFESTYLE
- IMPROVED WORK/LIFE BALANCE
- IMPROVED MORALE AND ENGAGEMENT
- IMPROVED TEAM SPIRIT AND JOB SATISFACTION
- REDUCED STRESS AND INCIDENCES OF INJURY
- ENHANCED RELATIONSHIPS WITH CO-WORKERS

# BENEFITS WITHIN THE WORKPLACE

- REDUCED ABSENTEEISM AND TURNOVER
- REDUCED BENEFITS CLAIMS
- ENHANCED RECRUITMENT AND RETENTION
- ENHANCED REPUTATION

*Discovering*

# Nutrition

Energy Balance  
and Weight Management:  
Finding Your Equilibrium



The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance.

# 2 TYPES OF NUTRIENTS

MICRONUTRIENTS AND MACRONUTRIENTS

MICRONUTRIENTS – VITAMINS & MINERALS

MACRONUTRIENTS – CARBOHYDRATES, PROTEIN AND

FAT

- NEEDED FOR ENERGY



# A BALANCED DIET

When considering where to get the energy needed for sport, it is more helpful to think about food in terms of what **molecules** it contains, rather than where it comes from.

Energy in food comes in three main forms:



Carbohydrates



Proteins

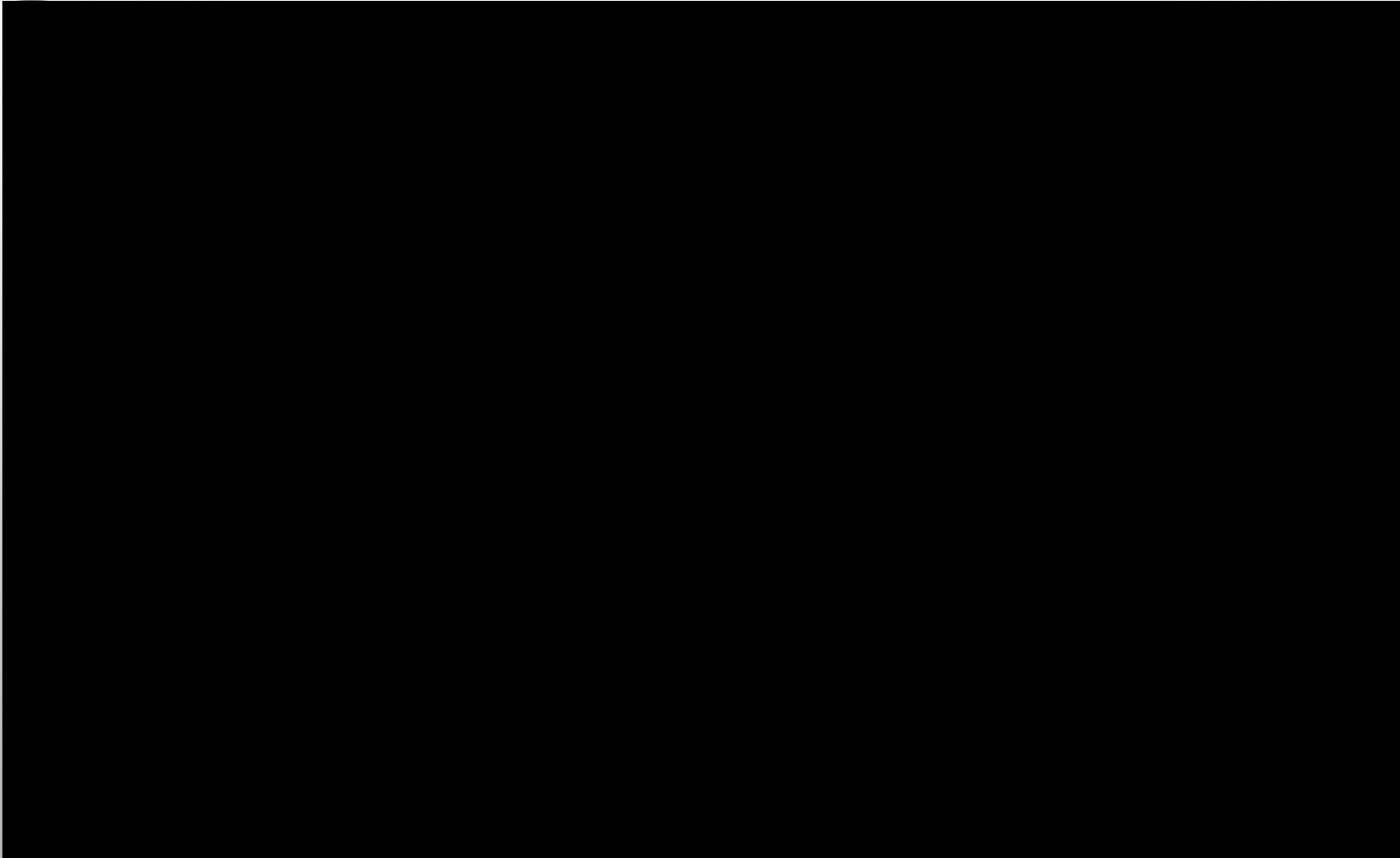


Fats

The body also requires **vitamins**, **minerals**, **fibre** and, of course, **water** in order to function properly.



# A BALANCED DIET



# CARBOHYDRATES

## Foods containing carbohydrates



*Fruit*



*Breads*



*Biscuits*

*Rice*



*Breakfast cereals*

*Pasta*



*Root vegetables*



*Potatoes*





# FATS

**Fats** are also used for energy, but only when stores of carbohydrate run low.

Weight-for-weight, fat contains more than twice as much energy as carbohydrates or proteins. However, lots of oxygen is required to release this energy.

This means that energy can only be released **slowly** from fats.

Fats supply the energy we need for endurance activities.



# FATS

Because fat contains so much energy, you can easily eat more than your body needs.

Excess fat is stored as **body fat**, causing weight gain.

In some sports like sumo wrestling and shot-putting, extra bulk can be an advantage. However, for most performers, extra body fat will hamper their performance.

If your body weighs more, it is more difficult to move. Sportspeople who need to move fast, like runners and games players, should **limit the amount of fat** in their diet.





# FATS

## Foods containing fats



*Butter*



*Margarine*



*Cooking oil*



*Meat*

*Sausages*



*Cakes*



*Cheese*



*Cream*



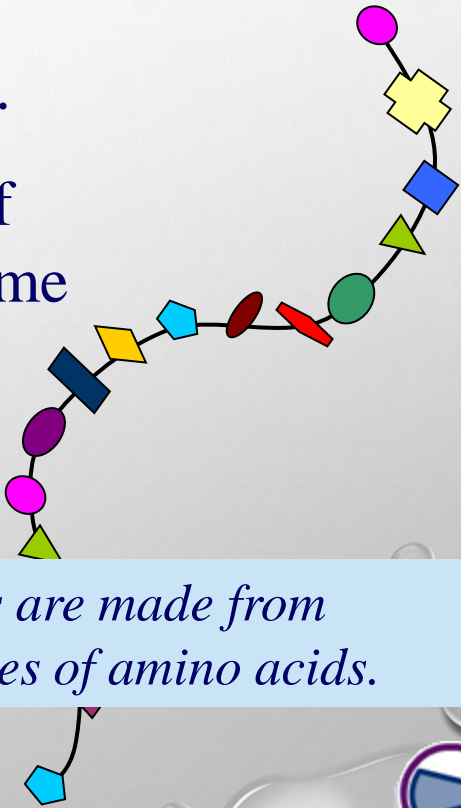
# PROTEINS

**Proteins** are used to generate energy only when the body has exhausted its stores of carbohydrates and fats. Proteins are very important in the body for other reasons. Our muscles and other tissues are made from proteins.

The body manufactures proteins from **amino acids**.

Your body cannot make all of the different types of amino acid that it needs – you have to consume some of them in the food that you eat.

The protein you eat is broken down into amino acids and used by the body to build cells, make blood and repair and replace tissue.



*Proteins are made from sequences of amino acids.*





# PROTEINS

Proteins are especially important for sportspeople who need to build up large, powerful muscles.

Performers in sports like weightlifting, rugby and sprinting can benefit from a protein-rich diet.



Proteins are also needed by performers who are **recovering from injury** in order to repair damaged tissue.



# PROTEINS

## Foods containing proteins



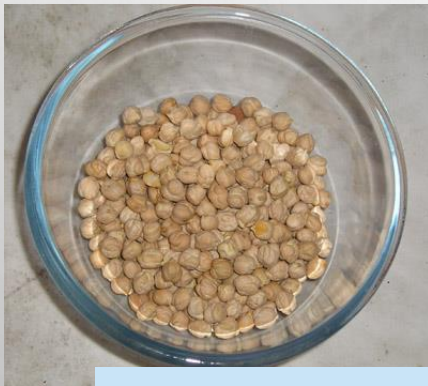
*Meat*



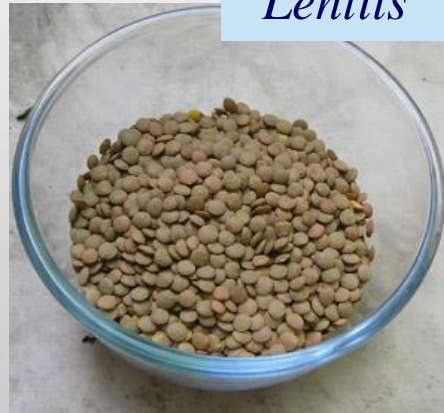
*Eggs*



*Fish*



*Chick peas*



*Lentils*



*Nuts*



# INDIVIDUAL ENERGY NEEDS

The amount of energy required varies from person to person. It depends on a number of factors:

**Age** – as you grow up and your body gets larger, it requires more energy. However, after the age of about 40, your metabolism slows down and you don't need to eat as much.

