

#### ADMINISTRATIVE SERVICES DIRECTORATE HEALTH UNIT

#### MEDICAL/HEALTH & WELLBEING AWARENESS

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#### **IMPORTANCE OF BREAKFAST**



Administrative Services Directorate (HEALTH UNIT)

#### DON'T SKIP BREAKFAST

Breakfast is often called 'the most important meal of the day', and for good reason. As the name suggests, breakfast breaks the overnight fasting period. It replenishes your supply of glucose to boost your energy levels and alertness, while also providing other essential nutrients required for good health.

#### What happens if you do not eat breakfast?

- Skipping the morning meal can throw off your body's rhythm of fasting and eating.
- When you wake up, the blood sugar your body needs to make your muscles and brain work their best is usually low. Breakfast helps replenish it.
- People who skip their morning meal are more likely to have clogged arteries.
- Skipping breakfast is linked to other harmful habits which can leads to hypertension, obesity, high blood pressure and high cholesterol which in turn increase the risk of heart attacks, strokes by 27%.

### YOUR HEALTH AT WORK BREAKFAST BENEFITS



#### FUEL YOUR BODY PART 1: BREAKFAST



# A good brekkie each day fuels your body the right way

A good breakfast every day provides plenty of benefits to your overall health and wellbeing. Eating breakfast breaks your overnight fast and gives you the fuel you need to boost energy levels and alertness as you start your day.

- Eating breakfast replenishes your energy
- Eating breakfast helps to kick start your metabolism

#### Nutritionists advise that breakfast should be eaten within two hours of waking

### Don't skip breakfast

Making time to eat something nutritious at the start of your day can make a great deal of difference to your overall wellbeing. Eating a healthy breakfast also has long-term health benefits. It can help reduce obesity, high blood pressure, risk of heart disease and diabetes. Other reasons why breakfast is often described as the most important meal of the day include (but are not limited to):



Eating breakfast energises your mind and body helping you to be focused and productive



### Tips to shake up your wake up

- Try to create a breakfast routine that fits in with your schedule e.g. setting your alarm 10 minutes earlier to make time to eat brekkie at home
- Choose nutritious options such as protein, fibre and wholegrains so that your breakfast keeps you energised and alert throughout the day, for example:
- Wholegrain toast with a thin scrape of peanut butter, or avocado and spinach or reduced fat ricotta
- Wholegrain cereals with reduced fat milk
- Fruit or vegetable smoothies
- Porridge or yoghurt with fresh fruit
- Boiled eggs with wholegrain toast

DRINKING WATER AT CORRECT TIME.

### **Drinking Water At the Correct Time Maximizes** its Effectiveness On The Human Body \*2 Glasses Of Water After Waking Up - Helps Activate Internal Organs \*1 Glass of Water 30 Minutes Before a Meal - Helps Digestion \*1 Glass of Water Before taking a bath/shower - helps Lower Blood Pressure \*1 Glass of water before Going to Bed - Avoids Stroke or Heart Attack

#### HOW TO STAY HYDRATED.

### کيف تبقى مرتويا ؟ ? How To Stay Hydrated



تجنب الأنشطة الخارجية عندما تكون الحرارة في ذروتها

Avoid Outdoor Activities When The Heat is at its Peak



Take A Cool Shower



كلما زاد التعرق كلما احتجت للشرب أكثر The More You Sweat The More You Need To Drink



قلل من استهلاك الكاقبين Decrease Your Caffeine Intake



أكثر من أكل الخضروات و الفواكه Increase Your Fruit & Vegtable Intake



فجنب المأكولات التي تحتوي على كمية كبيره من الملح و السكر Avoid Foods With High Salt & Sugar Content



اشرب 2-4 لتر من الماء يومياً Drink 2-4 L Of Water Daily

#### BENEFITS OF STAYING HYDRATED.



#### IMPORTANCE OF FULL BODY CHECKUP.



Full Body Checkups have several advantages:

- Increasing your lifespan by improving your health and preventing it from deteriorating
- Detect chronic diseases right at an early stage.
- Creates awareness.
- Increases the chance of treatments and cure.
- Reduces stress.
- Energizes you.
- Ensures a longer and healthier life.
- Fewer health care costs.

