



AWARENESS THE PEOPLE OF AL-BAHA REGION ABOUT THE IMPORTANCE OF THE DIET TO PREVENT CHRONIC DISEASES

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Abstract:

A healthy lifestyle includes a number of healthy choices, including choosing a balanced diet, It also includes a healthy eating plan that helps control weight by eating a variety of foods.

Nutrition and food consumption have been known in recent years as essential and unique components in maintaining proper health.

A healthy diet helps reduce the formation of chronic diseases and the deterioration of health.

Eating a healthy diet helps prevent chronic diseases, including diabetes, heart disease, stroke and cancer.

Healthy eating practices start early - breastfeeding promotes healthy growth and improves cognitive development, and may have longer-term health benefits such as reducing the risk of being overweight or obese and developing chronic diseases later in life.

Energy intake (calories) should be balanced with energy intake. In order to avoid unhealthy weight gain, the total percentage of fats should not exceed 30% of the total energy intake, the percentage of the saturated fats eaten should be less than 10% of the total energy intake, and the percentage of the trans fats eaten should be less than 1% of the total energy intake. Total energy intake, with a shift in fat consumption away from saturated fats and trans fats to unsaturated fats, and toward the goal of eliminating industrially produced trans fats.

Limiting free sugars to less than 10% of total energy intake is suggested to continue reducing them to less than 5% of total energy intake to achieve additional health benefits.

Keeping salt intake to less than 5g per day (equivalent to a sodium intake of less than 2g per day) helps prevent high blood pressure and reduces the risk of heart disease and stroke in the adult population.

A calorie is a unit of energy, usually used to measure the energy content of foods and beverages; Eating more calories than the body consumes leads to weight gain.

must be eat healthy foods that contain calories suitable for the body, and determine the amount of calories according to body weight, height, age, gender, and body activity, A female may need to eat around 2,000 calories a day, and she needs 1,500 calories to lose 450 grams of weight per week, A man needs 2,500 calories per day, and he needs 2,000 calories to lose 450 grams of weight per week.

For a healthy diet, you should limit the following:

- *Saturated fats, added sugars, and sodium.*
- *Consume less than 10% of your daily calories from added sugars.*
- *Consuming less than 10% of calories per day from saturated fats.*
- *Consuming less than 2300 mg of sodium per day.*

Finally, visiting a specialist doctor available in Al-Baha region hospitals can lead to improving the quality of the diet and making a plan to calculate the calories needed by the body.

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INTRODUCTION:

A healthy diet is considered a prevention of chronic diseases such as obesity, diabetes, heart disease, some types of cancer, and osteoporosis.

The importance of healthy food is represented in following a healthy and beneficial diet for all parts of the body, as it supports it to perform its various functions, and also helps protect cells from environmental damage and restores damaged cells.

The importance of healthy food lies in controlling weight and achieving an ideal weight. People do not only need to reduce the calories consumed every day, but they need to follow a healthy and balanced diet.

According to WHO recommendations, a healthy diet should include all foods and beverages within the appropriate calorie range.

Chronic diseases can be prevented by: Eating healthy food Eating healthy food helps prevent heart disease, type 2 diabetes, and other chronic diseases.

Maintaining exercise and calories and Body examination and blood tests.

Justification:

Evaluation of the diet to prevent chronic diseases health awareness in Al-Baha region.

Objectives of the Research:

Determine the degree of importance of adherence to healthy food for the people of Al-Baha region.

Research Methods

- Study design
- Cross –sectional analytic study prospective

- Study area: Al-Baha Region
- Sample size: 3000 sample in AL-Baha city
- Data collection: A structured questionnaire will be developed particularly for the purpose of this study in Arabic and also translated to English

Analysis procedure:

The analysis was primarily descriptive in nature and will be performed by using SPSS program for windows.

Ethical consideration:

Permission will be taken. Data collection: Data collection will be (Arabic questionnaire).

Problem statement:

Educating the community about the importance of following a healthy diet will lead to a decrease in the prevalence of chronic diseases.

Rational:

The majority of chronic disease patients are likely to suffer from long-term complications for a variety of reasons, including lack of awareness of the disease, which can be prevented with a healthy diet.

Research questions:

What is the level of awareness of the importance of a healthy diet?

Does awareness of the long-term complications of diseases reduce their incidence?

Hypotheses:

Awareness of the long-term complications of chronic diseases helps limit their spread.