**Size** – larger people require more energy to keep their bodies functioning and to move them around.

**Sex** – males usually require more energy than females because they tend to be more heavily built.

**Lifestyle** – the more activity you do, the more energy you will require.





# VITAMINS

Your body needs **vitamins** to help it work normally.

○ Vitamins are needed for many functions including:

- releasing energy from food
- repair and growth of tissues
- resisting infection and disease
- regulating chemical reactions in the body.



*Fruit and vegetables contain a lot of vitamins.*



# MINERALS

**Minerals** are basic elements that are found in the air and the earth.

The body needs small amounts of certain minerals in order to stay healthy.

Mineral	Found in	Why is it needed
Calcium	Vegetables, dairy products and dried fish	Keeping bones and teeth hard
Iron	Red meat, liver, beans, lentils and green vegetables	Making blood, preventing tiredness and anaemia
Iodine	Seafood and dairy products	Maintaining the thyroid gland



# FIBRE

**Fibre** is actually a substance called **cellulose**. It is found in the cell walls of plants.

Fruit, vegetables and whole-grain cereals are good sources of dietary fibre.



Fibre cannot be digested, but it is required to aid the smooth working of our digestive system.

People who eat too little fibre often suffer from **constipation** and may run a higher risk of bowel cancer.



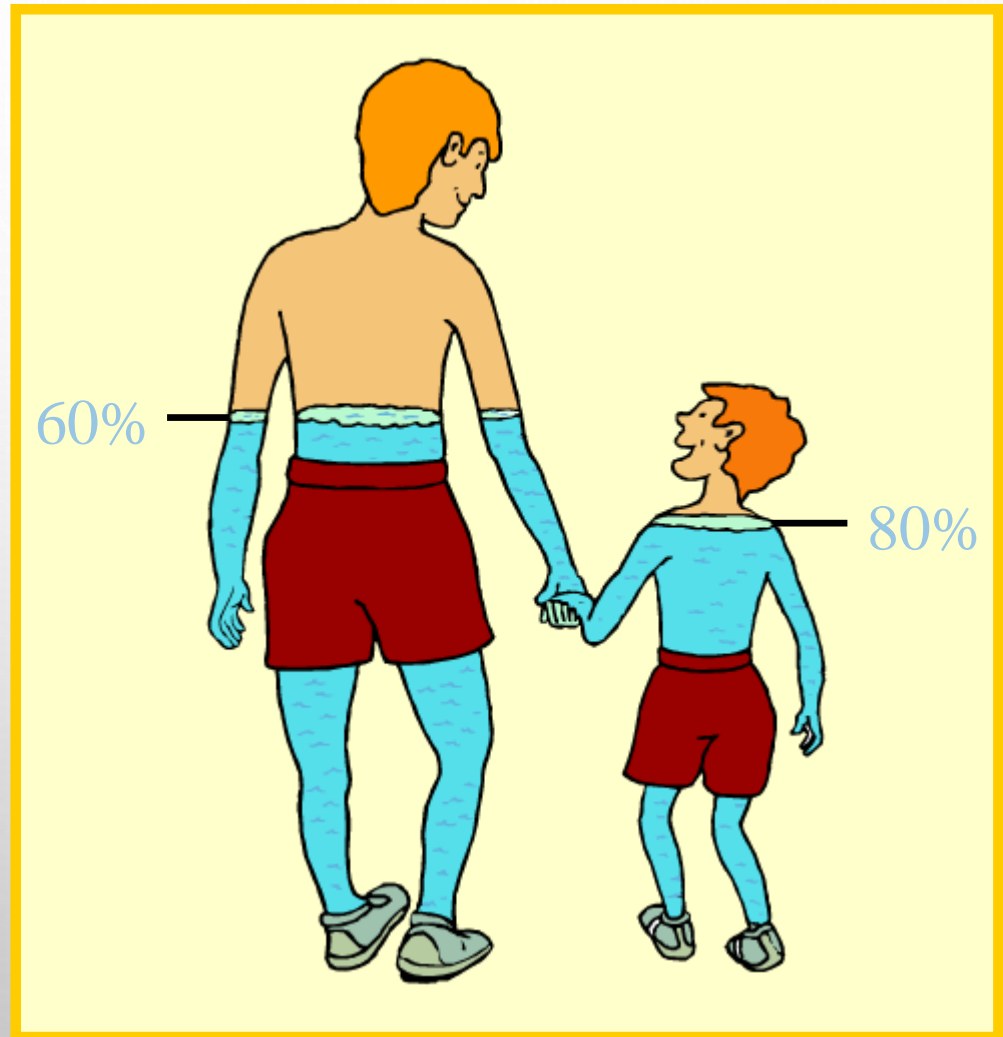
# WATER

The body is mainly composed of **water**.

Approximately **60%** of an adult's weight and approximately **80%** of a child's weight is made up of water.

It is vitally important that you drink enough water.

**Dehydration** can seriously damage performance.





# WATER



Water plays an integral part in regulating our **body temperature** when exercising.

When we exercise, the body secretes water as sweat. As the sweat evaporates off our skin, it takes heat with it, helping the body to stay cool.

We also lose water through breathing. This is why glass mists up when we breathe on it – the water vapour in our breath condenses on the cold surface.



# WATER AND HEALTH

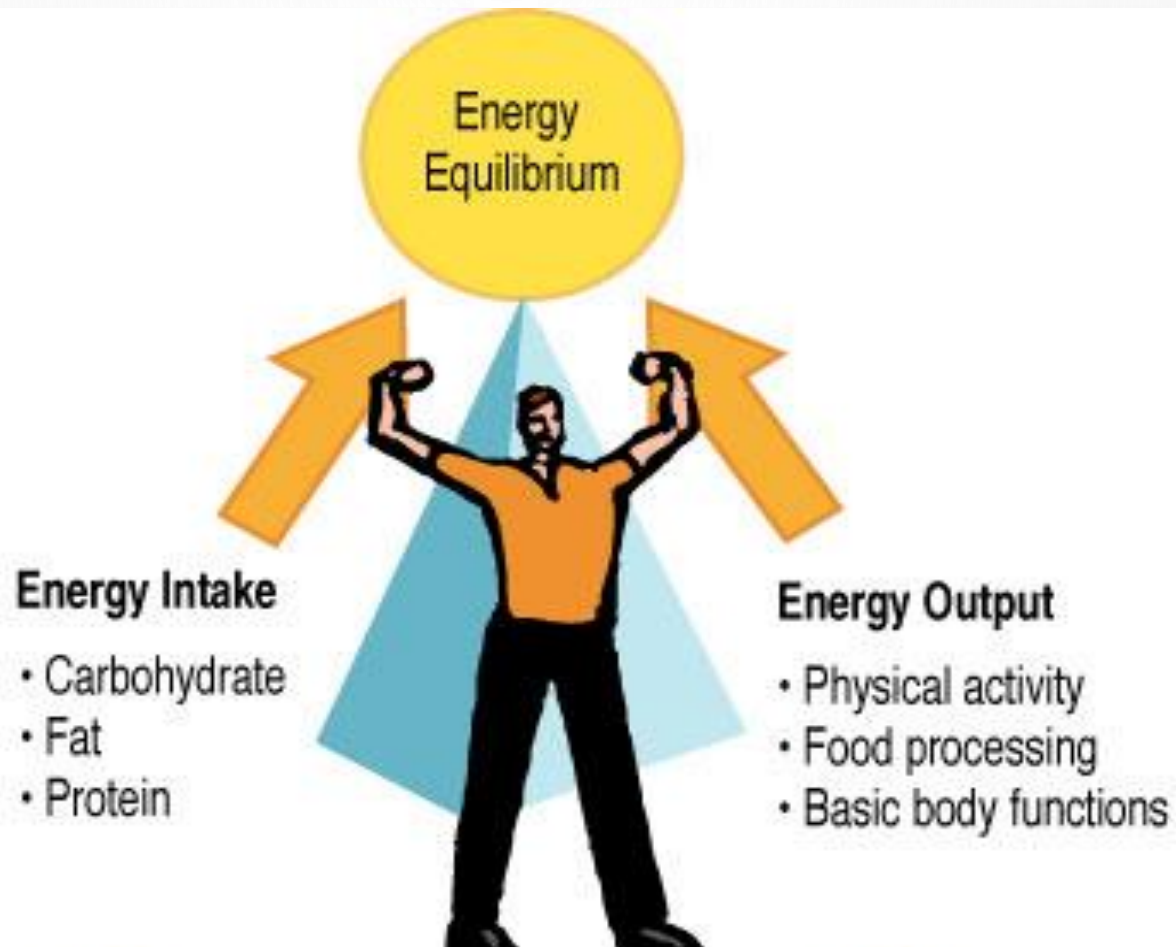
Drinking adequate amounts of water regularly throughout the day can help to protect health and contribute to well-being.

