Developed by Stowelink Inc.

STOWELINK INC.
TRANSFORMING AND EMPOWERING LIVES

Youth NCDS Champions

THE NON COMMUNICABLE DISEASES(NCDS) TRAINING MODULE

for school's, communities and groups.

#beatNCDs

PREFACE

Non communicable diseases (NCDs) are the leading killer diseases globally and 70% of the deaths caused by these diseases occur in low and middle income counties especially in the sub Saharan Africa. The thought of this situation facing Africa and other low and middle income countries led Ogweno Stephen to begin thinking of ways in which he could help alleviate this problem before it becomes a tragedy for African counties. Its towards this end that the lead author together with Dr. Roger Harrison (PHD) from university of Manchester in the United Kingdom decided to jointly work in developing a truly universal training module for schools, communities and societies addressing all the 5 NCDS and their risk factors and more than that exploring the relationship between non communicable diseases and antimicrobial resistance which is another big problem facing African countries.

This module contains information on non-communicable diseases which had been borrowed from global leading entities including the World Health Organization, the global NCD Alliance and research work from the Lancet and other reputable research work. This module can be used by community health workers, teachers, students and even parents in a bid to learn about various non communicable diseases and on how to prevent and control them. The module is written in simple easy to understand language that can be understood by the general population. The main aim of this short module is to educate communities on non-communicable diseases in a bid to eliminate NCDS illiteracy and improve better health outcomes.

This module was developed under Stowelink Inc., a youth led organization whose primary ethos is to inspire healthier communities through provision of information on non-communicable diseases to all at all times and in relevant formats through innovation, disruptive communication approaches and use of technology. In order to support the work in this module, the information in this module will also be available in the mCure App which is freely available on Playstore. This app is the first app that has been developed and dedicated solely to non-communicable diseases education. The app is free and easy to download.

We are hoping that through this module, you will be more informed, you will have fun while learning and that you will share your learnings with someone else. Information is power and relevant information on non-communicable diseases has never been important as it is currently.

Learn, share, practice

#beatNCDS #stowelink

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ABOUT STOWELINK INC.

Stowelink is a youth led organization whose mission is to inspire healthier communities through provision on non-communicable diseases information to ALL at ALL times and in RELEVANT formats through integration of innovative community projects, technology and using disruptive communication approaches.

Stowelink Inc. is registered with the government of Kenya under the Limited Liability Partnership act as an LLP. Founded in 2016, Stowelink has been able to conduct various initiatives reaching to over 2.1 million people with relevant messages on non-communicable diseases as at January 2020.

At Stowelink we focus majorly on preventive primary health care providing services and undertaking projects aimed at addressing this. We have projects to address the 4 major risk factors to non-communicable diseases which include tobacco use, alcohol use, poor diets and physical inactivity. We also provide screening services especially for cardiovascular diseases. Besides that, we conduct relevant, easy to understand trainings on the preventive approaches of all non-communicable diseases.

To find out more visit us at

www.stowelink.com

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Stowelink are registered members of the Non-Communicable Diseases Alliance Of Kenya

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Youth NCDS Champions

MESSAGE FROM THE AUTHOR

Greetings,

Non communicable diseases(NCDS), as you will learn in this module, are the leading cause of death worldwide but more shocking is that 70% of these deaths occur in low and middle income countries. The World Health Organization projects that sub Saharan Africa will show most new cases of non-communicable diseases by 2025 than any other part of the world. Despite such an impending danger on public health and on the health of various populations, not a lot of focus is put in the fight against non-communicable diseases. Some would argue it's because it takes long to be noticed or that investment in NCDS does not yield immediate returns but such arguments are what will lead us to the path we are trying to avoid. NCDS has the most effect on families and communities, effects that can easily be avoided by preventive practices and by focusing on prevention and control of non-communicable diseases, after all prevention is better than cure isn't it!

As a researcher, an enthusiast and an advocate in this field with in depth experience on youth led programmes and initiatives on non-communicable diseases literacy I have since developed a stronger feeling now more than ever to develop a series of tools that will help with NCDS education on a global level. This module together with the mCure App and the NCDS Youth champions board games are some of the innovative ideas that I have developed together with my team Stowelink Inc. to educate the mases on non-communicable diseases all in a bid to improve the NCDS literacy levels in Africa and beyond.

In this module you will find evidence based content curated from the World Health Organization, the NCD Alliance and its partners on the topic of non-communicable diseases. You will find this information presented to you in an easy simplified format that enhances understanding. You will also find exciting engagement activities to keep you and your audiences engaged as they learn about NCDS and more than that these activities are designed to make NCDS learning fun and meaningful.

Let's come up together and together let us improve NCDS literacy in Africa and beyond and beat NCDS!

Ogweno Stephen

Lead Author,
Founder and CEO,
Stowelink Inc.

HOW TO EFFECTIVELY USE THIS MODULE.

The following module was developed with the sole aim of being able to educate participants in various setups on non-communicable diseases.

i. The module is pretty easy to use.
ii. On the module there is content to be taught or learnt by the participants and each module is designed to be taught in about 30 minutes.
iii. After each module is an allocation for an engagement activity. Based on the audience, the facilitator will choose from out various engagements activities and carried it out with the participants.
iv. The engagement activities are designed to tale between 5 and 15 minutes.
v. We highly encourage the use of engagement activities as this is what helps to really drive the information home.

ENGAGEMENT ACTIVITIES GUIDE

Engagement activities are activities that can be carried out on various situations where this module is taught to drive various messages learnt in each module. These activities are meant to make the learning more practical and more fun.

The following activities can be carried out depending on various platforms to drive the message home.

ACTIVITIES THAT CAN BE CARRIED OUT IN A COMMUNITY SET UP

Campfire Session

1. The sessions generally begin a lot like a traditional presentation, with a speaker (or multiple speakers) at the front of the room presenting an idea to a group of people.
2. However, after 15 or 20 minutes, the focus shifts from the presenter to the audience and the floor is opened for discussion.
3. For the remainder of the session, the presenter becomes a facilitator, inviting comments, insights, and questions from those around the room.
4. Campfire sessions allow attendees to drive their own learning and share experiences with others, which also assists with networking.

Teach the teacher activity

1. In this activity, before the session random names or symbols are distributed to the participants
2. When the presenter or teacher is done presenting, the teacher will select a symbol and everybody with that symbol will come up and teach the class in 2 minute summaries on various aspects of the taught module.

Acting out the session.

1. In this activity the community breaks into groups
2. Each group selects a leader
3. The leaders of every group then collect and act out a scenario teaching what they have learnt in the session.
4. The groups cheer their leader ad in the end could vote for who was the best actor.
5. Acting session limits to 5 minutes.

Answer on 3 activity

1. All participants close their eyes
2. they randomly count to three and in multiples of three
3. Every third person answers a question or gives their feedback on what they learnt

ACTIVITIES THAT CAN BE CARRIED OUT IN A CLASS SET UP

Fishbowl Activity

1. Fishbowl is a great engagement idea that helps you capture more voices during a discussion.
2. Seat the attendees in a large circle and put 5 seats in a smaller circle inside (the fishbowl).
3. Three guests and a moderator sit in the fishbowl and discuss a topic.
4. Meanwhile, everyone else observes, leaving the fourth seat empty.
5. If an attendee wants to join, he or she can approach the fishbowl and the moderator invites them to take a seat.
6. At the same time, one of the other speakers stands up and leaves an empty seat for other participants who will want to join later.

The Three Questions

1. Split people into groups of five.
2. Give them three questions that each attendee has one minute to answer: What have I learnt? What can I do now with the information learned? What useful experience or expertise do I have?
3. Let people answer in turns.

Super brainstorm

1. Ask the uneven rows to turn around and face the people sitting behind them, to form pairs.
2. Each pair exchanges thoughts on a given problem or topic, e.g. How can we use the lessons learnt to make impact? or what stood out for you during the session?
3. At the end, the moderator invites a few participants to share their ideas.

Elevator pitch

1. Knowing how to summarize your thoughts in a concise and thoughtful manner is a true 21st-century skill. At the end of class, ask students to sum up the day's learning in a 30- to 60-second elevator pitch.
2. Make sure to include the context and importance of the day's learning and how it may fit into the larger scope of the class' learning.

MODULE 1 : WHAT ARE NCDS.

NCDS stand for non-communicable diseases. These are diseases that do not transfer from one person to the other thus the name non communicable.

These diseases are chronic which means they take long periods of time to develop and when they do they take long periods of time to treat or manage. Most of these diseases last a lifetime once they've developed.

MAJOR TYPES OF NCDS

There are 5 major types of NCDs that make up the bigger chunk of these diseases and cause 80% of all deaths from NCDs. They include

1. Cancers

A disease in which abnormal cells divide uncontrollably and destroy body tissue. When the body has cancer, old cells do not die and instead they grow out of control, forming new, abnormal cells. These extra cells may form a mass of tissue, called a tumor(cancer).