Research timeframe									
Research Project	90 Days								
Develop Research Proposal									
Ask for permission to access to Statistics									
Correspondent Statistics department									
Bring statistic from statistical department									
Administer instrument(s)									
Ongoing data collection and analysis									
Final collection of data									
Research Report									

3 Months

METHODOLOGY:

- A cross-sectional web survey was introduced to the residents of Albaha region.
- The questionnaire contain sections focused on participants' socio-demographic, different.
- 3000 samples were collected in Al-Baha city.
- A specially structured questionnaire was developed for the purpose of this study in Arabic and also translated into English.

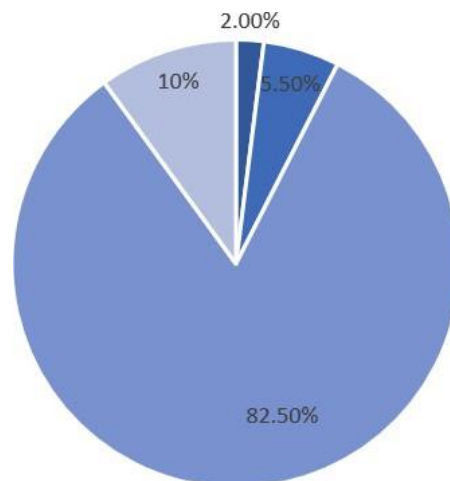
RESULTS:

A total of 3000 questionnaires were completed:

✓ **Question 1: Do you have diabetes?**

The percentage of those who answered yes have type 1 diabetes = 2%. The percentage of those who answered yes have type 2 diabetes = 5.5%.

The percentage of those who answered no without diabetes = 82.5%. The percentage of those who answered that they do not know = 10%.



Based on the statistic of question 1 percentage People with type 1 diabetes = 2%, people with type 2 diabetes 5.5%, so it is necessary to educate the community about the importance of healthy food to prevent diabetes and calculate calories for the meals that the body needs per day.

And based on the statistics of question 1, the percentage of those who do not know that they have or do not have diabetes = 10%, so it is necessary to spread awareness of the importance of conducting rapid tests and laboratory tests.

How can you tell if you have diabetes? Most early symptoms are from higher-than-normal levels of glucose, a kind of sugar, in your blood.

The warning signs can be so mild that you don't notice them. That's especially true of type 2 diabetes. Some people don't find out they have it until they get problems from long-term damage caused by the disease.

With type 1 diabetes, the symptoms usually happen quickly, in a matter of days or a few weeks. They're much more severe, too.

Early Signs of Diabetes:

Both types of diabetes have some of the same telltale warning signs.

Diabetes symptoms:

- Toilet - going for a wee a lot, especially at night.
- Thirsty - being really thirsty.
- Tired - feeling more tired than usual.
- Thinner - losing weight without trying to.
- Genital itching or thrush.
- Cuts and wounds take longer to heal.
- Blurred eyesight
- Increased hunger.

o **What are the most common symptoms?**

No individual is the same. The symptoms you experience won't exactly match those of another person. However, the most common diabetes symptoms experienced by many people with diabetes are increased thirst, increased urination, feeling tired and losing weight.

o **Diabetes risk factors**

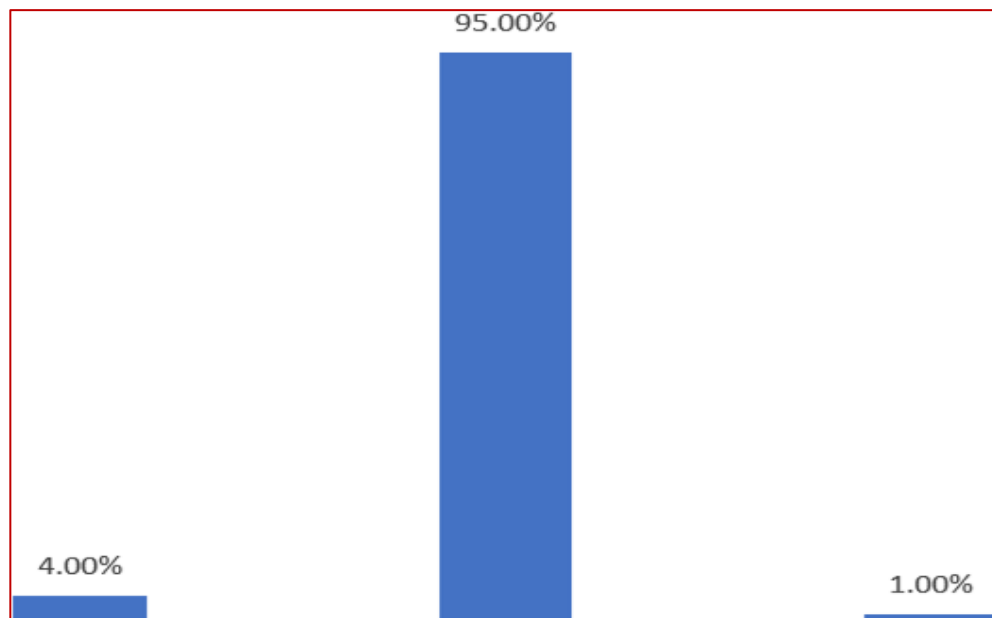
Some people are at a higher risk of developing diabetes than others.