#### GOOD SITING POSTURE.



#### **IMPORTANCE OF VITAMIN D.**

What does Vitamin D do?

- Vitamin D is a nutrient that helps your body absorbs Calcium. Vitamin D and Calcium work together to help you maintain healthy bones and teeth.
- Vitamin D also helps your nerves, muscles and immune system work properly.

Warning signs that you have a Vitamin D deficiency:



The best source of Vitamin D is Sunlight. Our Body itself makes Vitamin D When it is exposed to the sun.



#### HEALTH BENEFITS OF ALMONDS.

# 10 Health Benefits of... Almonds

Contains Leatril (anti-cancer)
 Increase Good Cholesterol
 Reduce Heart Diseases
 Reduce Bad Cholesterol
 Good Source of Protein
 Very Alkalising
 Rich in Vitamin E
 Lasting Energy
 Full of Many Minerals
 Rich in Mono-unsaturated Fat

#### HEALTH BENEFITS OF CHIA SEEDS.

## Health Benefits of Chia Seeds

- Digestion
- Weight loss
- Assists in arthritis
- Cleanses the colon
- high in antioxidents
- Superfood for the brain and heart
- Strengthens immune system
- Healthy skin, hair and nails
- Normalises blood sugar levels
- Increase energy and stamina
- Maintain healthy bones and teeth

5 times more calcium than milk
7 times more vitamin C than oranges
3 times more iron than spinach
2 times more potassium than bananas
8 times more omega 3 than salmon



### **Health Benefits of Cucumbers**

Keeps the Body Hydrated Low Calorie Vegetable **Reduce Constipation** Reduces Blood Pressure Health Drink **Promotes Joints Health** Reduces Cholesterol Level Good for Weight Loss Improves Digestive System Remedy for Chronic Constipation Fight cancers Prevents Bad Breath



#### HEALTH BENEFITS OF APPLE.



#### HEALTH BENEFITS OF GERGER LEAVES



- Protect your Heart.
- Help control weight.
- Excellent source of antioxidant.
- Improves Eye health.
- Reduces cancer risk.
- Good for pregnant women.
- Helps with digestion.
- Helps control blood pressure.
- Helps prevent diabetes.
- Rich source of Vitamin A, Vitamin C, Vitamin I certain minerals such as Iron and Magnesium are excellent Immunity Booster.

### Gooseberry /Amla Health Benefits

- Improves eye vision
- Improve skin health
- Prevents ageing
- Increase immunity
- Improves hair health
- Prevents constipation
- Improves nervous system health
- Improve memory and brain health
- Protect and cure diabetes
- Improve cardiovascular health
- Prevent Anemia

# **Health Benefits of Green Juice**

Green Juice requires hardly any digestion, so all its nutritional goodness gets rapidly in your system while simultaneously giving your digestive system a rest.



 Power-packed with nutrition Greens produce chlorophyll, which oxygenates your body Improved focus and mental clarity Improved bone and joint function Healthier hair, skin and nails Stronger immune system Better digestion Lose weight Anti-aging DRJOCKERS.COM

More ENERGY

HEALTH BENEFITS OF POMEGRANATE.



#### HEALTH BENEFITS OF WALNUTS.



Lowers risk of Cancer.
 Enhances antioxidants in the body.
 Prevents inflammation in the body.
 Helps improve memory and brain activity.
 Reduces LDL (the Bad Cholesterol).
 Graet for hair and skin.
 Treatment for Type 2 diabetes.
 Prevents constipation and help digestion.
 Lowers blood pressure.
 Helps sleep well.
 Helps lose weight.
 For bone health.





HEALTH BENEFITS OF WALNUTS HEALTH BNEFITS OF AVOCADO.