2. Diabetes

A group of diseases that result in too much sugar in the blood (high blood glucose). diabetes is of 2 major types:

- **Type 1 diabetes** is where the body produces little or no insulin leading to high glucose(sugar) levels in the blood.
- **Type 2 diabetes** is where your body either resists the effects of insulin — a hormone that regulates the movement of sugar into your cells — or doesn't produce enough insulin to maintain normal glucose levels.

3. Cardiovascular diseases (heart and vein diseases)

These are diseases that affect the heart, including blood vessels i.e. veins and blood clots.

4. Chronic lung diseases

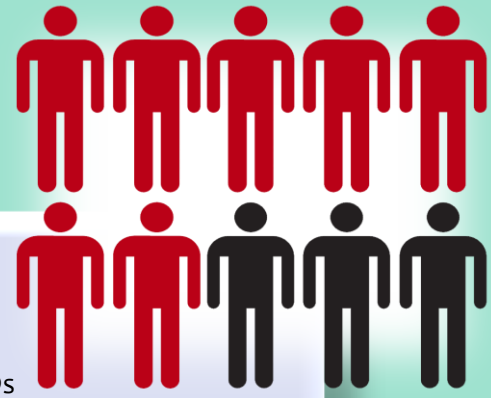
A group of lung diseases that block airflow and make it difficult to breathe.

5. Mental Health disorders.

A wide range of conditions that affect mood, thinking and behavior.

Other NCDS include chronic kidney disease, osteoarthritis, osteoporosis, Obesity Alzheimer's disease, cataracts, and others.

IMPORTANT NUMBERS AND STATISTICS ON NCDS



- **41 million** + = people who die from NCDs yearly
- **7 out of 10 deaths** globally are as a result of NCDs
- **15 million** + = people between 30-69 years who die from NCDs
- **8 out of 10 premature deaths** from NCDs occur in low and middle income countries.
- Cardiovascular diseases are the leading killer disease **(17.9 million people** annually)
- Cancers is the **second leading killer NCDs** (9.0 million people per year)
- Respiratory diseases are **the third killer NCDs** (3.9million per year)
- **diabetes** is the fourth killer disease (1.6 million people per year).
- Tobacco accounts for over **7.2 million deaths every year**
- **Excess salt/sodium intake** accounts for 4.1 million annual deaths
- **Alcohol use** accounts for 3.3 million annual deaths
- insufficient physical activity accounts **for 1.6 million deaths** annually.

NCDS AND THE SUSTAINABLE DEVELOPMENT GOALS(SDGS).

The 2030 Agenda for Sustainable Development adopted at the United Nations Summit on Sustainable Development in September 2015, recognizes non-communicable diseases (NCDs) as a major challenge for sustainable development. Government committed to do the following

- Reduce by one third premature mortality from NCDs (SDG3.4)
- Strengthen responses to reduce the harmful use of alcohol (SDG 3.5)
- Achieve universal health coverage (UHC) (SDG 3.8)
- Strengthen the implementation of the WHO Framework Convention on Tobacco Control (FCTC)
- Support the research and development of vaccines and medicines for NCDs
- Provide access to affordable essential medicines and vaccines for NCDs

INTERESTING FACTS ON NCDS

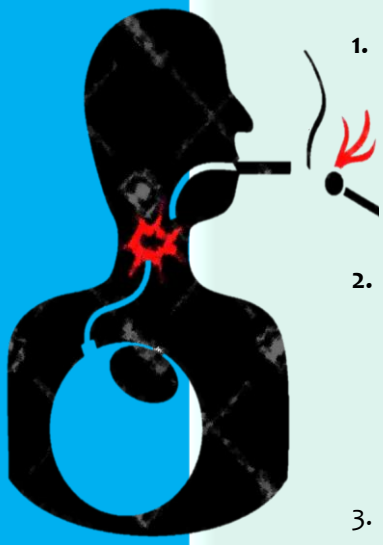
- Around the world, NCDs affect women and men almost equally.
- NCDs are highly preventable.
- Having an NCDs is not a death certificate with proper management, you can live a complete life.

ENGAGEMENT ACTIVITY.

MODULE 2: CAUSES OF NCDS.

Non-communicable diseases (NCDs) are usually caused by genetic or lifestyle factors. These causes include:

TOBACCO USE.



1. **The numbers**
   - *Every 1 second, one person dies of tobacco use which equals to 6 million people per year.*
   - *600,000+ people die of second hand smoking per year*

2. **Tobacco use causes**
   - *cardiovascular diseases*
   - *cancers (lung, mouth, throat, esophagus, and larynx)*
   - *chronic respiratory diseases*

3. **Smoking can cause cancer and then block your body from fighting it.**

This is because poisons in cigarette smoke can weaken the body's immune system, making it harder to kill cancer cells.

4. **Cigarette smoke contains more than 7,000 compounds and at least 70 chemicals that cause cancer.**

These chemicals are referred to as Carcinogens. Every time you breathe in that smoke, those chemicals get into your bloodstream, which in turn carries them to all parts of your body.

5. **Smokeless tobacco products, such as dipping vaping, using tobacco patches and chewing tobacco, can cause cancer too, including cancers of the Esophagus, Mouth and Throat, and Pancreas.**

No form of smokeless tobacco is a safe substitute for cigarettes.

ALCOHOL USE

1. **The numbers**
    - *Harmful alcohol use kills 3.3 million people every year.*
    - *320 000 die of alcohol and are young people between 15 and 29 years of age.*
    - *Alcohol is the third leading risk factor for poor health globally*
2. **Men are twice more likely to die from alcohol than women.**
3. **Alcohol use causes**
    - *More than 200 disease and injury conditions*
    - *Cardiovascular disease i.e. stroke.*
    - *Cancer (of the oral cavity, pharynx, larynx, esophagus, liver, colon, rectum, and female breast)*
    - *Liver Disease (alcoholic hepatitis and cirrhosis)*
    - *mental illness and injuries.*

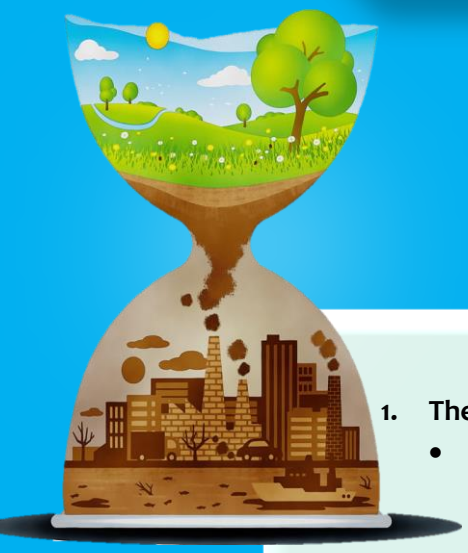
PHYSICAL INACTIVITY.

1. **The numbers**
    - 5 million+ people die of physical inactivity per year.
    - Physical inactivity is the fourth leading cause of early death globally.
    - 3 out of every 10 people are not physically active
2. **Physical inactivity increases the risk of**
    - cancer (colon, breast, and uterine cancers)
    - heart diseases (ie stroke, hypertension coronary artery disease and heart attack)
    - diabetes
    - overweight/obesity
    - depression and anxiety.
3. **Shortens lifespan by 3–5 years.**

UNHEALTHY DIET.

1. **The numbers**
    - 2.7 million deaths are attributable to diets low in fruits and vegetables.
    - At least 2.6 million people each year die as a result of being overweight or obese.
2. **Unhealthy diets full of salt and lacking in fruits and vegetables cause:**
    - obesity
    - cardiovascular diseases (CVD)(coronary heart disease, stroke)
    - type 2 diabetes
    - cancers. (gastrointestinal cancer)
3. **Obesity and non-communicable diseases**

Overweight and obesity are potent risk factors for cardiovascular diseases and type 2 diabetes and are major contributors to premature death.



ENVIRONMENT (ESP. AIR POLLUTION)

1. **The numbers**
    - In 2016 air pollution was the second largest risk factor causing NCDs globally

2. **Environment (esp. Air Pollution) causes:**
    - Stroke
    - ischemic heart disease
    - lung cancer
    - chronic obstructive respiratory disease

ENGAGEMENT ACTIVITY

MODULE 3: NCDS ACROSS LIFE.

NCDS affects both children, adult and the elderly, it affects both the rich and the poor, in fact it affects the poor more!

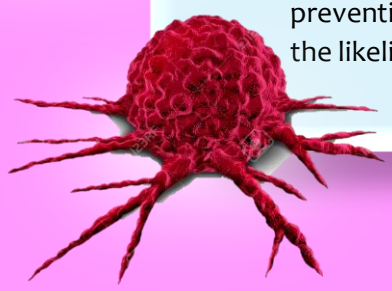
NCDS IN CHILDREN AND YOUTH

CARDIOVASCULAR DISEASE (CVD)

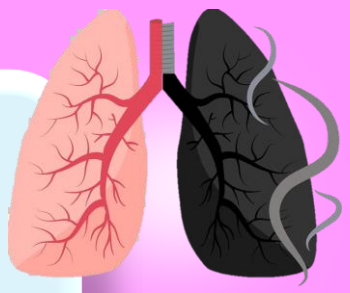
- Cardiovascular diseases (CVDs) are disorders of the heart and blood vessels
- Children can also be affected by CVDs
- In 2017, more than 13.9 million children had some form of CVD.
- Heart disease in children include, but are not limited to, congenital heart disease, rheumatic heart disease, and pediatric stroke.