Depending on the type of diabetes, this can be due to their ethnicity, their genetics or even their lifestyle choices. These are known as the risk factors of diabetes.

✓ **Question 2: Do you have Hypertension disease? Percentage of those who answered yes = 4%.**

The percentage of those who answered no = 95%.

Percentage of those who answered that they do not know = 1%.



Based on the statistics of question 2, the percentage of people with Hypertension disease = 4%, so it is necessary to educate the community about the importance of healthy food to prevent Hypertension disease and to calculate the calories of the meals that the body needs daily.

Based on the statistics of the first question, the percentage of those who do not know that they have or do not have Hypertension disease

= 1%, so it is necessary to spread awareness of the importance of conducting examinations.

Blood pressure is the force exerted by circulating blood against the walls of the body's arteries, the major blood vessels in the body.

Hypertension is when blood pressure is too high.

Blood pressure is written as two numbers. The first (systolic) number represents the pressure in blood vessels when the heart contracts or beats. The second (diastolic) number represents the pressure in the vessels when the heart rests between beats.

Hypertension is diagnosed if, when it is measured on two different days, the systolic blood pressure readings on both days is ≥ 140 mmHg and/or the diastolic blood pressure readings on both days is ≥ 90 mmHg.

o What are common symptoms of hypertension?

Hypertension is called a "silent killer". Most people with hypertension are unaware of the problem because it may have no warning signs or symptoms. For this reason, it is essential that blood pressure is measured regularly.

When symptoms do occur, they can include early morning headaches, nosebleeds, irregular heart rhythms, vision changes, and buzzing in the ears. Severe hypertension can cause fatigue, nausea, vomiting, confusion, anxiety, chest pain, and muscle tremors.

The only way to detect hypertension is to have a health professional measure blood pressure. Having blood pressure measured is quick and painless. Although individuals can measure their own blood pressure using automated devices, an evaluation by a health professional is important for assessment of risk and associated conditions

o What are the complications of uncontrolled hypertension?

Among other complications, hypertension can cause serious damage to the heart. Excessive pressure can harden arteries, decreasing the flow of blood and oxygen to the heart. This elevated pressure and reduced blood flow can cause:

- Chest pain, also called angina.
- Heart attack, which occurs when the blood supply to the heart is blocked and heart muscle cells die from lack of oxygen. The longer the blood flow is blocked, the greater the damage to the heart.
- Heart failure, which occurs when the heart cannot pump enough blood and oxygen to other vital body organs.
- Irregular heart beat which can lead to a sudden death. Hypertension can also burst or block arteries that supply blood and oxygen to the brain, causing a stroke.

In addition, hypertension can cause kidney damage, leading to kidney failure.

o What are the risk factors for hypertension?

Modifiable risk factors include unhealthy diets (excessive salt consumption, a diet high in saturated fat and trans fats, low intake of fruits and vegetables), physical inactivity, consumption of tobacco and alcohol, and being overweight or obese.

Non-modifiable risk factors include a family history of hypertension, age over 65 years and co-existing diseases such as diabetes or kidney disease.

o **How can the burden of hypertension be reduced?**

Reducing hypertension prevents heart attack, stroke, and kidney damage, as well as other health problems.

o **Prevention**

- Reducing salt intake (to less than 5g daily).
- Eating more fruit and vegetables.
- Being physically active on a regular basis.
- Avoiding use of tobacco.
- Reducing alcohol consumption.
- Limiting the intake of foods high in saturated fats.
- Eliminating/reducing trans fats in diet.

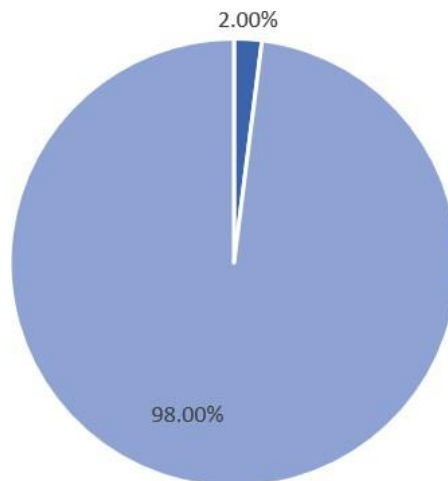
o **Management**

- Reducing and managing stress.
- Regularly checking blood pressure.
- Treating high blood pressure.
- Managing other medical conditions.