# 10 Health Benefits of Avocado

- 1. May reduce risk factors for heart disease
- 2. Contributes to 8% of daily fiber
- 3. Aids in stablilizing blood sugar
- 4. Source of naturally good fats
- 5. Great source of potassium
- 6. Maintains a healthy heart
- 7. Boosts immune system
- 8. Makes your skin glow
- 9. Anti-Inflammatory
- 10. Anti-aging

#### HEALTH BENEFITS OF DRINKING LEMON WATER.

Balances PH Hydrates Lymph System Aids in Digestion Blood Purifier Rejuvenates Skin Reduces Fever Aids in Weight loss Flushes-out Toxins Relieves Tooth Pain Reduces Inflammation Lowers High Blood-Pressure Soothes and Heals Throat Infections Decrease Wrinkles and Blemishes Relieves Respiratory Problems

Helps Purify and Stimulate the Liver

Boost the Immune System

Calcium Potassium Vitamin C Vitamin B1 Vitamin B2 Vitamin B6 Riboflavin Magnesium Anti-oxidants Phosphorouous

Lemons are a natural energizer hydrating & oxygenating the body making it feel revitalized & refreshed

### BENEFITS OF DRINKING WARM LEMON WATER

#### **BEST IMMUNITY BOOSTING VITAMINS.**

Adequate nutrition is another important way to help reduce the risk and impact of virus infections, as well as to build a more resilient immune system over the long term.

- **3** Vitamins That Are Best for Boosting Your Immunity.
  - VITAMIN C is one of the biggest immune system boosters of all. In fact, a lack of vitamin C can even make you more prone to getting sick. Daily intake of vitamin C is essential for good health because your body does not produce or store it.



VITAMIN B6 is vital to supporting biochemical reactions in the immune system.



VITAMIN E is a powerful antioxidant that helps the body fight off infection. Foods's rich in vitamin E include nuts, seeds, and spinach.



#### STEPS TO A HEALTHIER HEART.



You don't have to make big changes to reduce your heart attack and stroke risk. Here are 7 healthy habits that could save your life:



#### STRENGHEN IMMUNE SYSTEM NATURALLY.



#### TIPS FOR PREVENTING HEART DISEASE.

### The Top 3 Tips For Preventing Heart Disease in Adults

#### **1.** Exercise Daily

Men and women need to stay active daily. Physical activity and aerobic exercise for at least 30 minutes a day needs to part of your every day routine. This may include exercising at the gym, brisk walking, bicycling, or swimming. Find an exercise activity that you love and do it daily.

#### 2. Eat Healthy

Making healthy nutritional choices daily is vital for your health. A diet rich in colorful fruits and vegetables, and water, should be part of a daily heart healthy diet. Everyone should avoid food with excessive fat, sugar, and salt. Also, limit soft drinks and fast food consumption.

3.

#### **Avoid Tobacco Smoke**

Smoking tobacco leads to heart disease. Cigarette smoke narrows and damages the arteries of the body. It is important that you do not smoke or stop smoking. Also, everyone needs to reduce their exposure to second-hand smoke which research shows is associated with coronary artery calcification, a build-up of calcium in the heart's arteries which indicates heart disease.

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#### FIRST AID FOR CHOKING.



#### Health Unit

# FIRST AID FOR



### You must act if there are any signs that a person can't speak, breathe or cough.

- SIGNS Universal choking sign
  - - Person cannot breathe, cough or speak
    - Person makes high pitched sounds when breathing
    - Lips and finger nails may become blue

#### Ask, "Are you choking?" If the person gestures yes,

stand behind the person, wrapping your arms around the person's waist.



Make a fist with one hand



hold it with the other hand against the person's abdome



between the navel and lower end of breast bone

Provide guick, upward and inward abdominal thrusts (Heimlich maneuver) until the food or object is forced out.

#### If the person becomes unresponsive,

- Call 999 or local EMS
- · Return to the person
- Lay the person flat on his or her back
- Open his or her mouth
- · Remove the object if you see it



- If the object is not seen: Tilt his or her head back
- Begin CPR
   Look for the object each time you open the airway



 Continue rescue breaths and chest compressions until rescue personnel arrive.

#### FIRST AID FOR BURNS

### **First Aid for burns**



Strip hot clothes & jewellery.