- Drinking plenty of water can help prevent a range of **health problems** including headaches, bladder, kidney and bowel problems and even cancer.
- Water does not contain sugar, additives, sweeteners, acids or caffeine, all of which are associated with health problems.
- Water can aid **learning** – when you are thirsty, mental performance deteriorates by 10%. It is easier to concentrate when you are not distracted by effects of dehydration such as thirst, tiredness and irritability.



# ENERGY BALANCE

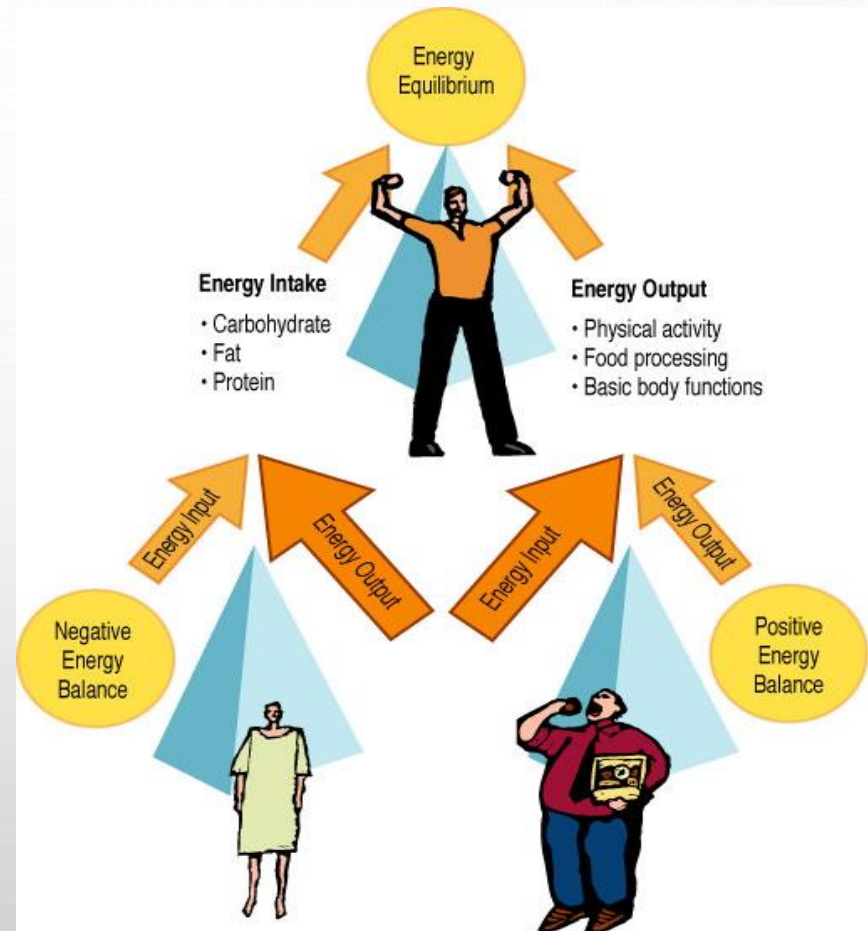
- ENERGY INTAKE VS. ENERGY OUTPUT





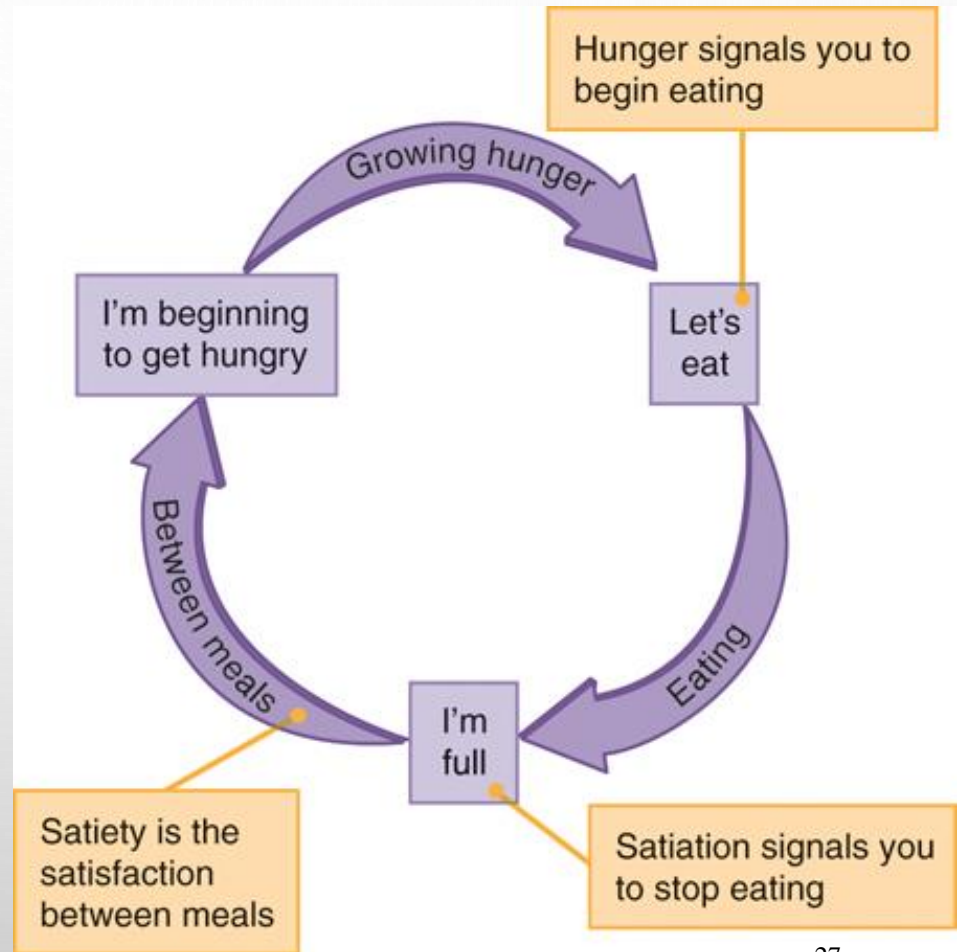
# ENERGY BALANCE

- ENERGY EQUILIBRIUM
  - INTAKE = OUTPUT
  - MAINTAIN WEIGHT
- POSITIVE ENERGY BALANCE
  - INTAKE > OUTPUT
  - GAIN WEIGHT
- NEGATIVE ENERGY BALANCE
  - INTAKE < OUTPUT
  - LOSE WEIGHT



# ENERGY IN

- REGULATION OF INTAKE
  - INTERNAL CUES
    - HUNGER
      - PROMPTS EATING
    - SATIATION
      - SIGNALS TO STOP EATING
    - SATIETY
      - TELLS WHEN YOU ARE READY TO EAT AGAIN



# ENERGY IN

- REGULATION OF INTAKE
  - EXTERNAL CUES
    - APPETITE
      - PSYCHOLOGICAL DESIRE TO EAT
      - INFLUENCED BY THE EATING ENVIRONMENT

# ENERGY IN

- CONTROL BY COMMITTEE
  - WHAT STIMULATES OUR CUES?
    - INTERNAL, PHYSIOLOGICAL RESPONSE
    - EATING ENVIRONMENT



# ENERGY IN

- INTERNAL FACTORS
  - GASTROINTESTINAL SENSATIONS
    - SENSE OF FULLNESS
  - NEUROLOGICAL AND HORMONAL FACTORS
    - NEUROPEPTIDE Y
    - GHRELIN
    - LEPTIN

# ENERGY IN

- EXTERNAL FACTORS
  - DIET COMPOSITION
    - ENERGY DENSITY, BALANCE OF ENERGY SOURCES, AND FORM
    - MACRONUTRIENTS
  - SENSORY PROPERTIES
    - TASTE