CANCER

- Every year 300,000 new children (under 20) get cancer
- Child hood cancers are the leading cause of death in children and adolescents
- The most common categories of childhood cancers are leukemias, brain cancers, lymphomas and solid tumors, such Wilms tumors; most cannot be prevented or screened.
- The causes of Child hood cancers are often unknown and prevention efforts should focus on risk factors that may increase the likelihood of developing cancer as an adult.



CHRONIC RESPIRATORY DISEASES



- Chronic respiratory diseases (CRDs) are diseases of the airways and lungs.
- They include asthma, chronic obstructive pulmonary disease (COPD), lung cancer, cystic fibrosis, sleep apnea and occupational lung diseases.
- Asthma is the most common condition that affects children and adults.
- It's estimated that 235 million people currently suffer from asthma.
- Risk factors include tobacco smoke, air pollution, occupational chemicals, dusts, and frequent lower respiratory infections during childhood
- Early childhood respiratory infection, asthma or environmental exposures may lead to chronic disease in adulthood.

DIABETES

- Type 1 diabetes, traditionally called childhood-onset diabetes, occurs when the pancreas does not produce enough insulin, a hormone that regulates blood sugar.
- A combination of genetic and environmental factors is thought to cause the majority of Type 1 diabetes cases. At present, Type 1 diabetes cannot be prevented.
- Type 2 diabetes develops when the body cannot effectively use the insulin it produces.
- Type 2 diabetes is increasing exponentially and developing at a younger age, including in adolescence and childhood.
- The most prevalent risk factor for Type 2 diabetes is obesity.
- Strategies for the prevention of Type 2 diabetes include healthy eating and increased physical activity.

MENTAL HEALTH

- Mental disorders include anxiety disorders, attention deficit/hyperactivity disorder, autism Spectrum disorder, behavior disorders, conduct disorder, mood disorders, eating disorders, schizophrenia, and substance abuse.
- They also include intellectual disabilities and neurological disorders such as epilepsy and dementia.
- It's estimated that 10-20% of young people experience mental disorders.
- Untreated mental disorders can severely influence young people's development, their educational attainments and their quality of life.
- Young people with mental disorders also contribute to an increased prevalence of disability and are faced with stigma, isolation and discrimination, as well as lack of access to health care and education

NCDS IN ADULTS AND ELDERLY

CARDIOVASCULAR DISEASE

- Cardiovascular disease remains the leading cause of death globally.
- Cardiovascular diseases are responsible for an estimated 17·8 million deaths in 2017
- Among the 71.3 million adults with one or more forms of CVD, the most common conditions are hypertension or high blood pressure (65 million), coronary heart disease (13.2 million), stroke (5.5 million), heart failure (5 million), and congenital heart defects (1 million).
- CVDs represent a significant threat to human welfare and sustainable development.

CANCER

- Cancer starts when cells in the body begin to grow out of control. Cells in nearly any part of the body can become cancer, and can then spread to other areas of the body.
- Most cancers occur in older adults.
- The most common cancers in older people are cancers of the skin, lung, colon and rectum, breast (in women), and prostate (in men).
- Many cancers in older adults are linked to lifestyle-related risk factors (such as smoking, being overweight or obese, or not getting enough physical activity) or to other environmental factors.

CHRONIC RESPIRATORY DISEASES

- Chronic respiratory diseases are chronic diseases of the airways and other parts of the lung.
- The two most important risk factors for chronic respiratory diseases are tobacco smoke (through personal smoking and exposure to second-hand smoke) and indoor and outdoor air quality.
- Adults are affected more because of their lifestyle choices including exposure to smoke and tobacco.

DIABETES

- Diabetes means that your blood glucose (sugar) level is too high. Your body's cells need glucose for energy.
- The risk for diabetes increases with age, making diabetes common in older adults.
- In fact, approximately 25% of adults over the age of 60 years have diabetes. Diabetes means that your blood glucose (sugar) level is too high. Your body's cells need glucose for energy.
- There's no cure for type 2 diabetes, but losing weight, eating well and exercising can help manage the disease.
- If diet and exercise aren't enough to manage your blood sugar well, you may also need diabetes medications or insulin therapy.
- Type 1 diabetes used to be called "juvenile diabetes," because it's usually diagnosed in children and teens. But don't let that old-school name fool you. It can start when you're a grownup, too.

MENTAL HEALTH

- About 1 in 5 adults has a mental illness in any given year.
- Mental illness, also called mental health disorders, refers to a wide range of mental health conditions — disorders that affect your mood, thinking and behavior.
- Examples of mental illness include depression, anxiety disorders, schizophrenia, eating disorders and addictive behaviors. Trauma and stress: in adulthood, traumatic life events or ongoing stress such as social isolation, domestic violence, relationship breakdown, financial or work problems can increase the risk of mental illness.

ENGAGEMENT ACTIVITY

MODULE 4: PREVENTION OF NCDS.

Many NCDs can be prevented by addressing diet, physical activity, tobacco and alcohol use and making the places we live in health promoting.

FOODS TO EAT

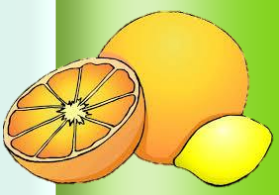
CANCER

1. **Carrots**

Several studies have found that eating more carrots is linked to a decreased risk of certain types of cancer. Try incorporating carrots into your diet as a healthy snack or delicious side dish just a few times per week to increase your intake and potentially reduce your risk of cancer.

2. **Beans**

Beans are high in fiber, which some studies have found may help protect against colorectal cancer. According to these results, eating a few servings of beans each week may increase your fiber intake and help lower the risk of developing cancer.



3. **Citrus Fruits**

Eating citrus fruits such as lemons, limes, grapefruits and oranges has been associated with a lower risk of cancer in some studies. including a few servings of citrus fruits in your diet each week may lower your risk of developing certain types of cancer.

4. **Tomatoes**

Lycopene is a compound found in tomatoes that is responsible for its vibrant red color as well as its anticancer properties. include a serving or two of tomatoes in your diet each day by adding them to sandwiches, salads and sauces.

5. **Fatty Fish**

Some research suggests that including a few servings of fish in your diet each week may reduce your risk of cancer. Aim for two servings of fatty fish per week to get a hearty dose of omega-3 fatty acids and vitamin D, and to maximize the potential health benefits of these nutrients.

1. Leafy vegetables

Leafy green vegetables like spinach, kale and collard greens are well-known for their wealth of vitamins, minerals and antioxidants.in particular, they're a great source of vitamin K, which helps protect your arteries and promote proper blood clotting.

2. Whole Grains

Studies show that eating whole grains is associated with lower cholesterol and systolic blood pressure, as well as a lower risk of heart disease. Whole grains are higher in fiber, which may help reduce "bad" LDL cholesterol and decrease the risk of heart disease.

3. Avocados

Avocados are an excellent source of heart-healthy monounsaturated fats, which have been linked to reduced levels of cholesterol and a lower risk of heart disease. Avocados are also rich in potassium, a nutrient that's essential to heart health. In fact, just one avocado supplies 975 milligrams of potassium, or about 28% of the amount that you need in a day.

4. Dark Chocolate

Dark chocolate is rich in antioxidants like flavonoids, which can help boost heart health. Interestingly, several studies have associated eating chocolate with a lower risk of heart disease.

5. Green Tea

Green tea has been associated with a number of health benefits, from increased fat burning to improved insulin sensitivity. It's also brimming with polyphenols and catechins, which can act as antioxidants to prevent cell damage, reduce inflammation and protect the health of your heart.

LUNG HEALTHY FOODS

1. Water

Water is essential for healthy lungs. Dry lungs are prone to irritation. Each day you should try to drink between six and eight glasses.

2. Fatty Fish

Fish high in fat is an excellent choice of food for healthy lungs as they contain high levels of omega-3 fatty acids which are linked with lung health.

3. Apples

Apples are the food for adults who want healthy lungs. Apples are effective for adults who want to focus on lung health.

4. Poultry

Chicken, turkey, and other small poultry birds can benefit your lungs. According to the Office of Dietary Supplements, these foods are high in lung health boosting vitamin A, and your body may absorb animal-based versions of vitamin A better than plant-based versions.

5. Berries

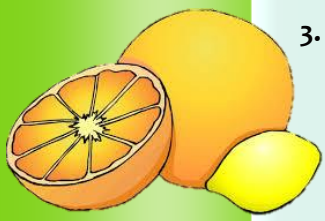
Berries are rich in antioxidants, which the American Cancer Society notes protects lungs. Acai and blueberry are two of the top sources, but cranberries, grapes, and strawberries are also good for the lungs.

1. Green leafy vegetables

Green leafy vegetables are packed full of essential vitamins, minerals, and nutrients. They also have minimal impact on blood sugar levels. Leafy greens, including spinach and kale, are a key plant-based source of potassium, vitamin A, and calcium. They also provide protein and fiber.