**Turn on cool tap** (never use ice). Run burn under cool water for 10 minutes. Keep the rest of the person warm.





Organise medical assistance (999, A&E, GP).





**Protect** burn with cling film or clean cloth (Do not use dressings, fluffy cloth, creams or lotions).



#### FIRST AID FOR BLOODY NOSE.

## How to Treat A BLOODY NOSE

Pinch the soft part at the front of the nose, then lean forward and breathe through your mouth.

Pinching the nose helps the blood to clot, which should eventually stop the bleeding.



Do not tip the head back as it is very unhelpful and potentially cause a choking hazard. By doing this, you're essentially tipping all that blood and snot back into your own windpipe, and could end up choking yourself.

See a health care provider immediately if :

- Nosebleed doesn't stop after 10 minutes of self-treatment
- You are taking medication that can interfere with blood clotting or have a bleeding disorder
- Nosebleed happens after a severe head injury or a blow to the face

SMOKING HEALTH RISK.



#### HYPERTENSION/HIGH BLOOD PRESSURE.

### **HYPERTENSION: ACT NOW!**

#### What is hypertension?



### High Blood Pressure







#### Are you one of the millions of people unknowingly living with high blood pressure? You're not alone.

#### The High Blood Pressure Diet: How to Improve Your Diet to Lower High Blood Pressure

Research shows that about **50 percent** of people with high blood pressure fail to control their condition, either because they aren't aware of the problem or they haven't made lifestyle changes that promote overall heart health.

Some of the best foods that lower blood pressure naturally include:

#### 1. Vegetables

Eating a variety of vegetables is a staple for basically every diet that exists, considering veggies are high-antioxidant foods packed with protective nutrients like fiber, vitamin C, vitamin K and various electrolytes (yet very low in calories).





#### 2. Fresh Fruit

Consuming fresh fruit (as opposed to juices or sweetened, canned fruits) is a great way to increase your intake of fiber, electrolytes like potassium and magnesium, and antioxidants like flavonoids and resveratrol.

#### 3. Lean Proteins

This can include foods such as wild-caught seafood (especially anti-inflammatory omega-3 foods like salmon, sardines and halibut), cage-free eggs and grass-fed/pasture-raised meats. Aim to get about 20 percent to 30 percent of your total calories from "lean and clean" proteins.



#### High Blood Pressure Diet: The DASH Diet Protocol for Lowering Blood Pressure

The DASH diet (which stands for Dietary Approaches to Stop Hypertension) is most doctors' go-to eating plan for lowering high blood pressure naturally.



#### **Tips for Lowering Blood Pressure**

- 1. Cook More at Home
- 2. Increase Fiber Consumption
- 3. Lower Your Sodium Intake 4. Get More Potassium
- 4. Get More Potassium
- 5. Stay Hydrated
- 6. Practice Portion Control

HYPOTENSION/LOW BLOOD PRESSURE.



#### DIABETES MELLITUS/HIGH BLOOD SUGAR.

### TYPE II AND PRE-DIABETES CAN BE PREVENTED **Pre-Diabetes** Type II Type I

- Over 21% of the U.S. population has high blood glucose levels, but not high enough to be considered diabetes.
- Heart and circulatory damage can occur at this stage as well as full-blown diabetes.

### Facts

- **Diabetes is the sixth leading**
- cause of death in the U.S. The risk of death for people that have diabetes is two times that of people without diabetes.
- Greater risk for stroke and heart disease (2 to 4 times higher) than non-diabetics
- Over 70% of diabetic patients have high blood pressure.
- Over 5 million people in the **U.S. have undiagnosed** diabetes.
- Over 18% of people over 60 have diabetes.
- Over 11% of Blacks have diabetes.
- Over 8% of Hispanics have diabetes.
- 27% of Native Americans from the Southwest have diabetes.