# ENERGY IN

- EXTERNAL FACTORS

- PORTION SIZE

- SUPER-SIZE CULTURE

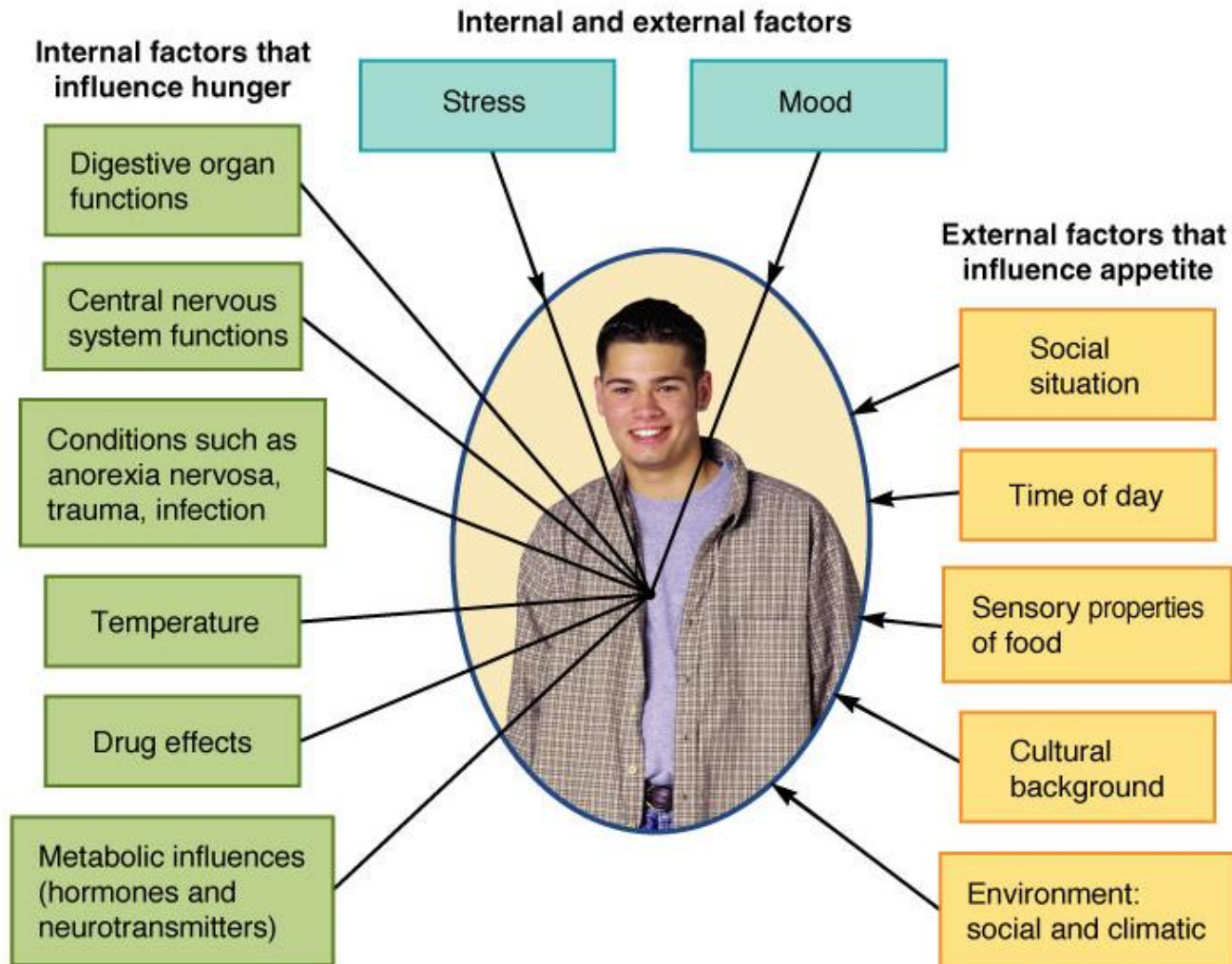
- ENVIRONMENT AND SOCIAL FACTORS

- HYPOTHALAMUS

- EMOTIONAL FACTORS

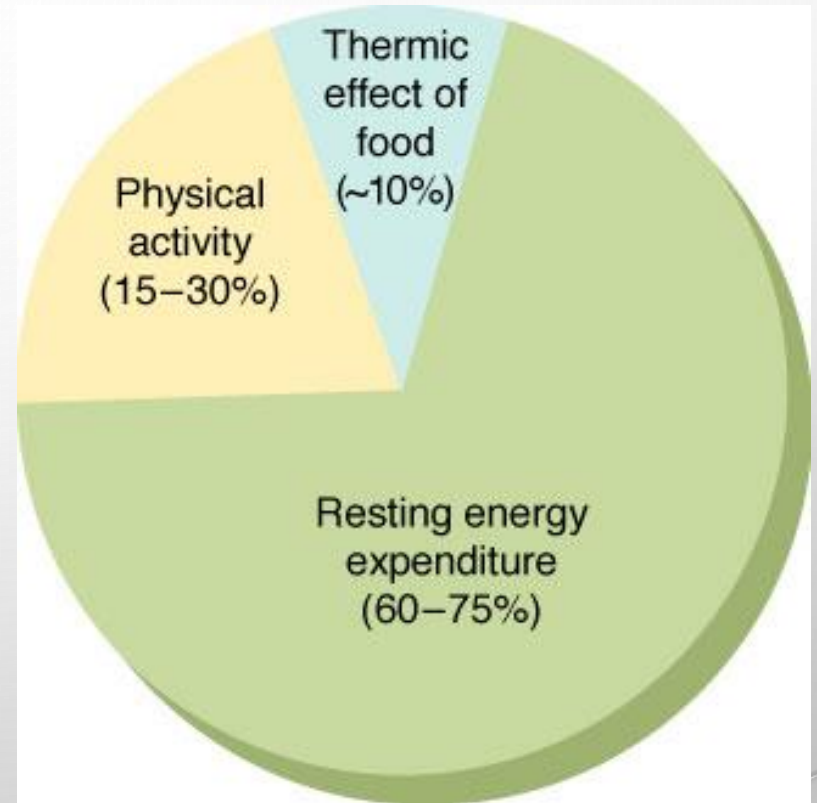
- HYPOTHALAMUS

# ENERGY IN: REGULATORY FACTORS



# ENERGY OUT: FUEL USES

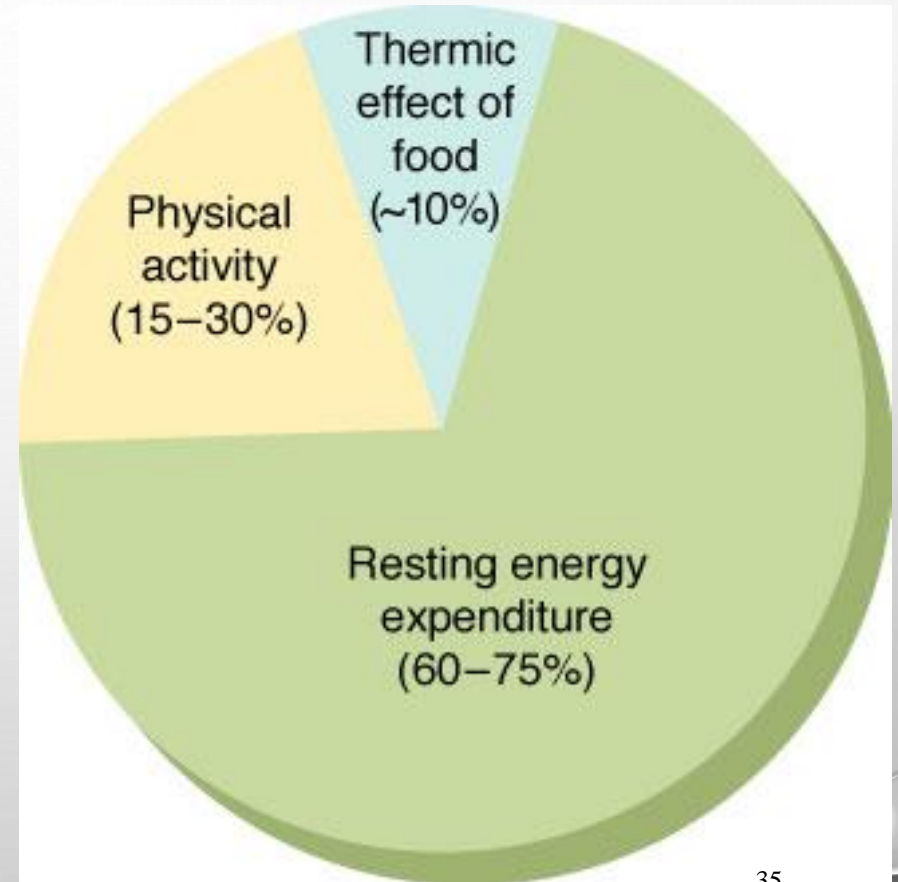
- TOTAL ENERGY EXPENDITURE
- MAJOR COMPONENTS OF ENERGY EXPENDITURE
  - ENERGY EXPENDITURE AT REST (BASAL ENERGY EXPENDITURE)
    - ENERGY FOR BASIC BODY FUNCTIONS
    - AFFECTED BY BODY SIZE, COMPOSITION, AGE, AND GENDER





# ENERGY OUT: FUEL USES

- MAJOR COMPONENTS OF ENERGY EXPENDITURE
  - PHYSICAL ACTIVITY
    - HIGHLY VARIABLE
    - AFFECTED BY BODY SIZE, FITNESS LEVEL, TYPE OF ACTIVITY
  - THERMIC EFFECT OF FOOD (TEF)
    - ENERGY TO DIGEST, ABSORB, METABOLIZE FOOD



# ENERGY OUT: FUEL USES

- ESTIMATING ENERGY EXPENDITURE
  - RESTING ENERGY EXPENDITURE (REE)
    - 1.0 KCAL/KG/HR FOR MALES
    - 0.9 KCAL/KG/HR FOR FEMALES
  - PHYSICAL ACTIVITY
    - ADD A % OF REE (SEE TABLE 8.2)
  - THERMIC EFFECT OF FOOD
    - 6% TO 10% OF (REE + PHYSICAL ACTIVITY)



# ESTIMATING ENERGY EXPENDITURE

- ESTIMATED ENERGY REQUIREMENT (EER)
  - EQUATIONS FOR MALES AND FEMALES
    - FACTORS FOR AGE, WEIGHT, HEIGHT, AND PHYSICAL ACTIVITY
  - PREDICTS TOTAL ENERGY EXPENDITURE (TEE)