✓ **Question 3: Do you have heart disease? Percentage of those who answered**

yes = 2%.

The percentage of those who answered “no” = 98%.



Based on the statistics of question 3, the percentage of people with heart disease = 2%, so it is necessary to educate the community about the importance of healthy food to prevent heart disease, and it is necessary to spread awareness of the importance of conducting examinations and analyzes.

Heart disease describes a range of conditions that affect the heart. Heart diseases include:

- Blood vessel disease, such as coronary artery disease
- Irregular heartbeats (arrhythmias)
- Heart problems you're born with (congenital heart defects)
- Disease of the heart muscle
- Heart valve disease

Symptoms

Heart disease symptoms depend on the type of heart disease.

o **Symptoms of heart disease in the blood vessels**

Coronary artery disease is a common heart condition that affects the major blood vessels that supply the heart muscle. Cholesterol deposits (plaques) in the heart arteries are usually the cause of coronary artery disease. The buildup of these plaques is called atherosclerosis (ath-ur-o-skluh-ROE-sis). Atherosclerosis reduces blood flow to the heart and other parts of the body. It can lead to a heart attack, chest pain (angina) or stroke.

Coronary artery disease symptoms may be different for men and women. For instance, men are more likely to have chest pain. Women are more likely to have other symptoms along with chest discomfort, such as shortness of breath, nausea and extreme fatigue.

Symptoms of coronary artery disease can include:

- Chest pain, chest tightness, chest pressure and chest discomfort (angina)
- Shortness of breath
- Pain in the neck, jaw, throat, upper belly area or back
- Pain, numbness, weakness or coldness in the legs or arms if the blood vessels in those body areas are narrowed

You might not be diagnosed with coronary artery disease until you have a heart attack, angina, stroke or heart failure. It's important to watch for heart symptoms and discuss concerns with your health care provider. Heart (cardiovascular) disease can sometimes be found early with regular health checkups.

o **Heart disease symptoms caused by irregular heartbeats (heart arrhythmias)**

The heart may beat too quickly, too slowly or irregularly. Heart arrhythmia symptoms can include:

- Chest pain or discomfort
- Dizziness
- Fainting (syncope) or near fainting
- Fluttering in the chest
- Lightheadedness
- Racing heartbeat (tachycardia)
- Shortness of breath
- Slow heartbeat (bradycardia)

o **Heart disease symptoms caused by congenital heart defects**

Serious congenital heart defects usually are noticed soon after birth. Congenital heart defect symptoms in children could include:

- Pale gray or blue skin or lips (cyanosis)
- Swelling in the legs, belly area or areas around the eyes
- In an infant, shortness of breath during feedings, leading to poor weight gain

Less-serious congenital heart defects are often not diagnosed until later in childhood or during adulthood.

Symptoms of congenital heart defects that usually aren't immediately life-threatening include:

- Easily getting short of breath during exercise or activity
- Easily tiring during exercise or activity
- Swelling of the hands, ankles or feet

o **Heart disease symptoms caused by diseased heart muscle (cardiomyopathy)**

Early stages of cardiomyopathy may not cause noticeable symptoms. As the condition worsens, symptoms may include:

- Dizziness, lightheadedness and fainting
- Fatigue
- Feeling short of breath during activity or at rest
- Feeling short of breath at night when trying to sleep or waking up short of breath
- Irregular heartbeats that feel rapid, pounding or fluttering
- Swollen legs, ankles or feet

o **Heart disease symptoms caused by heart valve problems (valvular heart disease)**

The heart has four valves — the aortic, mitral, pulmonary and tricuspid valves. They open and close to move blood through the heart. Many things can damage the heart valves. A heart valve may become narrowed (stenosis), leaky (regurgitation or insufficiency) or close improperly (prolapse).

Valvular heart disease is also called heart valve disease. Depending on which valve isn't working properly, heart valve disease symptoms generally include:

- Chest pain
- Fainting (syncope)
- Fatigue
- Irregular heartbeat
- Shortness of breath
- Swollen feet or ankles

Endocarditis is an infection that affects the heart valves and inner lining of the heart chambers and heart valves (endocardium).