- Usually strikes children and young adults
- Characterized by the destruction of pancreatic beta cells by the person's immune system
- Accounts for 5-10% of all diabetes
- **Treated with insulin** introduced through injections or a pump
- In this type of diabetes. cells are unable to use the insulin that is produced.
- Formerly called adult-onset diabetes, this term has lost favor because of the increase of Type II among adolescents and children.
- Can be controlled by weight loss, low-fat or lowsugar diet, exercise, and medication
- Over 50% of Type II diabetics are able to control the disease without taking insulin.

You can prevent Type II and pre-diabetes with a low-fat diet and 30 minutes of exercise a day.

#### Symptoms

- **Frequent urination**
- **Excessive thirst**
- **Extreme hunger**
- **Unusual weight loss**
- **Increased** fatigue
- Irritability **Blurry** vision

Diabetes is a condition in which the body is unable to produce or use its insulin to move sugar glucose out of the bloodstream and into the body's cells.

### DEALING WITH HYPERGLYCEMIA FIND THE CAUSE FIRST



#### HYPOGLYCEMIA/LOW BLOOD SUGAR.



CHECK: YOUR BLOOD GLUCOSE RIGHT AWAY. IF YOU CAN'T CHECK - TREAT ANYWAY TREAT: BY EATING 3 TO 4 GLUCOSE TABLETS OR 3 TO 5 HARD CANDIES; YOU CAN CHEW QUICKLY (SUCH AS PEPPERMINTS) OR BY DRINKING 4 OUNCES OF FRUIT JUICE; OR 1/2 CAN OF REGULAR SODA POP

**CHECK:** YOUR BLOOD GLUCOSE LEVEL AGAIN AFTER 15 MINUES. IF IT STILL LOW, TREAT AGAIN. IF SYMPTOMS DON'T STOP, CALL YOUR HEALTH CARE PROVIDER.

#### BODY MASS INDEX(BMI)



#### Body mass index (BMI)

 The body mass index (BMI) is a measure that uses your height and weight to work out if your weight is healthy.

Why is it important to know your BMI?

- Your BMI is a measurement that is a ratio of your weight and height.
- It is a good way to gauge whether your weight is in healthy proportion to your height.
- In fact, knowing your BMI can help you and your GP determine any health risks you may face if it is outside of the healthy range.
- It can help identify your risk for obesity-related diseases.

#### STROKE.

### **REDUCE YOUR ODDS!**

- Monitor and keep blood pressure normal
- Irregular heartbeat should be treated

Prevention

- Treat carotid artery disease
- Avoid smoke and smoking
- Control through diet or insulin
- Maintain normal weight
- Follow a diet low in saturated fat, cholesterol, and salt
- Limit alcohol consumption
- Stay active with a reasonable exercise program

### Facts

- Every 45 seconds someone has a stroke (700,000 in one year)
- Every 3 minutes someone dies from a stroke
- Stroke is the third leading cause of death
- Stroke is the number one cause of long term disability
- 24% of strokes lead to death
- 50% to 70% of stroke victims will improve or have a mild disability
- 15% to 30% will have permanent disabilities
- 20% will require custodial care in an institution three months after the stroke

- Hemorrhagic Stroke
- Happens because a blood vessel ruptures
   Aneurysms are weakened blood vessels that balloon eventually leading to hemorrhagic bursting.

#### Who's At Risk?

- People who are older
- People with a family history of stroke and heart disease
- Males

- Blacks, Hispanics/Latinos, and Asians are at higher risk than Whites.
- People with a prior stroke or heart attack

### **Ischemic Stroke**

- Happens because a blood vessel becomes clogged
- Like a pipe filled with sludge, a vessel becomes so filled with fatty deposits lining its walls that it can no longer supply enough blood to the brain.
- Transient ischemic attacks (TIA's) are minor and even temporary clots with some stroke symptoms. However, they can lead to a major stroke.

A stroke is a cardiovascular disease in which a blood vessel bursts or a clot forms depriving the brain of oxygen. When this happens, a part of the brain dies or is damaged because it can't get the blood it needs.

#### TEXT NECK





#### **CHOLESTEROL**

#### What is cholesterol?

Cholesterol is a lipid found in cell membranes and is used in the production of hormones and bile.