# WEIGHT MANAGEMENT

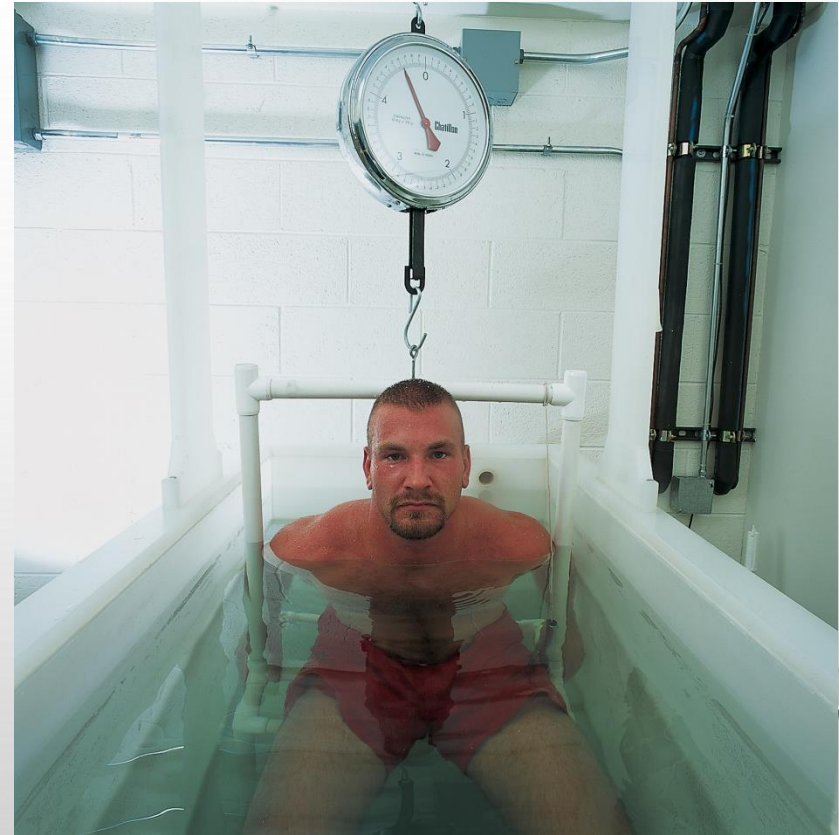


# BODY COMPOSITION: UNDERSTANDING FATNESS AND WEIGHT

- BODY COMPOSITION
  - FAT AND LEAN MUSCLE MASS
- ASSESSING BODY WEIGHT
  - BODY MASS INDEX (BMI)
    - $\text{WEIGHT (KG)} \div \text{HEIGHT}^2 \text{ (M)}$
    - $\text{BMI} < 18.5 \text{ KG/M}^2 = \text{UNDERWEIGHT}$
    - $\text{BMI } 18.5 \text{ TO } < 25 \text{ KG/M}^2 = \text{NORMAL WEIGHT}$
    - $\text{BMI } 25 \text{ TO } < 30 \text{ KG/M}^2 = \text{OVERWEIGHT}$
    - $\text{BMI} \geq 30 \text{ KG/M}^2 = \text{OBESE}$

# BODY COMPOSITION: UNDERSTANDING FATNESS AND WEIGHT

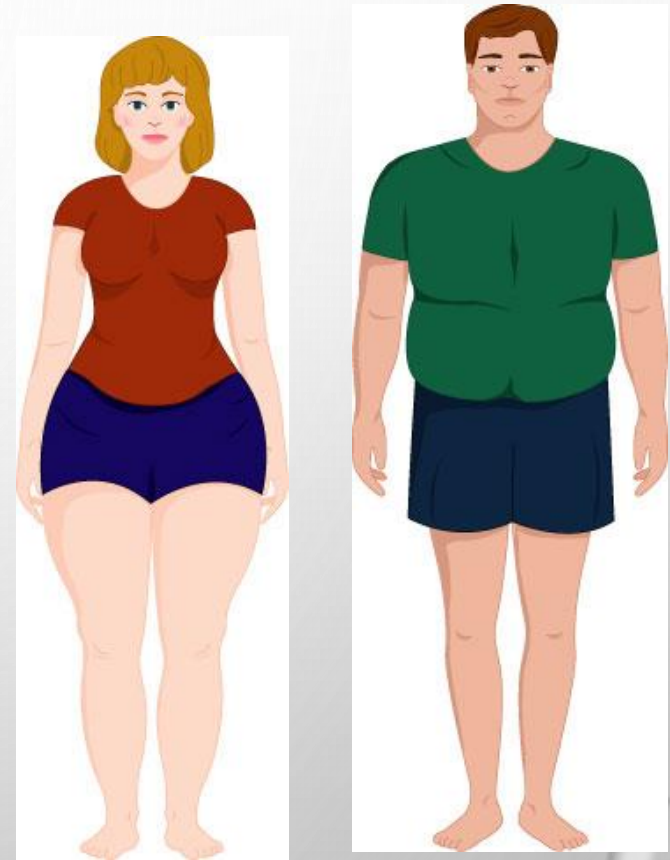
- ASSESSING BODY FATNESS
  - UNDERWATER WEIGHING
  - BODPOD
  - SKINFOLD MEASUREMENTS
  - BIOELECTRICAL IMPEDANCE





# BODY COMPOSITION: UNDERSTANDING FATNESS AND WEIGHT

- BODY FAT DISTRIBUTION
  - GYNOID OBESITY (“PEAR”)
    - EXCESS FAT IN HIPS AND THIGHS
  - ANDROID OBESITY (“APPLE”)
    - EXCESS FAT AROUND ABDOMEN
  - WAIST CIRCUMFERENCE



# OVERWEIGHT AND OBESITY

- MAJOR PUBLIC HEALTH PROBLEM



# OVERWEIGHT AND OBESITY

- FACTORS IN DEVELOPMENT OF OBESITY
  - BIOLOGICAL
    - HEREDITY
    - GENE-ENVIRONMENT
    - FAT CELL DEVELOPMENT
    - SEX AND AGE
    - RACE AND ETHNICITY

# OVERWEIGHT AND OBESITY

- FACTORS IN DEVELOPMENT OF OBESITY
  - SOCIAL AND ENVIRONMENTAL
    - SOCIOECONOMIC STATUS
    - BUILT ENVIRONMENT
      - “HUMAN FORMED, DEVELOPED, OR STRUCTURED AREAS”
    - SOCIAL FACTORS



# OVERWEIGHT AND OBESITY

- FACTORS IN DEVELOPMENT OF OBESITY
  - LIFESTYLE AND BEHAVIORAL
    - PHYSICAL ACTIVITY
      - LACK OF EXERCISE
    - PSYCHOLOGICAL FACTORS
      - RESTRAINED EATERS
      - BINGE EATERS

# OVERWEIGHT AND OBESITY

- HEALTH RISKS OF OVERWEIGHT AND OBESITY
  - HEART DISEASE, STROKE, DIABETES, HYPERTENSION, METABOLIC SYNDROME, CANCER, GALLBLADDER DISEASE, JOINT DISEASE, AND SLEEP APNEA
- WEIGHT CYCLING
  - LOW LDL CHOLESTEROL, HYPERTENSION

# WEIGHT MANAGEMENT

- *WEIGHT MANAGEMENT* IS THE ADOPTION OF HEALTHFUL AND SUSTAINABLE EATING AND EXERCISE BEHAVIORS INDICATED FOR REDUCED DISEASE RISK AND IMPROVED FEELINGS OF ENERGY AND WELL-BEING.

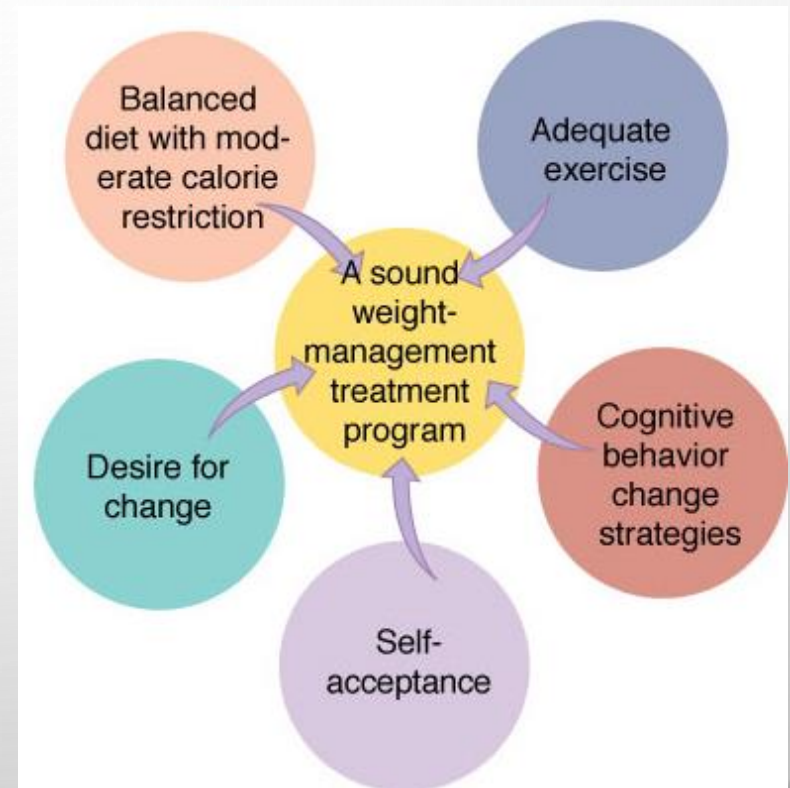
# WEIGHT MANAGEMENT

- PERCEPTION OF WEIGHT
- SETTING REALISTIC GOALS
  - METABOLIC FITNESS



# WEIGHT MANAGEMENT

- WEIGHT-MANAGEMENT LIFESTYLE
- DIET AND EATING HABITS
  - TOTAL CALORIES
  - CRASH DIETS DON'T WORK
  - BALANCING ENERGY SOURCES: FAT
  - BALANCING ENERGY SOURCES: PROTEIN
  - EATING HABITS
  - PHYSICAL ACTIVITY



# IS THERE HOPE?

- IS IT POSSIBLE TO LOSE WEIGHT AND KEEP IT OFF?
- WHAT REALLY WORKS, WHAT DOESN'T?