2. Beans

People can try adding kidney beans to a healthful salad. Beans are an excellent food option for people with diabetes. They are source of plant-based protein, and they can satisfy the appetite while helping people reduce their carbohydrate intake.



3. Citrus fruits

Research has shown that citrus fruits, such as oranges, grapefruits, and lemons, have antidiabetic effects. Eating citrus fruits is a great way to get vitamins and minerals from fruit without the carbohydrates. Citrus fruits are also a great source of: vitamin C, folate, potassium.

4. Sweet potatoes

Sweet potatoes have a lower GI than white potatoes. This makes them a great alternative for people with diabetes, as they release sugar more slowly and do not raise blood sugar as much. Sweet potatoes are also a great source of: Fiber, vitamin A, vitamin C, potassium.

5. Probiotic yogurt

Probiotics are the helpful bacteria that live in the human gut and improve digestion and overall health. eating probiotic yogurt could improve cholesterol levels in people with type 2 diabetes. This could help lower the risk of heart disease.

FOODS TO AVOID

1. Sugary Drinks

Added sugar is the single worst ingredient in the modern diet. However, some sources of sugar are worse than others, and sugary drinks are the absolute worst. Sugar is strongly linked to non-alcoholic fatty liver disease. It is also associated with various serious diseases, including type 2 diabetes and heart disease. Sugary drinks are also THE most fattening aspect of the modern diet, and drinking them in large amounts can drive fat gain and obesity.

2. White Bread

Bread is generally made from wheat, which contains the protein gluten. most commercial breads are unhealthy, even for people who do tolerate gluten. This is because the great majority of them are made from refined wheat, which is low in essential nutrients (empty calories) and leads to rapid spikes in blood sugar.

3. Fruit Juices

Fruit juice is often assumed to be healthy, but this is a mistake. Many fruit juices are actually little more than fruit-flavored sugar water. It is true that the juice contains some antioxidants and vitamin C, but this must be weighed against the large amount of liquid sugar. In fact, fruit juice contains just as much sugar as a sugary drink like Coke or Pepsi, and sometimes even more.

4. Margarine

Margarine used to be considered a healthy alternative to butter. Fortunately, most people have now realized that this is far from being true. Margarine is a highly processed pseudo-food that has been engineered to look and taste like butter. This increases their trans-fat content significantly.

5. Pastries, Cookies and Cakes

Most pastries, cookies and cakes are extremely unhealthy. They are generally made with refined sugar, refined wheat flour and added fats, which are often disturbingly unhealthy fats like shortening (high in trans fats).These tasty treats are literally some of the worst things that you can put into your body. Almost no essential nutrients, but tons of calories and unhealthy ingredients.

MORE FOODS TO AVOID.

6. French Fries and Potato Chips

Whole, white potatoes are very healthy. However, the same can NOT be said of the products that are made from them, such as French fries and potato chips. These foods are very high in calories, and it is easy to eat excessive amounts. Several studies link consumption of French fries and potato chips with weight gain.

7. Ice Cream

Ice cream is one of the most delicious foods on the planet. Unfortunately, it is also one of the unhealthiest. Most commercial ice cream is loaded with sugar. Ice cream is also high in calories, and it is very easy to eat excessive amounts.

8. Processed Meat

Even though unprocessed meat can be healthy and nutritious, the same is NOT true for processed meats. Studies show that people who eat processed meats have a higher risk of many serious diseases, including colon cancer, type 2 diabetes and heart diseases.

9. Fast Food Meals

Generally speaking, "fast food" chains serve only junk foods. The majority of the food they offer is mass-produced, highly engineered junk food with very little nutritional value. These places are often very cheap, but keep in mind that junk food costs you twice.

THINGS TO DO

1. Get regular health screenings

High blood pressure and high cholesterol can damage your heart and blood vessels. But without testing for them, you probably won't know whether you have these conditions. Regular screening can tell you what your numbers are and whether you need to take action.

2. Maintain a healthy weight and be physically active

Maintaining a healthy weight might lower the risk of various types of cancer, including cancer of the breast, prostate, lung, colon and kidney.it also helps you prevent NCDS in general.

3. Get vaccinated

Cancer prevention includes protection from certain viral infections. Talk to your doctor about vaccination against: Hepatitis B AND Human papillomavirus (HPV)

4. Consider taking low-dose aspirin.

Men who take aspirin or other nonsteroidal anti-inflammatory drugs appear to have a lower risk of colon cancer and possibly prostate cancer.

5. Get enough quality sleep

Sleep deprivation can do more than leave you yawning throughout the day; it can harm your health. People who don't get enough sleep have a higher risk of obesity, high blood pressure, heart attack, diabetes and depression.

6. Exercise daily

Did you know that daily exercise can reduce all of the biomarkers of aging? This includes improving eyesight, normalizing blood pressure, improving lean muscle, lowering cholesterol, and improving bone density. If you want to live well and live longer, you must exercise! Studies show that even ten minutes of exercise makes a difference.

MORE THINGS TO DO

7. Control diabetes.

Diabetes makes heart disease more likely. Many people who have diabetes don't know it. Get tested and get treated.

8. Manage stress and anger.

Everyone has stress, and it's normal to get angry now and then. When stress and anger flare up, especially if it happens a lot, that's a problem. Managing your stress and handling your anger in healthy ways puts you back in charge.

9. Be aware of the air.

People with lung diseases such as asthma and COPD need to pay particular attention to the levels of air pollution called particulates — tiny solid or liquid particles — in the environment and limit their outdoor exposure when levels are high.

10. Breathe deeply

If you're like many people, you take shallow breaths from your chest area, using only a small portion of your lungs. Deep breathing helps clear the lungs and creates a full oxygen exchange.

11. Watch portion sizes

Avoiding large portion sizes can help reduce insulin and blood sugar levels and decrease the risk of diabetes. Eating too much food at one time has been shown to cause higher blood sugar and insulin levels in people at risk of diabetes

12. Avoid sedentary behaviors

It's important to avoid being sedentary if you want to prevent diabetes. Avoiding sedentary behaviors like excessive sitting has been shown to reduce your risk of getting diabetes. Observational studies have shown a consistent link between sedentary behavior and the risk of diabetes.

THINGS NOT TO DO.

1. Don't use tobacco

Using any type of tobacco puts you on a collision course with cancer. Even if you don't use tobacco, exposure to secondhand smoke might increase your risk of lung cancer. Avoiding tobacco — or deciding to stop using it — is an important part of cancer prevention.

2. Over eating

Consuming more calories than you burn may cause you to become overweight or obese. This increases your risk for cancer and other chronic health problems. Overeating -- especially unhealthy foods -- can take its toll on your digestive system. Overeating can even impact your sleep.

3. Using too much salt

Excess sodium increases blood pressure because it holds excess fluid in the body, and that creates an added burden on the heart. Too much sodium will increase your risk of stroke, heart failure, osteoporosis, stomach cancer and kidney disease.

4. Being depressed

When people are stressed, anxious or feeling down, they're not apt to make the healthy choice because they're so overwhelmed by their situation. feeling down can lead to changes that can affect your health, and not just because you may fall into habits that are bad for your health including increased stress hormones, higher levels of cortisol and higher glucose levels, blood pressure and cholesterol.

5. Sitting a lot

Sitting or lying down for too long increases your risk of chronic health problems, such as heart disease, diabetes and some cancers. Too much sitting can also be bad for your mental health.

6. Not drinking enough water

Staying hydrated helps to keep your memory sharp, your mood stable and your motivation intact. Keeping up with your fluids helps your skin stay supple, your body cool down when it's hot, allows your muscles and joints to work better and helps clean toxins from your body via your kidneys.

MORE THINGS NOT TO DO.

7. Eating late at night

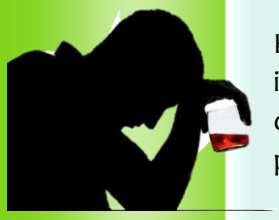
There are a couple of reasons why you should think about moving your dinner hour earlier. Researchers suspect that the longer lapse between meals allows the body to process the food more efficiently. There is some research around intermittent fasting (where you space out your meals and eat in a shorter window), that suggests it may help with weight loss.

8. Having less sleep

You know that falling short on sleep is a major no-no, but why—what's the big deal? Research shows that not getting enough sleep can impact on a lot of things: it can compromise your immune system, your judgment and ability to make decisions (you are also more likely to make mistakes) and damage your heart health.

9. Bad oral hygiene

Gum disease (periodontitis) is associated with an increased risk of developing heart disease. Poor dental health increases the risk of a bacterial infection in the blood stream, which can affect the heart valves. Tooth loss patterns are connected to coronary artery disease.



10. Drinking alcohol

Health effects associated with alcohol intake in large amounts include an increased risk of alcoholism, malnutrition, chronic pancreatitis, alcoholic liver disease and cancer. In addition, damage to the central nervous system and peripheral nervous system can occur from chronic alcohol abuse

11. Eating red meat

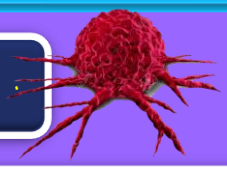
Research has linked both red and processed meat to a higher risk of certain health conditions, such as diabetes, coronary heart disease, and even some cancers.