Cholesterol is transported in the blood by molecules called **lipoproteins**, of which there are two types:

- high-density lipoprotein (HDL): often called 'good cholesterol'
- low-density lipoprotein (LDL): often called 'bad cholesterol'.



Cholesterol levels depend on diet and genes, but high levels of LDL have been linked to eating lots of saturated fats and few mono/polyunsaturated fats.



sure you find out both these levels.



### 8 Foods That Lower Bad Cholesterol



#### URIC ACID



#### What is Uric Acid?

• Uric acid is a waste byproduct (heterocyclic compound of carbon, nitrogen, oxygen, and hydrogen) It is formed when your body breaks down purines, which are found in some foods. Purines show up when cells die and get taken apart.

What causes high uric acid levels in the body?

Most of the time, a **high uric acid level** occurs when your kidneys do not eliminate **uric acid** efficiently. Things that may **cause** this slow-down in the removal of **uric acid** include rich foods, being overweight, having diabetes, taking certain diuretics (sometimes called water pills) and drinking too much alcohol.

**Hyperuricemia** is an excess of uric acid in the blood. Uric acid passes through the liver and enters your bloodstream. Most of it is excreted (removed from your body) in your urine or passes through your intestines to regulate "normal" levels. Hyperuricemia can cause crystals of uric acid (or urate) to form, and these crystals can settle in the joints and cause <u>Gout</u>, a form of arthritis that can be very painful. They can also settle in the kidneys and form <u>Kidney stones</u>.

#### Who is at risk for hyperuricemia?

Anyone can have hyperuricemia, but it's <u>more common</u> in men than women and your risk increases with age.

Several risk factors are associated with hyperuricemia:

- alcohol use
- some medications, particularly medications for heart disease
- lead exposure.
- pesticide exposure
- kidney disease
- high blood pressure
- high blood glucose levels
- hypothyroidism
- obesity etc.

#### Symptoms of Gout may include:

- severe pain in your joints.
- joint stiffness.
- difficulty moving affected joints.
- redness and swelling etc.

#### FOOD THAT SHOULD BE AVOIDED DURING GOUT



Limit the intake of foods that stimulate the production of uric acid such as fatty fish, shell fish, meat, eggs and caffeine. It increases the production of uric acid.



During acute attack white flour, yeast products like bread should be avoided.





Do not consume leafy vegetables like spinach, cabbage, brocoli etc.



Keep away yourself from cakes, pastries, sugar etc.

#### Foods rich in Vitamin C for Uric Acid

 Include Vitamin C rich foods and supplements in your daily diet to reduce uric acid in the body. It disintegrates uric acid and forces it out of the body through urine. Good sources of vitamin C are Amla, Guava, Kiwi, Sweet lime, oranges, capsicum, lemon, tomato and green leafy veg.



#### FIRST AID FOR CARDIAC ARREST AND HEART ATTACK.



### FIRST AID FLASH CARD

#### **Cardiac Arrest vs. Heart Attack**

✓ Cardiac Arrest is an Electrical Problem

The heart stops pumping blood around the body AMBULANCE, CPR & DEFIBRILLATION

#### Heart Attack is a Plumbing Problem

A blood vessel in the heart becomes blocked AMBULANCE, ASPIRIN

#### CARDIOPULMONARY RESUSCITATIONS(CPR)

- 1- Verify the scene is safe for you and the victim. You do not want to be a victim yourself.
- 2- Check for responsiveness. Tap on victim's shoulder and shout "are you OK?"
- **3-** If the victim is not response, shout for nearby help.
- 4- Activate the emergency response system as appropriate in your sitting and call 999.
- 5- If you are alone get AED or defibrillator and emergency equipment. if someone else is available, send that person to get it.
- 6- Assess the victim for normal breathing and pulse (to minimize delay in starting CPR, you may assess the breathing in the same time as you check the pulse. this should not take more than 10 seconds).
  - To check the breathing, scan the victim's chest for rise and fall for no more than 10 seconds.
  - if the victim is breathing, monitor the victim until additional help arrived.
  - If the victim is not breathing or is only gasping, this is not considered normal breathing and is sign of cardiac arrest.
  - To perform a **pulse**, **check** in an **adult**, **palpate** a **carotid pulse**.