Endocarditis symptoms can include:

- Dry or persistent cough
- Fever
- Heartbeat changes
- Shortness of breath
- Skin rashes or unusual spots
- Swelling of the legs or belly area
- Weakness or fatigue

o **When to see a doctor**

Seek emergency medical care if you have these heart disease symptoms:

- Chest pain
- Shortness of breath
- Fainting

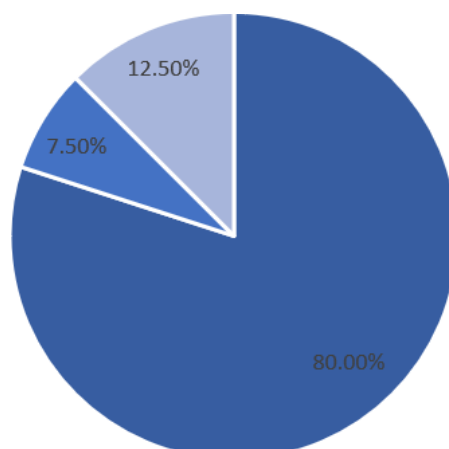
o **Risk factors for heart disease include:**

- **Age.** Growing older increases the risk of damaged and narrowed arteries and a weakened or thickened heart muscle.

- **Sex.** Men are generally at greater risk of heart disease. The risk for women increases after menopause.
 - **Family history.** A family history of heart disease increases the risk of coronary artery disease, especially if a parent developed it at an early age (before age 55 for a male relative, such as your brother or father, and 65 for a female relative, such as your mother or sister).
 - **Smoking.** If you smoke, quit. Substances in tobacco smoke damage the arteries. Heart attacks are more common in smokers than in nonsmokers. If you need help quitting, talk to your health care provider about strategies that can help.
 - **Unhealthy diet.** Diets high in fat, salt, sugar and cholesterol have been linked to heart disease.
 - **High blood pressure.** Uncontrolled high blood pressure can cause the arteries to become hard and thick. These changes interrupt blood flow to the heart and body.
 - **High cholesterol.** Having high cholesterol increases the risk of atherosclerosis. Atherosclerosis has been linked to heart attacks and strokes.
 - **Diabetes.** Diabetes increases the risk of heart disease. Obesity and high blood pressure increase the risk of diabetes and heart disease.
 - **Obesity.** Excess weight typically worsens other heart disease risk factors.
 - **Lack of exercises.** Being inactive (sedentary lifestyle) is associated with many forms of heart disease and some of its risk factors, too.
 - **Stress.** Unrelieved stress may damage the arteries and worsen other risk factors for heart disease.
 - **Poor dental health.** It's important to brush and floss your teeth and gums often. Also get regular dental checkups. Unhealthy teeth and gums makes it easier for germs to enter the bloodstream and travel to the heart. This can cause endocarditis.
- **Complications of heart disease include:**
- **Heart failure.** This is one of the most common complications of heart disease. Heart failure occurs when the heart can't pump enough blood to meet the body's needs.
 - **Heart attack.** A heart attack may occur if a blood clot is stuck in a blood vessel that goes to the heart.
 - **Stroke.** The risk factors that lead to heart disease can also lead to an ischemic stroke. This type of stroke happens when the arteries to the brain are narrowed or blocked. Too little blood reaches the brain. A stroke is a medical emergency — brain tissue begins to die within just a few minutes of a stroke.
 - **Aneurysm.** An aneurysm is a bulge in the wall of an artery. If an aneurysm bursts, you may have life-threatening internal bleeding.
 - **Peripheral artery disease.** In this condition, the arms or legs — usually the legs — don't get enough blood. This causes symptoms, most notably leg pain when walking (claudication). Atherosclerosis can lead to peripheral artery disease.
 - **Sudden cardiac arrest.** Sudden cardiac arrest is the sudden loss of heart function, breathing and consciousness. It's usually due to a problem with the heart's electrical system. Sudden cardiac arrest is a medical emergency. If not treated immediately, it results in sudden cardiac death.

The same lifestyle changes used to manage heart disease may also help prevent it. Try these heart-healthy tips:

- Don't smoke.
 - Eat a diet that's low in salt and saturated fat.
 - Exercise at least 30 minutes a day on most days of the week.
 - Maintain a healthy weight.
 - Reduce and manage stress.
 - Control high blood pressure, high cholesterol and diabetes.
 - Get good sleep. Adults should aim for 7 to 9 hours daily.
- ✓ **Question 4: Do you know the main health problems and diseases that can affect you as a result of consuming large amounts of sugars?**
 Percentage of those who answered yes = 80%. Percentage of those who answered "no" = 7.5%.
 The percentage of those who answered that they are not sure = 12.5%.