ENGAGEMENT ACTIVITY

MODULE 5: ALL YOU NEED TO KNOW ABOUT SPECIFIC NCDS

ALL YOU NEED TO KNOW ABOUT CANCERS

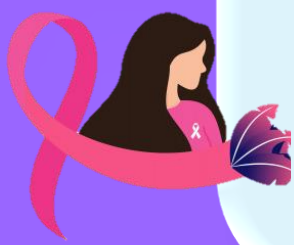
WHAT IS CANCER.



CANCER is a disease in which abnormal cells divide uncontrollably and destroy body tissue. When the body has cancer, old cells do not die and instead they grow out of control, forming new, abnormal cells. These extra cells may form a mass of tissue, called a tumor(cancer).

FACTS AND STATISTICS

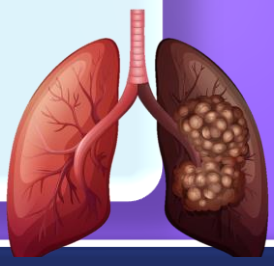
1. **The word 'cancer' comes from the Latin for 'crab'.-** Early doctors, when describing certain tumours which had veins or extensions from the main body, called them crab-like, or 'cancerous'.
2. **Cancer was first described by the ancient Egyptians**- The earliest description of cancer was found in the Edwin Smith Papyrus dating back to 1600 B.C. The document describes breast tumours removed by a tool called the fire drill. However, it states that "there is no treatment".
3. **More than half of all cancers are preventable**- Researchers believe that over half of all cancer cases – and up to half of all cancer deaths – are preventable. This means there are between 2.4 million and 3.7 million avoidable deaths per year, 80% of which occur in low- and middle-income countries.
4. **There are more than 200 types and subtypes of cancer**- Cancer is not one disease. In the last 10 years we have realized that there are more than 200 different types and subtypes of cancer. This has triggered a shift away from a one-size-fits-all approach and toward "tailored therapy".
5. **There are 28 million cancer survivors worldwide-** Thankfully, cancer is not always a death sentence – particularly with the progress made in recent decades. Although incidence of cancer is increasing, in many countries more people are surviving cancer than ever before.
6. **Only 5-10% of all cancers are entirely hereditary**- Most cancers develop through a combination of hereditary and environmental factors, including smoking, alcohol, obesity and diet.
7. Breast **cancer is more common in the left breast than the right** -The left breast is 5 - 10% more likely to develop cancer than the right breast. The left side of the body is also 10% more prone to melanoma (a type of skin cancer). Nobody is exactly sure why this is.



COMMON TYPES OF CANCER

The most common cancers are:

- Lung (2.09 million cases)
- Breast (2.09 million cases)
- Colorectal (1.80 million cases)
- Prostate (1.28 million cases)
- Skin cancer (non-melanoma) (1.04 million cases)
- Stomach (1.03 million cases)

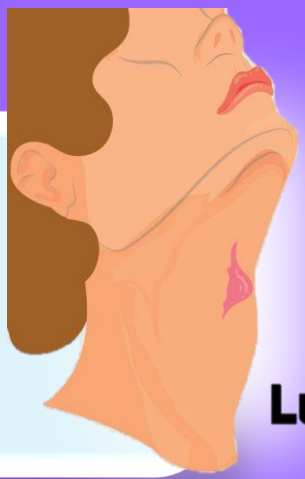


RISK FACTORS

1. **Your age-** cancer tends to be diagnosed at older age however you can get cancer at any age.
2. **Your habits**- habits like Smoking, drinking alcohol, excessive exposure to the sun, being obese, and having unsafe sex can contribute to cancer development.
3. **Your family history**- Only a small portion of cancers are due to an inherited condition.
4. **Your environment-** The environment around you may contain harmful chemicals that can increase your risk of cancer. Even if you don't smoke, you might inhale secondhand smoke, chemicals in your home or workplace, such as asbestos and benzene, also are associated with an increased risk of cancer.

COMMON SIGNS OF CANCER

1. Lump or area of thickening that can be felt under the skin
2. Skin changes, such as yellowing, darkening or redness of the skin, sores that won't heal, or changes to existing moles
3. Changes in bowel or bladder habits
4. Persistent cough or trouble breathing
5. Persistent, unexplained muscle or joint pain
6. Unexplained bleeding or bruising



Lump

PREVENTION

1. **Stop smoking.** If you smoke, quit. If you don't smoke, don't start. Stopping now will reduce your risk of cancer in the future.
2. **Avoid excessive sun exposure.** Limit your sun exposure by staying in the shade, wearing protective clothing or applying sunscreen.
3. **Eat a healthy diet.** Choose a diet rich in fruits and vegetables. Select whole grains and lean proteins.
4. **Exercise most days of the week.** Regular exercise is linked to a lower risk of cancer. Aim for at least 30 minutes of exercise most days of the week. If you haven't been exercising regularly, start out slowly and work your way up to 30 minutes or longer.
5. **Maintain a healthy weight.** Being overweight or obese may increase your risk of cancer. Work to achieve and maintain a healthy weight through a combination of a healthy diet and regular exercise.
6. **Schedule cancer screening exams.** Talk to your doctor about what types of cancer screening exams are best for you based on your risk factors.

ENGAGEMENT ACTIVITY

ALL YOU NEED TO KNOW ABOUT CARDIOVASCULAR DISEASES

WHAT IS CARDIOVASCULAR DISEASES

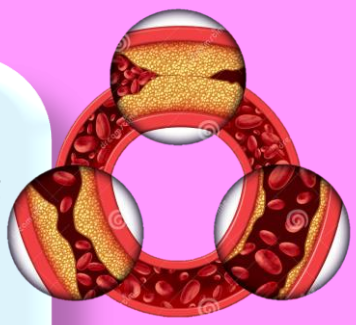
These are diseases that affect the heart, including blood vessels i.e. Veins and blood clots. Cardiovascular diseases (CVDs) are a group of disorders of the heart and blood vessels

FACTS AND STATISTICS.

1. Heart attacks and strokes **CAN be avoided.** 80% of them are preventable by avoiding tobacco use, regular physical activity, maintaining a healthy diet, and regularly checking blood pressure, blood sugar
2. To say exactly when civilization first became aware of coronary artery disease (arterial narrowing) is difficult. However, it's known that **Leonardo da Vinci (1452–1519)** investigated coronary arteries.
3. **Diet plays a significant role** in protecting or predisposing people to heart disease. Diets high in animal fat, low in fresh vegetables and fruit, and high in alcohol have been shown to increase the risk of heart disease.
4. **Smoking damages** the lining of blood vessels, increases fatty deposits in the arteries, increases blood clotting, adversely affects blood lipid levels, and promotes coronary artery spasm. Nicotine accelerates the heart rate and raises blood pressure.

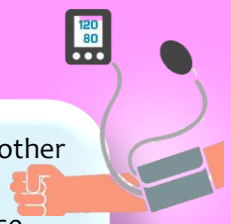
5. One in five of those who die from heart disease is **under the age of 65.**
6. Living an **active lifestyle can reduce** your risk of stroke by almost 40 percent.
7. **One in three adults has high blood pressure**. Many are unaware of their condition.
8. CT scans of mummies reveal that heart disease was surprisingly **frequent in ancient Egypt,** suggesting that heart disease is caused by factors other than modern habits, such as smoking, fast food, and T.V. watching (inactivity).

COMMON TYPES OF CARDIOVASCULAR DISEASES



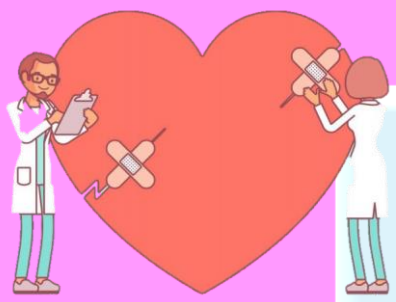
1. **High blood pressure (hypertension)-** A condition in which the force of the blood against the artery walls is too high.
2. **Cardiac arrest -** Sudden, unexpected loss of heart function, breathing and consciousness.
3. **Heart failure** - A chronic condition in which the heart doesn't pump blood as well as it should.
4. **Arrhythmia -** Improper beating of the heart, whether irregular, too fast or too slow.
5. **Peripheral artery disease** - A circulatory condition in which narrowed blood vessels reduce blood flow to the arms and legs.
6. **Stroke** - Damage to the brain from interruption of its blood supply.
7. **Congenital heart disease** - An abnormality in the heart that develops before birth.
8. **coronary heart disease** – disease of the blood vessels supplying the heart muscle.
9. **cerebrovascular disease** – disease of the blood vessels supplying the brain.