#### to locate the carotid pulse:

- Locate the trachea (on the side closest to you), using 2 or 3 fingers.
- 2- Slide these 2 or 3 fingers into the groove between the trachea and the muscles at the side of the neck m where you feel the carotid pulse.
- 3- Feel for the pulse for at least 5 minutes but no more than 10



If	Then	
The victim is <b>breathing normally</b> , and a <b>pulse is present</b> .	Monitor the victim	
The victim <b>is not breath normally</b> , but the <b>pulse is present</b>	<ul> <li>Provide rescue breathing:</li> <li>Confirm that the emergency response system has been activated.</li> <li>Continue rescue breathing every 2 minutes. be ready to perform high-quality CPR if you do not feel the pulse.</li> <li>If opioid suspected (opioids drug overdose), consider naloxone if available (not available in the university)</li> </ul>	
Victim <b>is not breathing normally</b> or <b>only gasping</b> and <b>no pulse</b> .	• Begin high-quality CPR	

- Before beginning high-quality CPR, remove or move the clothing covering the victim's chest so that you can locate appropriate hand placement for compression. This will allow placement of the AED pads when AED arrived. (consider victim's privacy, especially if the victim is female).
- Use AED as soon as it is available.

#### Importance of chest compressions:

- Each time you stop the chest compression, the blood flow of the heart and brain decrease significantly.
- Once you resume compression, it takes several compressions to increase blood flow to the heart and brain back to the levels present before the interruption.
- **Thus**, the **more often** chest compressions are **interrupted** and **the longer** the **interruption** are, **the lower** blood supply to the heart and brain is.

<u>**High-quality CPR**</u> (when there is no breathing or only grasping and no pulse):

Use the compression-to-ventilation ratio of 30 compressions to 2 breaths when giving CPR to the victims of any age. Follow these steps:

- 1- **Position yourself** on the victim's side.
- 2- Make sure that the victim is lying face up on firm, flat surface. If the victim is lying face down, carefully roll him face up. if you suspected the victim has head or neck injury, try to keep the head and the neck and torso (trunk of human body) in a line when rolling the victim to a face up position.
- 3- Position your hands and body to perform chest compressions:
- Put the heel of one hand in the center of the victim's chest, on the lower half of the breastbone.
- Put the heel of the other hand on top of the first hand.
- Straighten your arms and position your shoulders directly over your arms.



4- Give

chest compression at rate of 100

#### to120/min.

- 5- Press down at least 5 cm with each compression (this require hard working). For each chest compression, make sure you press straight down on victim's breastbone.
- 6- At the end of each compression, make sure you Allow the chest to recoil (re-expand) completely.
- 7- Minimize the interruption of chest compressions.

#### Importance of chest recoil (chest expand):

- Chest recoils allow blood to flow in the heart.
- Incomplete chest recoil reduces the filling of the heart between compressions and reduce the blood flow created by compressions.
- Chest compression and chest recoil/relaxed should be about equal.

**Opening the Airway** (for breath to be more effective):

Two methods for opening air way are:

- 1- Jaw thrust use it if head or neck injury suspected to reduce neck and spine movement.
- 2- Head tilt chin lift: use it if Jaw thrust does not open the airway.

Ja	aw thrust Head tilt – chin lift		ad tilt – chin lift
1-	Place one hand on each sides of the	1-	Place one hand on the victim's forehead
	victim's head. You may rest your elbow on		and push with your palm to tilt the head
	the surface where the victim is lying.		back.
2-	Place your fingers under the angle of the	2-	Place the finger of the other hand under the
	victim's lower jaw and left with both		boney part of the lower jaw near the chin.
	hands, displacing the jaw forward.	3-	Lift the jaw to bring the chin forward.
3-	If the lips close, push the lower lip with		• Things to avoid with it:
	your thump to open the lips.		- Do not press deeply on the soft tissue
			under the chain because this might
	7		close the airway.
			- Do not close victim's mouth
			completely.
		1	