# WEIGHT LOSS – THE FORMULA

- ENERGY IN=ENERGY OUT, BODY WEIGHT IS MAINTAINED
- ENERGY IN > ENERGY OUT, BODY WEIGHT INCREASES
- ENERGY IN<ENERGY OUT, BODY WEIGHT DECREASES

# IS BODY WEIGHT SO STRAIGHT FORWARD?

- NO –
- HORMONES – LEPTIN, GHERLIN
- GENES AND EPIGENETICS
- TEMPERATURE – BROWN FAT
- VIRUSES
- GUT BACTERIA
- SURGERY



# FIRST RULE OF THUMB

- DO NOT GAIN ANY MORE WEIGHT!
- MAINTAINING WEIGHT IS CONSIDERED A SUCCESSFUL STRATEGY.
- HEALTH AT EVERY SIZE (HAES)
- FOCUS ON HEALTH NOT WEIGHT- EATING NUTRIENT DENSE FOODS, MOVING THE BODY.

# STRATEGIES FOR SUCCESS

- MEAL PATTERN AND FREQUENCY
- PORTION CONTROL
- DIET COMPOSITION
  - HIGH FIBRE, LOW FAT
  - HIGHER PROTEIN
  - LOW GLYCEMIC INDEX CARBOHYDRATE CHOICES
- MONITORING AND RECORDING
- PHYSICAL ACTIVITY
- SLEEP

# STRATEGIES FOR SUCCESS

- MEAL FREQUENCY
  - ONE MEAL A DAY, 2, 3 OR 5 SMALL MEALS A DAY?
    - RESEARCH – NOT MUCH DIFFERENCE!
    - POSSIBLE ASSOCIATION WITH LOWER RATINGS OF HUNGER AND LOWER REPORTED ENERGY INTAKES.
    - THE RESEARCH DOES NOT SUPPORT THIS.
    - MORE RESEARCH IS NEEDED.

# STRATEGIES FOR SUCCESS

- BREAKFAST!
  - ADULTS WHO SKIP BREAKFAST ARE MORE LIKELY TO HAVE A HIGHER BODY MASS INDEX.
  - EATING BREAKFAST IS ALSO ASSOCIATED WITH REDUCING THE AMOUNT OF WEIGHT GAINED OVER TIME.



# STRATEGIES FOR SUCCESS

- PORTION CONTROL
  - INCREASED SUCCESS WITH LOSING WEIGHT AND KEEPING IT OFF WITH THE USE OF PORTION CONTROL METHODS.
  - PORTION CONTROL PLATES, RAMEKINS, PORTIONED SNACKS.
  - COMMERCIALY PACKAGED MEALS.





# STRATEGIES FOR SUCCESS

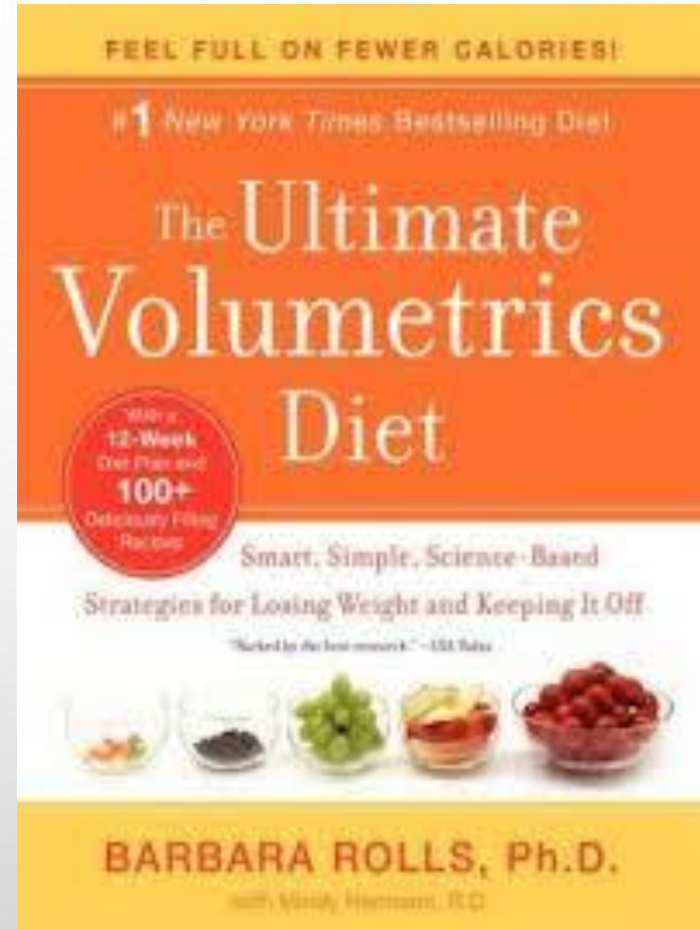
- SOME EVIDENCE THAT SMALLER PORTION SIZE IS ASSOCIATED WITH LOWER CALORIE INTAKES WITHOUT INCREASING RATINGS OF HUNGER.
- STRATEGIES LIKE SMALLER PLATES AND CUPS, MEASURING OR WEIGHING FOOD, LOOKING AT NUTRITION SERVINGS SIZES CAN HELP.

# DIET COMPOSITION

- HIGH FIBRE, LOW FAT
  - BODY MASS INDEX WAS LOWER IN INDIVIDUALS WHO CONSUMED MORE FIBRE AND LESS DIETARY FAT.
  - HIGH FIBRE AND LOW FAT FOODS – WHOLE GRAINS, VEGETABLES, FRUIT, BEANS, FILLING AND SATISFYING.
  - PEOPLE EAT ABOUT THE SAME AMOUNT OF FOOD AT MEALS, IF YOU CHANGE THAT FOOD FROM HIGHER CALORIES DENSE FOODS ( CHEESE, OILS, GRAINS) TO LOWER CALORIE DENSE FOODS VEGETABLES, YOU GET A REDUCTION IN OVERALL CALORIES.

# VOLUMETRICS

- PROGRAM CALLED VOLUMETRICS – TRIM CALORIES PER BITE TO TRIM POUNDS.
- FOOD WITH LOTS OF WATER LIKE VEGETABLES AND FRUITS HAS LESS CALORIES PER BITE.



Both of these meals have the same calories, which would fill you up?



# VOLUMETRICS





# VOLUMETRICS

- GOOD APPROACH THAT HAS PROMISE, ENCOURAGES HEALTHY FOODS THAT ARE SATISFYING AND FILLING.
- CUT FAT AND ADD VEGETABLES AND FRUIT WHEREVER YOU CAN, A PIZZA WOULD HAVE LESS CHEESE AND MORE VEGETABLES.
- HAVE A LOW CALORIE DENSE SOUP OR SALAD OR WHOLE PIECES OF APPLE AT THE START OF YOUR MEAL.

# NOT ALL LOW FAT FOODS HAVE A LOW CALORIE DENSITY

- LOW FAT COOKIES, BROWNIES, CHIPS AND PRETZELS ARE LOW IN FAT BUT NOT CALORIE DENSITY.
- LOW FAT MAY GIVE PEOPLE LICENSE TO EAT MORE, IN STUDIES PEOPLE ATE MORE YOGURT IF IT WAS LABELLED LOW FAT.
- MAIN CONCEPT IS TO ADD VEGETABLES TO FOODS TO LOWER CALORIE DENSITY.

# DIET COMPOSITION

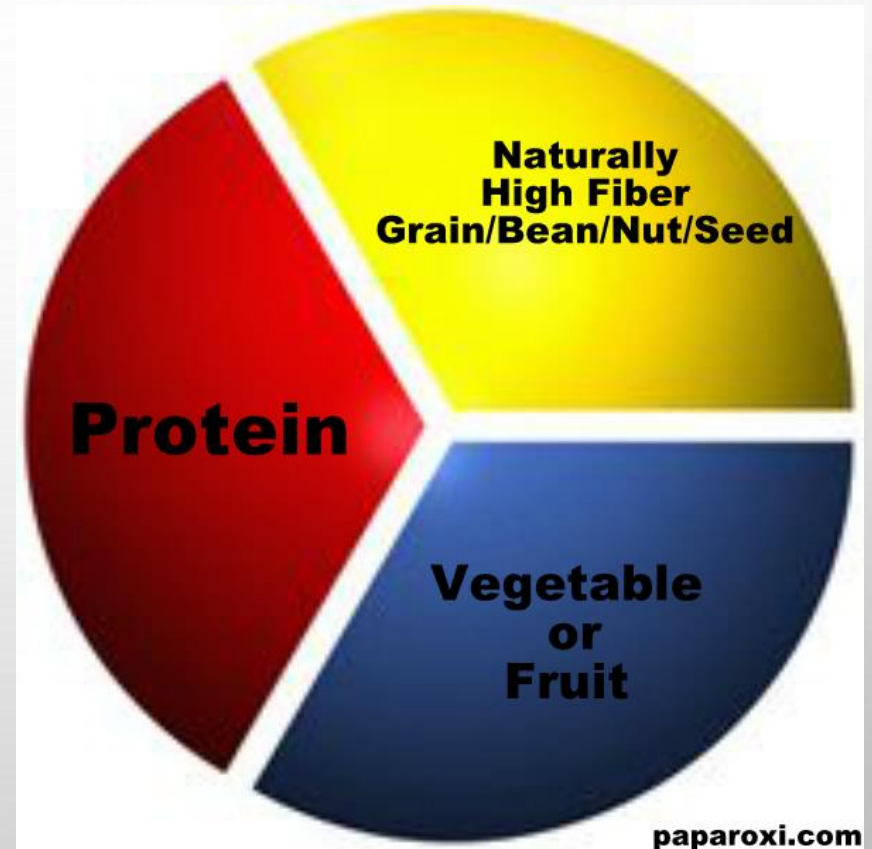
- HIGHER PROTEIN DIET ( NOT HIGH)
  - EVIDENCE THAT A INCLUDING MORE PROTEIN IN THE DIET MAY HAVE SOME BENEFIT IN PROMOTING FAT LOSS AND HELPING PEOPLE KEEP THE WEIGHT OFF.
  - MAINTAINING ADEQUATE PROTEIN INTAKE IMPORTANT WITH A CALORIE RESTRICTED DIET.
  - POSSIBLE REASON – PROLONGING SATIETY, SUPPRESSING FOOD INTAKE.