RISK FACTORS



1. **High blood pressure**. If the high pressure is not controlled, it can affect your heart and other major organs of your body, including your kidneys and brain.
2. **Unhealthy blood cholesterol levels.** If we take in more cholesterol than the body can use, the extra cholesterol can build up in the walls of the arteries, including those of the heart. This leads to narrowing of the arteries and can decrease the blood flow to the heart, brain, kidneys, and other parts of the body
3. **Diabetes.** If you have diabetes, your body doesn't make enough insulin, can't use its own insulin as well as it should, or both. Diabetes causes sugar to build up in the blood.
4. **Tobacco smoke**. The risk that smokers will develop coronary heart disease is much higher than that for nonsmokers. Cigarette smoking is a powerful independent risk factor for sudden cardiac death in patients with coronary heart. Exposure to other people's smoke increases the risk of heart disease even for nonsmokers.
5. **Physical inactivity**. - an inactive lifestyle is a risk factor for coronary heart disease. Regular, moderate to vigorous physical activity helps reduce the risk of cardiovascular disease. Physical activity can help control blood cholesterol, diabetes and obesity. It can also help to lower blood pressure in some people.

COMMON SIGNS OF CARDIOVASCULAR DISEASES



1. pain or pressure in the chest, which may indicate angina
2. pain or discomfort in the arms, left shoulder, elbows, jaw, or back
3. shortness of breath
4. nausea and fatigue
5. Swollen feet or ankles could be a sign of heart failure.
6. Heart palpitations (irregular or rapid heartbeat)

PREVENTION

1. **Manage body weight:** if you lose 5–10% of your body weight, you reduce your risk of developing heart diseases.
2. **Get regular exercise**: doing 150 minutes of moderate-to-intense physical activity every week.
3. **Follow a heart-healthy diet:** Eating healthy foods with omega-3 such as oily fish, fruits and vegetables to support heart health and reduce the risk of heart diseases.
4. **Reduce the intake** of processed food, salt, saturated fat, and added sugar has a similar effect.

ENGAGEMENT ACTIVITY

ALL YOU NEED TO KNOW ABOUT DIABETES

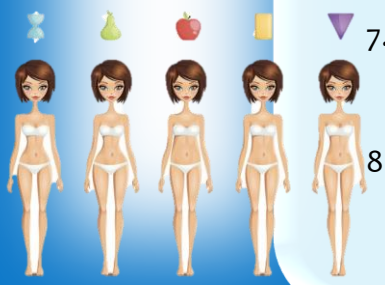
WHAT IS DIABETES

A group of diseases that result in too much sugar in the blood (high blood glucose). diabetes is of 2 major types:

Type 1 diabetes is where the body produces little or no insulin leading to high glucose(sugar) levels in the blood. Insulin is a hormone that controls the movement of sugar into your cells. Insulin helps keeps your blood sugar level from getting too high or too low.

Type 2 diabetes is a where your body either resists the effects of insulin — a hormone that regulates the movement of sugar into your cells — or doesn't produce enough insulin to maintain normal glucose levels.

FACTS AND STATISTICS.

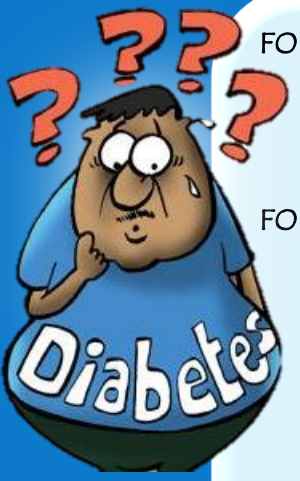


1. **The word "diabetes" is Greek** for "siphon," which refers to the copious urine of uncontrolled diabetes. "Mellitus" is Latin for "honey" or "sweet," a name added when physicians discovered that the urine from people with diabetes is sweet with glucose.
2. Diabetes can be managed and **pre-diabetes can be stopped**, if caught early and treated with relatively simple measures such as losing weight, cutting back on daily calories and staying physically active.
3. **Stress can increase your blood sugar levels**. This is true for everyone—whether we have diabetes or not.
4. Diabetes is a **significant risk factor** for heart disease and stroke because diabetes may raise blood cholesterol levels.
5. Approximately 90% of people with type 2 diabetes **are obese**
6. Individuals with an **"apple" body shape** are at greater risk for diabetes than are those **with "pear" body shapes**.
7. Ancient doctors would test for diabetes by tasting the urine of a suspected sufferer of diabetes. **Sweet urine is high in glucose**, suggesting the presence of diabetes.
8. **Smoking can increase diabetes risk** by constricting blood vessels, raising blood pressure, and stimulating the release of catecholamines (fight-or-flight hormones), which promote insulin resistance

COMMON TYPES OF DIABETES

1. **Type 1 diabetes** can develop at any age, but occurs most frequently in children and adolescents. When you have type 1 diabetes, your body produces very little or no insulin, which means that you need daily insulin injections to maintain blood glucose levels under control.
2. **Type 2 diabetes** is more common in adults and accounts for around 90% of all diabetes cases. When you have type 2 diabetes, your body does not make good use of the insulin that it produces. The cornerstone of type 2 diabetes treatment is healthy lifestyle, including increased physical activity and healthy diet. However, over time most people with type 2 diabetes will require oral drugs and/or insulin to keep their blood glucose levels under control.
3. **Gestational diabetes (GDM)** is a type of diabetes that consists of high blood glucose during pregnancy and is associated with complications to both mother and child. GDM usually disappears after pregnancy but women affected and their children are at increased risk of developing type 2 diabetes later in life.

RISK FACTORS



FOR TYPE 1 DIABETES

1. **Family history.** Your risk increases if a parent or sibling has type 1 diabetes.
2. **Environmental factors.** Circumstances such as exposure to a viral illness likely play some role in type 1 diabetes.

FOR TYPE 2 DIABETES

1. **Weight.** The fattier tissue you have, the more resistant your cells become to insulin.
2. **Inactivity**. The less active you are, the greater your risk. Physical activity helps you control your weight, uses up glucose as energy and makes your cells more sensitive to insulin.
3. **Family history**. Your risk increases if a parent or sibling has type 2 diabetes.
4. **Age.** Your risk increases as you get older. This may be because you tend to exercise less.
5. **Gestational diabetes.** If you developed gestational diabetes when you were pregnant, your risk of developing prediabetes and type 2 diabetes later increases.
6. **High blood pressure.** Having blood pressure is linked to an increased risk of type 2 diabetes.

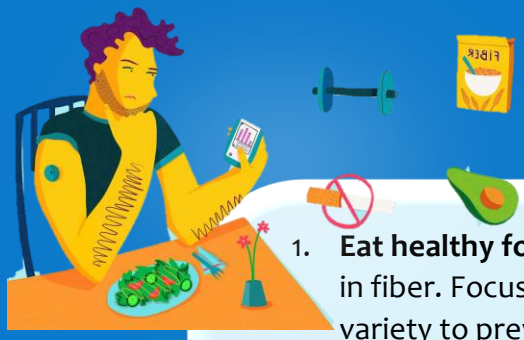
FOR GESTATIONAL DIABETES

1. **Age.** Women older than age 25 are at increased risk.
2. **Family or personal history.** Your risk increases if you have prediabetes — a precursor to type 2 diabetes — or if a close family member, such as a parent or sibling, has type 2 diabetes. Weight. Being overweight before pregnancy increases your risk.

COMMON SIGNS OF DIABETES

1. Increased thirst
2. Frequent urination
3. Extreme hunger
4. Unexplained weight loss
5. Blurred vision
6. Slow-healing sores
7. Frequent infections, such as gums or skin infections and vaginal infections

PREVENTION



1. **Eat healthy foods.** Choose foods lower in fat and calories and higher in fiber. Focus on fruits, vegetables and whole grains. Strive for variety to prevent boredom.
2. **Get more physical activity.** Aim for 30 minutes of moderate physical activity a day. Take a brisk daily walk. Ride your bike. Swim laps. If you can't fit in a long workout, break it up into smaller sessions spread throughout the day.
3. **Lose excess weight.** If you're overweight, losing even 7 percent of your body weight — for example, 6.4 kilograms if you weigh 90.7 kilograms— can reduce the risk of diabetes
4. **Cut Sugar and Refined Carbs** from Your Diet
5. **Drink Water as Your Primary Beverage** sticking with water most of the time helps you avoid beverages that are high in sugar, preservatives and other questionable ingredients.
6. **Smoking is strongly linked** to the risk of diabetes, especially in heavy smokers. Quitting has been shown to reduce this risk over time.
7. **Avoiding large portion sizes** can help reduce insulin and blood sugar levels and decrease the risk of diabetes.

ENGAGEMENT ACTIVITY

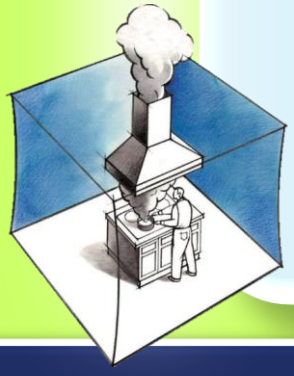
ALL YOU NEED TO KNOW ABOUT CHRONIC LUNG DISEASES

WHAT IS CHRONIC LUNG DISEASES

A group of lung diseases that block airflow and make it difficult to breathe.