Based on the statistics of Question 4, the percentage of people who do not know about health problems and diseases resulting from consuming large amounts of sugar = 7.5%, the percentage of those who answered that they are not sure = 12.5%.

It is necessary to educate the community of Al-Baha region about the harmful effects of consuming large amounts of sugar.

You can reduce calories without compromising on proper nutrition by reducing the amount of sugar in your diet. In fact, cutting out foods with added sugars may make it easier to get the nutrients you need without going over your calorie target.

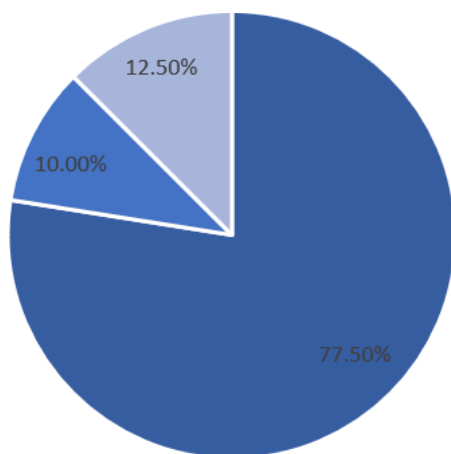
Side effects of excessive sugar intake are:

- Obesity.
- Diabetic disease.
- Hypertension disease.

✓ **Question 5: Do you know the main health problems or diseases that can affect you as a result of eating large amounts of fat?**

Percentage of those who answered yes = 77.5% Proportion of those who answered “no” = 10%.

The percentage of those who answered that they are not sure = 12.5%.



Based on the statistics of Question 5, the percentage of people who do not know about health problems and diseases resulting from consuming large amounts of fat = 10%, the percentage of those who answered that they are not sure = 12.5%.

It is necessary to educate the community of Al-Baha region about the harmful effects of consuming large amounts of fat.

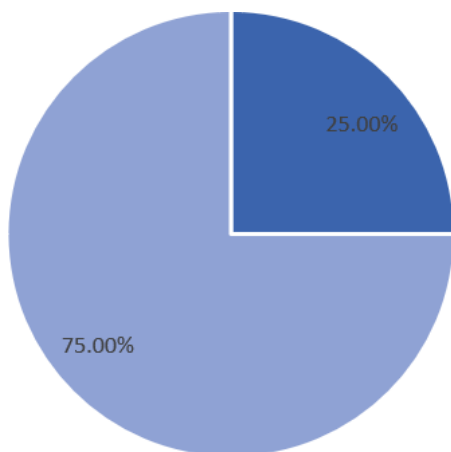
The amount of fat recommended to be consumed by an adult is estimated at between 20-35% of the total daily calories. Which means 44 - 77 grams of fat per day if 2000 calories per day are consumed, and it is indicated that the recommended amounts to be eaten according to the type of fat areas follows:

- 15 - 20% of monounsaturated fats.
- 5-10% of polyunsaturated fats.
- Less than 10% of saturated fat.
- 0% trans fat.
- Generally, less than 300 milligrams per day of cholesterol.

✓ **Question 6: Do you suffer from obesity?**

Percentage of those who answered yes = 25%.

Percentage of those who answered “no” = 75%.



Based on the statistics of Question 6: The percentage of participants in the questionnaire who suffer from obesity = 25%

It is necessary to educate the community of Al-Baha region about the harms of obesity and the importance of healthy food in getting rid of obesity.

Overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. A body mass index (BMI) over 25 is considered overweight, and over 30 is obese.

Risk factors

Obesity usually results from a combination of causes and contributing factors:

Family inheritance and influences

The genes you inherit from your parents may affect the amount of body fat you store, and where that fat is distributed. Genetics may also play a role in how efficiently your body converts food into energy, how your body regulates your appetite and how your body burns calories during exercise.

Obesity tends to run in families. That's not just because of the genes they share. Family members also tend to share similar eating and activity habits.

o Lifestyle choices

- **Unhealthy diet.** A diet that's high in calories, lacking in fruits and vegetables, full of fast food, and laden with high-calorie beverages and oversized portions contributes to weight gain.
- **Liquid calories.** People can drink many calories without feeling full. Other high-calorie beverages, such as sugared soft drinks, can contribute to significant weight gain.
- **Inactivity.** If you have a sedentary lifestyle, you can easily take in more calories every day than you burn through exercise and routine daily activities. Looking at computer, tablet and phone screens is a sedentary activity. The number of hours spent in front of a screen is highly associated with weight gain.

Pregnancy. Weight gain is common during pregnancy. Some women find this weight difficult to lose after the baby is born. This weight gain may contribute to the development of obesity in women.