# PROTEIN

- WHEY PROTEIN MAY HAVE AN ADVANTAGE, IT HAS AN INCREASED SATIATING EFFECT.
- GOOD PROTEIN SOURCE SHOULD BE INCLUDED AT EACH MEAL – BREAKFAST, LUNCH AND SUPPER.
- LEAN MEAT, AND POULTRY, FISH, LOW FAT DAIRY, GREEK YOGURT, EGGS, NUTS AND SEEDS, BEAN, TOFU, PROTEIN POWDERS.

# MEAL BALANCE-BREAKFAST

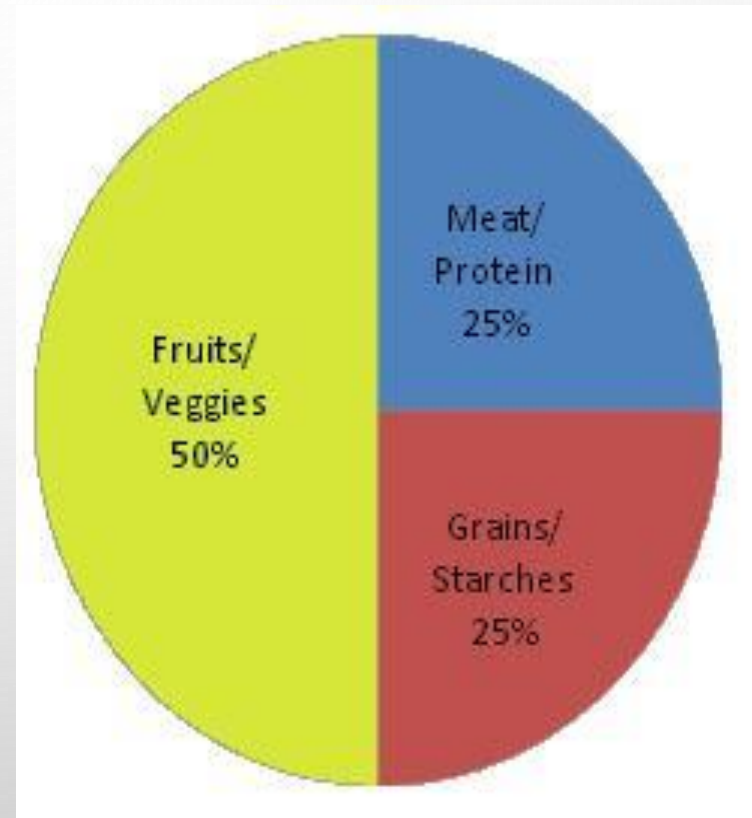
- MANY OF US ARE NOT GETTING ENOUGH PROTEIN AT BREAKFAST.
- CEREAL, MILK, FRUIT – NOT ENOUGH.





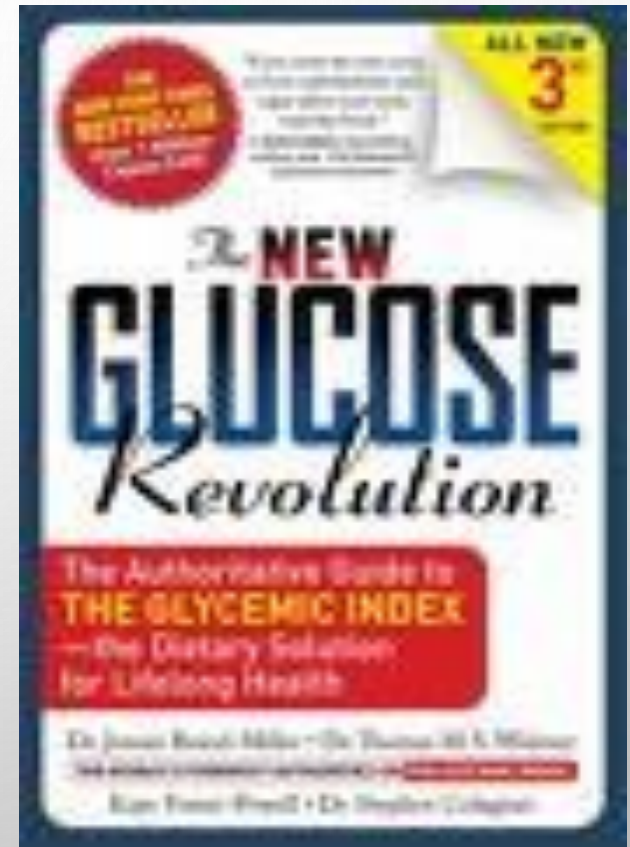
# MEAL BALANCE – LUNCH AND DINNER

- INCLUDE PROTEIN AT EACH.
- 1/2 PLATE VEGETABLES.
- USE SMALLER PLATES.



# LOW GLYCEMIC INDEX (GI) FOODS

- CHOOSING LESS HIGH GLYCEMIC INDEX (GI) CHOICES AND MORE LOW GI FOODS MAY HELP PEOPLE LOSE MORE WEIGHT, INCLUDING FAT MASS.
- GOOD INDICATORS THAT THIS APPROACH CAN HELP PEOPLE BE MORE SUCCESSFUL AT MAINTAINING LOST WEIGHT.



# LOW GI FOODS

- [WWW.GLYCEMICINDEX.COM](http://WWW.GLYCEMICINDEX.COM)
- ALL BRAN BUDS, OATMEAL, MULTIGRAIN BREAD, PUMPERNICKLE BREAD, BARLEY BULGUR, PASTA, CONVERTED RICE, APPLES, PEARS, ORANGES, LENTILS, KIDNEY BEANS, CHICKPEAS.
- HEALTHY SATISFYING FOODS.

# SUCCESSFUL STRATEGIES

- SELF - MONITORING  
AND RECORDING
  - FOOD RECORDS
  - WEIGHING IN ONCE A  
WEEK



# FOOD JOURNAL/RECORD

- CAN BE DONE ON TRADITIONAL PEN/PAPER, CHECKLIST ETC.
- MANY NEW PHONE AND COMPUTER “APPS” ,
  - MYFITNESSPAL, LOSE IT, MYPLATE, CALORIE COUNTER, MYFOODDIARY, SPARKPEOPLE.



# WEIGHING ONCE A WEEK

- IN THE NWCR, PARTICIPANTS WHO WEIGHED THEMSELVES ONCE A WEEK WERE ABLE TO OBSERVE THE TREND, ADJUST INTAKE AND ACTIVITY IF WEIGHT WAS GOING UP.



# FITNESS-STRATEGIES FOR SUCCESS

- PHYSICAL ACTIVITY
  - PEOPLE WHO ENGAGE IN MORE PHYSICAL ACTIVITY ARE MORE LIKELY TO MAINTAIN THEIR WEIGHT THAN THOSE WHO DON'T.
  - IN THE NWCR 94% OF SUCCESSFUL LOSERS AND MAINTAINERS EXERCISED AND THE MOST POPULAR ACTIVITY WAS WALKING.



# PHYSICAL ACTIVITY

- AS WE AGE WE LOSE MUSCLE MASS. LEAN MUSCLE MASS IS MORE METABOLICALLY ACTIVE THAN FAT MASS. MUSCLE WILL BURN MORE CALORIES AT REST.
- A YOUNG WOMAN, OLDER WOMAN, AND OLDER MAN CAN HAVE AS RAPID A METABOLISM AS A YOUNG MAN IF THEY HAVE THE SAME AMOUNT OF LEAN TISSUE.



# STRENGTH TRAINING

- STUDIES HAVE CONFIRMED THAT STRENGTH TRAINING BOOSTS METABOLISM AND IMPROVES BODY COMPOSITION.
- ONE STUDY INCLUDED A GROUP OF MEN AND WOMEN AGES 61-77.
- THE GROUP PARTICIPATED IN A 3 DAYS PER WEEK STRENGTH TRAINING PROGRAM FOR 6 MONTHS.