It usually develops slowly, and may get worse over time. Chronic lung disease may be caused by smoking tobacco or by breathing in secondhand tobacco smoke, chemical fumes, dust, or other forms of air pollution. Types of chronic lung disease include asthma, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, asbestosis, pneumonitis, and other lung conditions.

FACTS AND STATISTICS



1. Approximately 210 million people suffer from COPD worldwide, and 5% of all deaths globally are estimated to be due to this disease. It causes more than 3 million deaths annually, of which 90% are thought to occur in low and middle-income countries.
2. Cigarette smoking is the major risk factor , and much of the increase is associated with projected increases in tobacco use, especially in the developing world.
3. Smoke from coal and wood fires, exposure to dust, fumes and vapors, childhood illness, and previous tuberculosis are all risk factors.
4. Cessation of smoking is the only significant therapeutic intervention that can retard the accelerated decline in lung function experienced by smokers with these diseases.
5. flu can cause serious problems for those with COPD, so it is recommended that COPD sufferers get the flu shot each year to be proactive in preventing future complications.
6. Over the past decade, more women have died from COPD than men.

COMMON TYPES OF CHRONIC LUNG DISEASES

1. chronic obstructive pulmonary disease (COPD)
2. asthma
3. occupational lung diseases
4. pulmonary hypertension.

RISK FACTORS

1. tobacco smoking (including second-hand smoke)
2. Air pollution
3. Allergens
4. Occupational exposure to dust, fumes, and smoke
5. Outdoor air pollution and indoor air pollution (often caused by cooking with solid fuels)
6. Being overweight

COMMON SIGNS

1. Frequent coughing or wheezing.
2. Excess phlegm, mucus, or sputum production.
3. Shortness of breath.
4. Trouble taking a deep breath.
5. Chest tightness
6. A chronic cough that may produce mucus (sputum) that may be clear, white, yellow or greenish.

PREVENTION

1. Quit smoking. For people who smoke, the most important part of treatment is smoking cessation.
2. Avoid tobacco smoke and other air pollutants at home and at work.
3. Avoid second- and third-hand smoke. Breathing the smoke from cigarettes and pipes boosts your risk for the same diseases that affect people who smoke. Don't allow smoking in your home, in the car, or at work.
4. Clean house. Air fresheners, mould, pet dander, and construction materials all pose a potential problem. Turn on the exhaust fan when you cook and avoid using aerosol products like hair spray.

ENGAGEMENT ACTIVITY

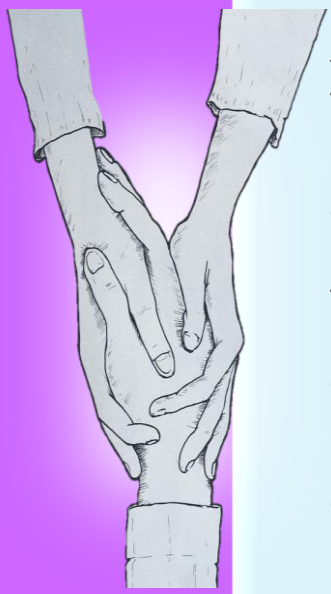
ALL YOU NEED TO KNOW ABOUT MENTAL HEALTH

WHAT IS MENTAL HEALTH

Mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community

Mental health disorders is a wide range of conditions that affect mood, thinking and behavior.

FACTS AND STATISTICS



1. One in 10 young people experienced a period of major depression.
2. 1 in 5 young people (age 13-18) has or will develop a mental illness in their lifetime
3. Mental illnesses can affect people of any age, race, religion, or income.
4. Depression is the leading cause of disability worldwide.
5. More than 1 in 4 adults living with serious mental illnesses also struggles with substance abuse.
6. 1/2 of all mental illnesses show early signs before a person turns 14 years old, and 3/4 of mental illnesses begin before age 24.
7. Suicide accounts for over 800,000 deaths globally each year. It is the second leading cause of death worldwide for 15-29 year olds.
8. People with a mental health issue are generally nonviolent. In fact, only 3-5% of violent acts can be attributed to people with a serious mental illness.
9. Most people living with mental illness lead productive lives despite their challenges.

COMMON TYPES OF MENTAL HEALTH DISORDERS

1. **Anxiety & panic attacks**

Anxiety is a normal emotion that we all experience but becomes a mental health problem when someone finds they are feeling this way all or most of the time.

2. **Bipolar disorder**

Bipolar disorder is a mood disorder that can cause extreme periods of low (depressed) and high (manic) moods. Bipolar used to be called manic depression.

3. **Depression**

Depression is a diagnosis given to someone who is experiencing a low mood and who finds it hard or impossible to have fun or enjoy their lives.

4. **Eating disorders**

An eating disorder is a diagnosis given to someone who has unhealthy thoughts, feelings and behavior about food and their body shape.

5. **Personality disorders**

A personality disorder can affect how a person copes with day-to-day life and manages relationships, as well as how they feel and behave.

6. **Post-Traumatic Stress Disorder (PTSD)**

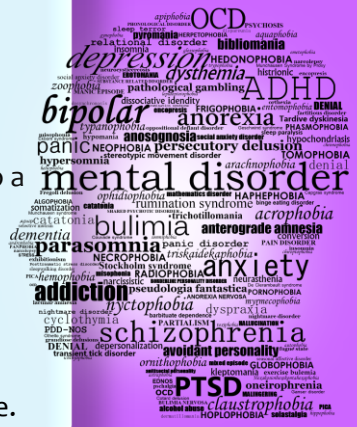
Post-traumatic stress disorder (PTSD) is a diagnosis given to people who develop a certain set of symptoms following a traumatic event.

7. **Self-harm**

Self-harm is when someone purposely hurts themselves, usually in order to cope with intense emotional distress.

8. **Suicidal feelings**

Suicide - when someone intentionally takes their own life - is a very complex issue.



RISK FACTORS

1. A history of mental illness in a blood relative, such as a parent or sibling
2. Stressful life situations, such as financial problems, a loved one's death or a divorce
3. An ongoing (chronic) medical condition, such as diabetes
4. Brain damage as a result of a serious injury (traumatic brain injury), such as a violent blow to the head
5. Traumatic experiences, such as military combat or assault
6. Use of alcohol or recreational drugs
7. A childhood history of abuse or neglect
8. Few friends or few healthy relationships
9. A previous mental illness

COMMON SIGNS

1. Feeling sad or down
2. Confused thinking or reduced ability to concentrate
3. Excessive fears or worries, or extreme feelings of guilt
4. Extreme mood changes of highs and lows
5. Withdrawal from friends and activities
6. Significant tiredness, low energy or problems sleeping
7. Detachment from reality (delusions), paranoia or hallucinations
8. Inability to cope with daily problems or stress
9. Trouble understanding and relating to situations and to people
10. Problems with alcohol or drug use
11. Major changes in eating habits
12. Excessive anger, hostility or violence
13. Suicidal thinking

PREVENTION

1. **Take good care of yourself.**

Sufficient sleep, healthy eating and regular physical activity are important.

2. **Value yourself:**

Treat yourself with kindness and respect, and avoid self-criticism. Make time for your hobbies.

3. **Surround yourself with good people:**

Make plans with supportive family members and friends, also find ways to meet new people.

4. **Give yourself:**

Volunteer your time and energy to help someone else. You'll feel good about doing it .

5. **Learn how to deal with stress:**

Like it or not, stress is a part of life. Practice good coping skills.

6. **Quiet your mind:**

Try meditating, Mindfulness and/or prayer. Relaxation exercises boosts the mind..

7. **Set realistic goals:**

Aim high, but be realistic. You'll enjoy a sense of accomplishment as you progress to your goal.

8. **Avoid alcohol and other drugs:**

Avoid drugs, they don’t solve stress. In reality, these drugs only aggravate problems.

9. **Get help when you need it:**

Seeking help is a sign of strength — not a weakness. And it is important to remember that treatment is effective. People who get appropriate care can recover from mental illness.

ENGAGEMENT ACTIVITY

MODULE 6 NON-COMMUNICABLE DISEASE AND THE WORLD OF TINY ORGANISMS

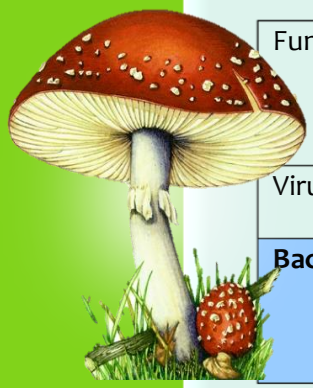
PURPOSE

1. To help learners understand the basic types of microbes
2. To introduce good and bad bacteria
3. To introduce antibiotics

THE WORLD OF MICROBES

All around us, on us and even inside us, is a very different world, that consists of trillions of very, very, very very tiny living things called microbes. Microbes are often just called 'germs or 'bugs'. They are so small that they can only be seen using special equipment called a **Microscope.**

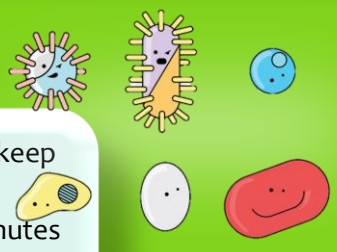
There are three main groups of microbes called **fungus, bacteria and virus** and they can have positive and negative effects on our natural environment, animals and us.