Quitting smoking. Quitting smoking is often associated with weight gain. And for some, it can lead to enough weight gain to qualify as obesity. Often, this happens as people use food to cope with smoking withdrawal. In the long run, however, quitting smoking is still a greater benefit to your health than is continuing to smoke. Your doctor can help you prevent weight gain after quitting smoking.

Lack of sleep. Not getting enough sleep or getting too much sleep can cause changes in hormones that increase appetite. You may also crave foods high in calories and carbohydrates, which can contribute to weight gain.

Stress. Many external factors that affect mood and well-being may contribute to obesity. People often seek more high-calorie food when experiencing stressful situations.

Microbiome. Your gut bacteria are affected by what you eat and may contribute to weight gain or difficulty losing weight.

Complications

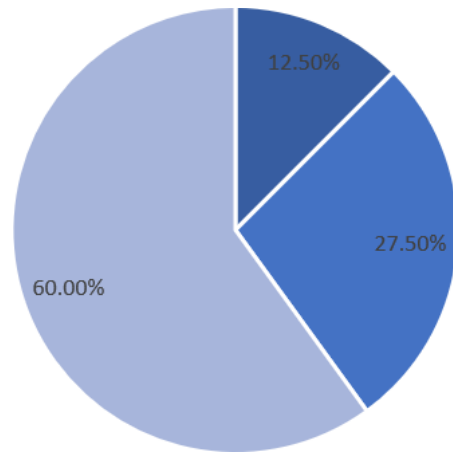
People with obesity are more likely to develop a number of potentially serious health problems, including:

- **Heart disease and strokes.** Obesity makes you more likely to have high blood pressure and abnormal cholesterol levels, which are risk factors for heart disease and strokes.
- **Type 2 diabetes.** Obesity can affect the way the body uses insulin to control blood sugar levels. This raises the risk of insulin resistance and diabetes.
- **Certain cancers.** Obesity may increase the risk of cancer of the uterus, cervix, endometrium, ovary, breast, colon, rectum, esophagus, liver, gallbladder, pancreas, kidney and prostate.
- **Digestive problems.** Obesity increases the likelihood of developing heartburn, gallbladder disease and liver problems.
- **Sleep apnea.** People with obesity are more likely to have sleep apnea, a potentially serious disorder in which breathing repeatedly stops and starts during sleep.
- **Osteoarthritis.** Obesity increases the stress placed on weight-bearing joints, in addition to promoting inflammation within the body. These factors may lead to complications such as osteoarthritis.
- **Severe COVID-19 symptoms.** Obesity increases the risk of developing severe symptoms if you become infected with the virus that causes coronavirus disease 2019 (COVID-19). People who have severe cases of COVID-19 may require treatment in intensive care units or even mechanical assistance to breathe.

✓ **Question 7: Do you eat fast food frequently?**

The percentage of those who answered yes = 12.5%. The percentage of those who answered “no” = 27.5%.

The percentage of those who answered “sometimes” = 60%.



Based on the statistics of question 7: Percentage of respondents who constantly eat fast food = 12.5%

The need to educate the community of Al-Baha about the harmful effects of fast food and the importance of healthy food.

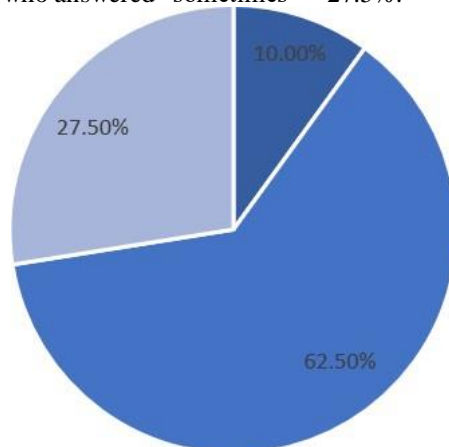
Fast food is considered more unhealthy than home meals, because it contains a large amount of fats, salts, additives and harmful bacteria, in addition to the fact that fast food that contains a large amount of salts has a negative effect on heart health.

✓ **Question 8: Do you count calories in your daily diet?**

The percentage of those who answered yes = 10%.

The percentage of those who answered “no” = 62.5%.

The percentage of those who answered “sometimes” = 27.5%.



Based on the statistics of question 8:

The percentage of respondents who do not count calories in their daily diet = 62%

The need to educate the Baha community about the importance of counting calories in daily food.

Calories are used to express the amount of energy the body needs in order to be able to do various basic things, including:

- breathing.
- thinking.
- Keep your heartbeat.