<u>Giving breaths</u> (use a brier to lower the risk of infection)

- By Pocket mask:
  - 1- Position yourself on the victim's side.
  - 2- Place the mask on the victim's face, using the bridge of the nose as a guide for correct position.
  - 3- Seal the pocket mask against the face by:
- Using the hand that closer to the top of the victim's face, place the index finger and the thumb along the edge of the mask.
- Place the thumb of the other hand along the edge of the mask.
  - 4- Place the remaining fingers of your second hand along the bony margin of the jaw and lift the jaw. Perform a head tilt-chain lift.
  - 5- While you lift the jaw, press firmly and completely around the outside edge of the mask to seal the pocket.
  - 6- Deliver each one breath over one second, enough to rise victim's chest. Note the visible chest rise with each breath.

Note: Resume chest compressions in less than 10 second.

#### • By bag-mask device:

- 1- Position yourself directly above the victim's head.
- 2- Place the mask on the victim's face, using the bridge of the nose as a guide of the correct position.
- 3- Use E-C clamp technique to hold the mask in place while you lift the jaw to hold the airway open:
- Perform a head tilt.
- Place the mask on the face with narrow portion at the bridge of the nose.
- Use the thumb and index finger of one hand to make "C" in the side of the mask, pressing on the edge of the mask to the face.
- Use the remaining finger to lift the angle of the jaw (three fingers form an "E")
  4-Squeeze the bag to give breaths (1second each) while watching the chest rise. Deliver each

breath 1 second, whether or not you are using oxygen supplementary.

#### AUTOMATED EXTERNAL DEFIBRILLATOR(AED)

**Definition:** lightweight, portable, computerized device that can identify abnormal heart rhythm that need shock. AED can then stop abnormal heart rhythm (ventricular fibrillation or pulseless ventricular tachycardia) and allow normal heart rhythm to return.

- **AEDs** are simple to operate, allowing **laypersons** and **healthcare providers** to attempt defibrillation **safely**.
- Universal steps for operating an AED: Open the carrying case. Power an AED, if needed
- Some devices "turn on" automatically when you open the lid or case.
- Follow AED prompts as a guide to next steps.

2.Attach EAD pads to victim's bare chest. choose adult pads.



- Peel packing away from AED pads.
- Attach the adhesive AED pads to the victim's bare chest. Follow the placement diaphragm on the pads.



• Attach AED connecting cables to the AED device (some AED cables are already pre-connected to the device)

#### AED Pads placement options:

AED pads should be placed by following the diaphragm on the pads. The 2 common placement diaphragms are anterolateral and anteroposterior.

Anterolateral placement

Both pads will be placed on victim's bare chest (FIGURE 1)

- Place one AED pads directly below the right collarbone (a bone between your shoulder and neck on each side of your body)
- Place the other pads to the side of the left nipple, with the top edge of the pads approximately 7 to 8 centimeters below the armpit (a hollow under the arm at the shoulder).

Anteroposterior:

One pad will be placed on the victim's bare chest (anterior), and the other will be placed on the victim's back (posterior). (FIGURE 2)







FIGURE 2

- 1- "Clear" the victim and allow AED to analyze the rhythm.
- When the AED prompts you, clear the victim during analysis. Be sure that no one is touching the victim, not even the rescuer in charge of giving breaths.
- Some AEDs' will tell you to push the button to allow AED to begin analyzing the heart rhythm, others will do that automatically. The AED may take a few second to analyzes.



- The AED then tells you if a shock is needed.
- 2- If the AED advises a shock, it will tell you to clear the victim and then deliver the shock.
- Clear the victim before the delivering the shock be sure that no one is touching the victim.
- Loudly state "clear the victim" message, such as "everybody clear "or simply "clear".
- Look to be sure that no one is in contact with the victim.
- Press the shock button.
- The shock will produce a sudden contraction of the victim's muscle.
- 3- If no shock is needed, or after any shock delivery, resume CPR immediately, starting with chest compressions.
- 4- After about 5 cycle or 2 minutes of CPR, the AED will prompt you to repeat step 3 and 4.