Fungus	✓ ✗	Some are good for us and some can cause us harm	*Mushroom* is a type of fungus – some mushrooms are poisonous and some are good to eat
Virus	✗ ✗	These are always harmful	Human Immunodeficiency Virus (HIV) and Coronavirus
Bacteria	✓ ✗	Some are good for us and some can cause us harm	*Lactobacillus* – found in our stomach and breaks down food into micronutrients *Campylobacter* –lives in our stomach but can cause potentially fatal food poisoning

Microbes live in different places - in the air, in water, in soil, in food, and also in and on our bodies. For example, our stomach and gut/intestine is full of millions and millions of microbes, and our skin is covered in them too.

FOCUS ON BACTERIA



Remember, some types of bacteria are bad for us, and some we need to keep us healthy. Individual bacteria do not live very long, but they constantly reproduce by dividing in half, and growing again. This just takes a few minutes so just a small number of bacteria can quickly multiply until tens of thousands exist after just a few hours have passed.

ALL OF US SPREAD MICROBES AS WE GO ABOUT OUR DAILY LIVES

Most of the time, these microbes live in harmony (symbiosis) with our bodies, and help keep us well. We would not survive unless we had good bacteria in our bodies. But it is the bad bacteria that we need to be very cautious of. These can get into our body through an open cut/wound on our skin, through our eyes, ears, nose, mouth, urogenital openings.

Direct contact	skin to skin
Indirect contact	touching a surface (example door handle) recently touched by someone with the microbes, some of which are left behind, touched by someone else who then puts their hand near their mouth, nose, eyes etc.
Mucous (example, the fluid in our mouth and nose)	from someone who is infected that gets into our own mouth or nose, such as when someone coughs or sneezes near to us.

Bacteria also get moved around our environment in different ways:

1. Contaminated food, water, blood
2. Carried by other creatures, such as mosquitos
3. Airborne – when tiny droplets containing the bad bacteria remaining in the air for long periods of time and then get into our body.

Imagine if you had wet paint on your hand and you then went to school or work. Write down all the things that would get paint on them if you carried on walking about as usual. This is similar to one way that all of us are always spreading microbes as we go about our day.

THE BODY IMMUNE SYSTEM

Our body is always on guard with its natural defences (called the immune system), to fight off harmful bacteria in our body. Some bacteria are too powerful and dangerous, and our body is not able to fight off the harmful effects without getting some extra help. Without proper help, this can make us extremely sick, and some people even die from a bacterial illness.

The table below includes photographs taken by a very powerful microscope of individual bacteria. A type of dye has been added to make them easier to see. These are some of the most harmful bacteria affecting humans in different parts of the world:

Klebsiella pneumonia	*Salmonellae*	*Tuberculosis*
		

Bacterial disease like Tuberculosis (TB) can be treated very well, if people get the right treatment quick enough. One of the common effective treatments used for TB is a type of antibiotic.

ANTIBIOTICS

Antibiotics have been around for millions of years. Around **100 years ago,** a Scottish scientist called Alexander Flemming, discovered that a fungus called **penicillium** could kill and protect humans from some harmful bacteria. He worked with other scientists and started to develop this as a treatment for bacterial disease. Many types of antibiotics have since been produced to treat different types of bacterial illnesses in humans. Some also help animals/cattle too.
There are different types of antibiotics depending on the bacterial infection. Common ones include. Penicillin and Amoxicillin

IMPORTANT!

Antibiotics are usually given as a tablet, and most people have to take at least one tablet every day, for a specific number of days or even weeks. It is essential that people follow the information and advice given by the doctor/pharmacist.
N/B:- People who stop the treatment early (i.e. not taking the correct amount of tablets over the correct number of days), can soon became ill again.

ENGAGEMENT ACTIVITY

ANTIBIOTIC RESISTANCE AND NON-COMMUNICABLE DISEASES

In the previous module you learnt about microbes, including good and bad bacteria. You also learnt that antibiotics are a medication often used to treat bacterial disease. The current module will introduce the topic of antibiotic resistance and the impact on non-communicable disease.

ANTIBIOTIC RESISTANCE

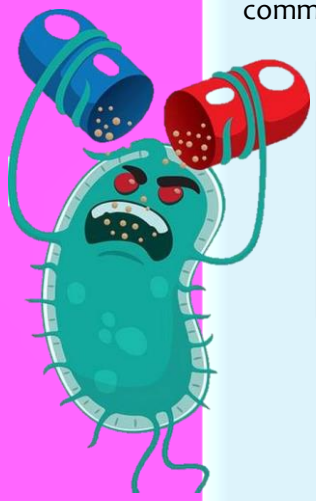
Antibiotic resistance is a natural biological process describing how bacteria adapt and try to resist the effect of the antibiotic treatment – they are devising clever ways to stop the antibiotic from killing them. This is called antibiotic resistance. The more we use antibiotics, the more the bacteria can also develop their own resistance. Antibiotic resistance can also increase if people do not take the correct dosage for the correct length of time.

NON-COMMUNICABLE DISEASE (NCD) AND ANTIBIOTIC RESISTANCE

What is the link between non-communicable disease and antibiotic resistance?

Aren't antibiotics used to treat bacterial disease and isn't bacterial disease a communicable one (i.e. not an NCD)?

To understand why antibiotics are just as important for communicable and non-communicable disease, think about some common situations:



People with diabetes are at risk of getting bacterial infections on their feet because of poor blood circulation from their diabetes
People with heart disease sometimes need heart surgery. Any type of surgery puts people at risk of getting a bacterial infection
People who develop cancer often have surgery, chemotherapy and/or radiotherapy. All these treatments increase the risk of the patient getting a bacterial disease

THEREFORE

People with a NCD can be at a higher risk of getting a bacterial disease

AND

They are more likely to need antibiotics to treat the bacterial disease

SO

They need the antibiotics to work

BUT

Antibiotic resistance can reduce the ability of an existing antibiotic to kill the harmful bacteria

SOME OF THE THINGS THAT EVERYONE CAN DO

1. Reduce your risk of getting a bacterial disease – hand hygiene is one of the most important things you can do to protect yourself and others. ROUTINELY WASH YOUR HANDS CORRECTLY
2. Only take antibiotics that have been prescribed and/or recommended by a qualified health professional
3. Always take the correct amount of antibiotics for the correct amount of time

Antibiotics are a very important treatment. But if they are used incorrectly, they increase antibiotic resistance bacteria from developing. This means that the antibiotics can become less affective in the future for you or someone close to you.

ENGAGEMENT ACTIVITY

GET TO KNOW US.

LEAD AUTHORS

Ogweno Stephen

The development of this module was done from a multi-disciplinary team from **Stowelink Inc.,** and organization whose primary ethos is to make information on non-communicable diseases available to all at all times and in relevant formats.

This team was led by **Ogweno Stephen** who is the CEO and founder of Stowelink Inc. Ogweno Stephen, is a Population Health expert and a global advocate for non-communicable diseases who has been recognized time and again as a leading voice in innovation and advocacy in the development of successful programmes and projects that are centered on NCDS literacy. He is a published author of several health books including the Drug Free Youth and The Mental Health Matters Anthology and also a scientific researcher who has published various papers majorly on non-communicable diseases. These, he has been able to present both locally and globally with some of his major highlights including presenting at Windsor Castle in the United Kingdom in 2018, presenting at the Royal College of Physicians in London in 2020 and getting his work accepted into the World NCDs Congress in 2020.

We also worked closely with **Dr Roger Harrison(PHD)** a senior lecturer at the **University of Manchester** in the United Kingdom who has a vast experience in public health. Dr Rodger is currently also the Chair 'Action on Antibiotic Drug Resistance: One student, one campus, one world' and was crucial in developing content on NCDs and Antibiotic resistance.

LEAD SUPPORTER: NCD Alliance Of Kenya

The **Non-Communicable Diseases Alliance Kenya (NCDAK)** is a registered Non-Governmental Organization (NGO) that seeks to comprehensively and sustainably address the rising prevalence of non-communicable diseases (NCDs) in Kenya by bringing together all players working in different aspects of NCDs control. NCDAK also seeks to leverage on synergistic relationships with multi-sectoral stakeholders in and out of the healthcare industry to facilitate effective promotional and advocacy activities for prevention and control of NCDs and provision of quality NCD care services.

PARTNERS AND ADDITIONAL RESOURCES

PARTNERS

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ADDITIONAL RESOURCES

LEARN MORE ABOUT NCDS AT:

https://ncdalliance.org/

http://www.ncdchild.org/

https://www.who.int/health-topics/noncommunicable-diseases/

LEARN MORE ABOUT ANTI MICROBIAL RESISTANCE (AMR) AT:

https://bit.ly/antibiotics-and-you

DOWNLOAD mCure APP ON PLAYSTORE AT:

https://bit.ly/mcureApp

MORE RESOURCES FROM STOWELINK:

https://stowelink.com/stowelink-online-documents/

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