In order to know the importance of counting calories in food, it is necessary to understand how the body uses them, and we must know the sources of calories in food, which include:

- carbohydrates.
- protein.
- Fats.

During digestion, the body breaks down the foods that are eaten into smaller units, and distributes them throughout the body as needed. They may be used to build tissues or to provide the body with the energy it needs to meet its immediate needs. The amount of energy the body gets from the subunits depends on its source. As follows:

- Carbohydrates: 4 calories per gram.
- Protein: 4 calories per gram.
- Fat: 9 calories per gram.

The calories from metabolizing these nutrients are used by the body to power three main processes:

- Basic metabolism: In metabolism, most calories are used by the body to perform basic functions, such as delivering energy to the brain, kidneys, lungs, heart, and nervous system.
- Digestion: Part of the calories are used by the body to help digest the foods that are eaten.
- Physical Activity: The remaining calories fuel the body to be able to carry out daily tasks and exercise.

The total number of calories needed for these functions can vary greatly from day to day and person to person.

In order to calculate calories in food, two important things must be distinguished, namely:

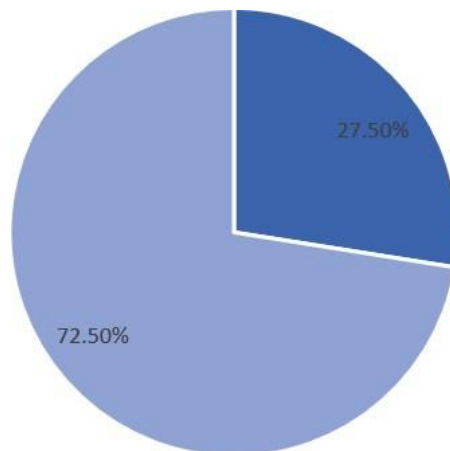
- The amount of food.
- The quality of the food.

The number of calories the body needs depends on a set of determinants, namely:

- weight.
- sex.
- the age.
- height.
- activity levels.

✓ **Question 9: Have you ever consulted a doctor about dieting?**

The percentage of those who answered yes = 27.5%. The percentage of those who answered “no” = 72.5%.



Based on the statistics of Question 9: The percentage of those who did not consult a doctor about their diet = 72%.

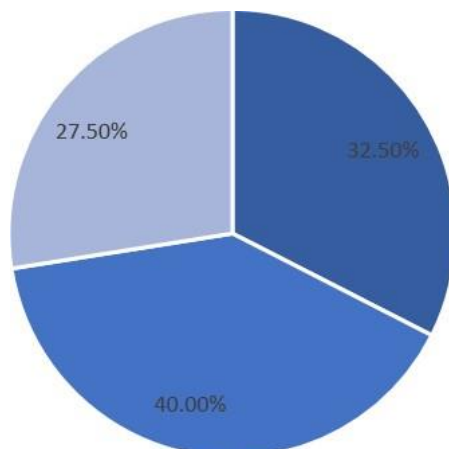
It is necessary to go to a specialized doctor to find out the needs of the body in terms of proteins, carbohydrates, and others.

There are nutrition clinics in various hospitals in the Al-Baha region. We recommend that you visit the hospital closest to your home and you will receive the service.

✓ **Question 10: Have you followed a diet during the last two years?**

The percentage of those who answered yes = 32.5%. Percentage of those who answered “no” = 40%.

The percentage of those who answered at different times = 27.5%.



Based on the statistics of Question 10: The percentage of those who didnot follow a diet during the last two years = 40%.

It is necessary to raise awareness of the community of Al-Baha region about the importance of a healthy diet.

□ Finally, the goals we hope to achieve:

- Regularity on a healthy diet to prevent chronic diseases.
- Do periodic laboratory tests to detect diabetes.
- Do periodic checks to detect high blood pressure.
- Doing periodic examinations to detect heart diseases.
- Maintaining body mass within the normal range of 18.5-24.9.
- Consult a doctor on calories.
- Consult a doctor about the appropriate diet for the body.

CONCLUSION:

Our survey concluded that the community of Al-Baha region is generally aware of healthy food and its role in preventing chronic diseases, with the exception of some information that needs awareness of chronic diseases through voluntary campaigns to increase community awareness in the Al-Baha region, Urging chronic disease doctors to educate patients when they visit hospitals about the importance of healthy food and a course in preventing chronic diseases and publishing educational publications online. And also educating students in schools about the importance of healthy food and a course in the prevention of chronic diseases to build a healthysociety in the future.

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- 6\ <https://www.mayoclinic.org/diseases-conditions/heart-disease/symptoms-causes/syc-20353118>
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