# STRENGTH TRAINING

- AFTER 6 MONTHS THE STRENGTH TRAINING GROUP;
  - GOT MUCH STRONGER
  - LOST 6 LBS OF FAT
  - GAINED 4.5 POUNDS OF LEAN TISSUE
  - STARTED PARTICIPATING IN MORE LEISURE TIME ACTIVITIES ON A REGULAR BASIS
  - HAD A 12% INCREASE IN TOTAL ENERGY EXPENDITURE
  - THIS BOOST IN METABOLISM MEANT THAT THEY WERE BURNING 230 KCAL MORE PER DAY.



# PHYSICAL ACTIVITY

- TO BUILD LEAN MUSCLE MASS, AIM FOR TWO SESSIONS OF STRENGTH TRAINING A WEEK.
- STRENGTH TRAINING CAN INCLUDE USING HAND WEIGHT TO DO BICEP CURLS, USING WEIGHT MACHINES AT THE GYM, CALISTHENICS LIKE PUSH-UPS AND ABDOMINAL CRUNCHES, PILATES AND SOME FORMS OF YOGA.

# PHYSICAL ACTIVITY

- THE BIGGEST BURN OF EXTRA CALORIES COMES FROM VOLUNTARY ACTIVITIES – THE MORE YOU MOVE, THE MORE YOU BURN!
- RUNNING, HIKING, WALKING, CYCLING, FITNESS CLASSES, DANCING, USING CARDIO MACHINES AT A GYM.
- IDEALLY 4-5 TIMES A WEEK FOR 30-40 MINUTES EACH TIME.

# SLEEP

- LACK OF SLEEP IS STRONGLY ASSOCIATED WITH WEIGHT GAIN.
- IT IS BELIEVED TO BE A MAJOR DRIVER IN THE OBESITY EPIDEMIC.
- CURRENT EVIDENCE SUGGEST WE ARE SLEEPING 2 HOURS LESS THAN IN THE 60S.

# SLEEP

- LACK OF SLEEP AFFECTS YOUR APPETITE HORMONES LEPTIN AND GHERLIN, INCREASE HUNGER AND DECREASING SATIETY.
- IN A RESEARCH STUDY PARTICIPANTS WHO HAD LESS THAN 5.0 HOURS A SLEEP A NIGHT ATE 220 CALORIES MORE A DAY FROM SNACKS, PARTICULARLY AT NIGHT THAN THEY DID WHEN THEY WERE ALLOWED 7 HOURS OF SLEEP.

# SLEEP

- SLEEP HYGIENE IS AN IMPORTANT PART OF THE WEIGHT EQUATION, POSSIBLY JUST AS IMPORTANT AS FOOD AND EXERCISE.
- PRACTICE GOOD SLEEP HYGIENE, THIS MAY HELP YOU MAINTAIN A HEALTHY WEIGHT!



# • **SUCCESSFUL WEIGHT MANAGEMENT**

- **STARTS WITH LIMITING FURTHER WEIGHT GAIN – A MUCH MORE ACHIEVABLE AND SUSTAINABLE GOAL THAN LOSING WEIGHT AND KEEPING IT OFF!**

The background of the slide is a light gray gradient. It is decorated with several realistic water droplets of various sizes, scattered primarily in the top-left, top-right, and bottom-right corners. The droplets have highlights and shadows, giving them a three-dimensional appearance.

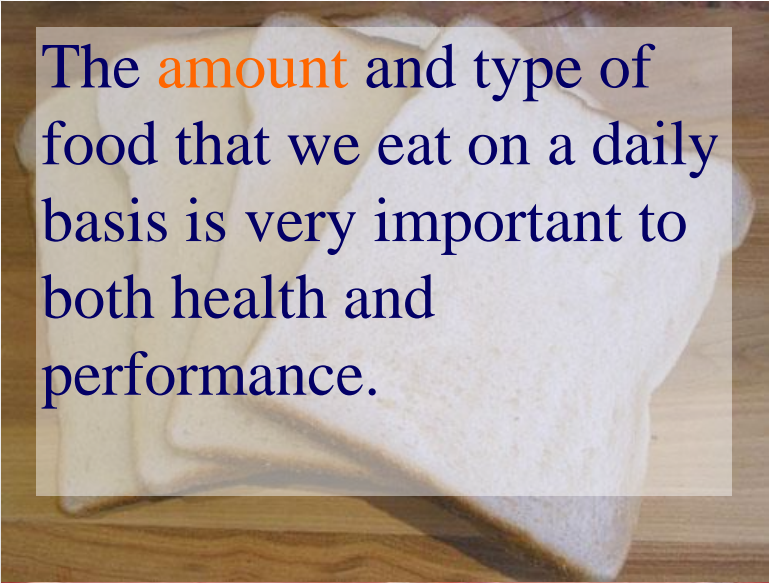
# A DELICATE BALANCE

# WHAT HAVE WE LEARNT?

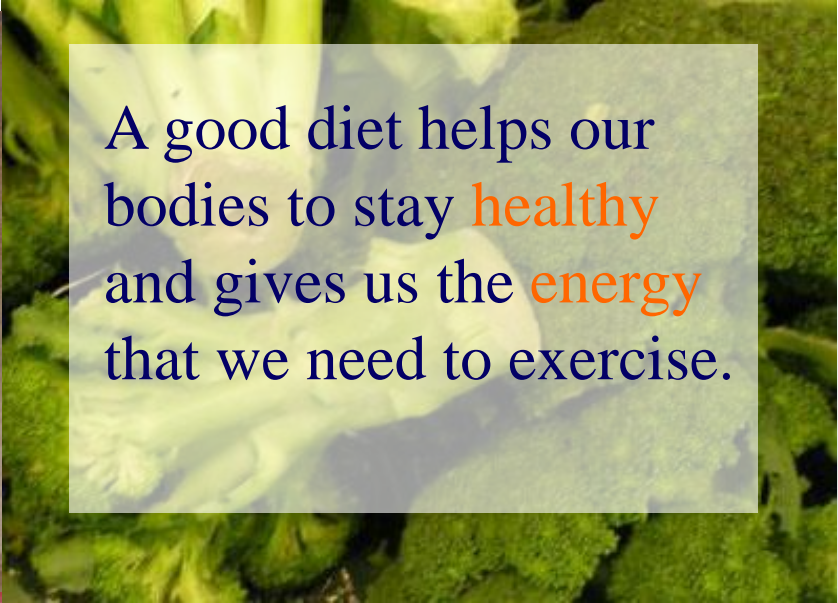
- The components of a balanced diet
- How the body gets energy: carbohydrates, fats and proteins
- How energy needs vary depending on the individual
- The importance of balancing energy intake with energy needs
- The importance of vitamins, minerals and fibre
- The importance of drinking enough water.



# DIET AND NUTRITION



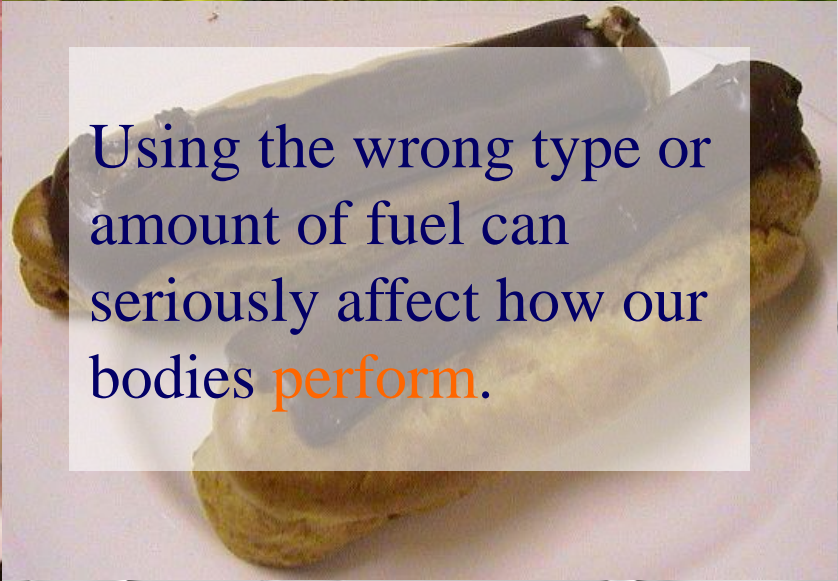
The **amount** and type of food that we eat on a daily basis is very important to both health and performance.



A good diet helps our bodies to stay **healthy** and gives us the **energy** that we need to exercise.



Like a car, our bodies rely on the **'fuel'** that we put into our 'tank'.



Using the wrong type or amount of fuel can seriously affect how our bodies **perform**.





# DIET AND NUTRITION



A good **diet** on its own will not make you more skilful or fit as a performer, but it will help you make the most of your abilities.

Participation in sport or exercise requires **energy**.

This energy is obtained from the food that we eat.

In order to optimize our performance, it is important that we have an appropriate and balanced diet.





# CONCLUSION

“IF OUR MOST IMPORTANT ASSET IS OUR EMPLOYEES,  
THEN HOW CAN WE BUILD WORKPLACES TO LET THEM KNOW  
THAT WE CARE ABOUT AND SUPPORT THEIR HEALTH AND  
WELLBEING?”



**Thank You**

**Canon Dr. P.J. Pelham-Hazeley**

**EXECUTIVE DIRECTOR**

**UN EXAMINING PHYSICIAN**

**For more information visit:**

**P.J's PRIMARY MEDICAL CENTRE**

**+260977775367 OR +260 977 847 334**