



E T I O

PUBLIC HEALTH CONSULTANTS

# A PUBLIC HEALTH HANDBOOK

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**IN PARTNERSHIP WITH:**



# EXECUTIVE SUMMARY



As part of ETIO's aim to create meaningful collaborations through assisting low- and middle- income country (LMIC) projects, we have decided to partner with Health Literacy Zambia. This handbook provides the Zambian community with informative infographics that are meant to improve health literacy on relevant public health topics. Health literacy enables us to take care of our own health. At some point in our lives, we will need to be able to find, understand, and navigate health information and services, to make informed decisions about our health, and the health of our families. The infographics included in this handbook are meant to educate individuals in the community and expand their knowledge on certain health topics, including women's health, children's health, communicable diseases, and non-communicable diseases. By recognizing the signs and symptoms of certain diseases and by being informed on certain health issues, individuals are able to prevent and protect themselves and their loved ones from developing health-related complications, as well as better manage health outcomes.

# BACKGROUND



ETIO Public Health Consultants was founded with a single mission: to bring the benefits of evidence-informed, upstream, public health solutions to businesses and organizations locally and internationally. With experts in Research and Policy Analysis, Knowledge Translation, and Program Management and Evaluation, they aim to create meaningful collaborations by assisting in LMIC projects and by generating innovative strategies in health care.



Health Literacy Zambia (HLZ) is youth-led non-profit, non-governmental charitable organization based in Zambia, whose goal is to accomplish Sustainable Development Goals (SGDs) 3, 4, and 5. HLZ's mission is to find lasting solutions to existing disease burdens through research and public health awareness. In Zambia, they hope to accomplish this through the use of community-based training, health sensitization and awareness, student-led activism, and support of local vulnerable children through the provision of good access to education.



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# WOMEN'S HEALTH



Women's **reproductive health** has been identified as an area of public health concern in Zambia. As such, this infographic is designed to educate and tackle common reproductive health issues in women, such as endometriosis, uterine fibroids and polycystic ovary syndrome (PSOS). Moreover, research shows that older Zambian women's reproductive health is often overlooked. It is therefore important to understand concepts such as menopause, and the implications that come with it. Additionally, being that there is a high fertility rate in Zambia, maternal health may be faced with poor outcomes. This is why family planning and the use of contraception are crucial in optimising women's health and preventing health risks, such as sexually transmitted diseases (STDs). STDs, like HIV/AIDS, are major concerns for women's reproductive health. Some diseases like Hepatitis B and Human Papillomavirus (HPV) can also be transmitted through sexual contact. HPV can increase the risk of developing cancers of the cervix, anus and throat. Although some STDs are curable like chlamydia, others like HIV/AIDs and Hepatitis B can be controlled and managed. Overall, it is important to understand that various complications may arise in women's reproductive health, and in knowing what these issues are and how they can be prevented, women can protect themselves and their health.



## COMMON WOMEN'S REPRODUCTIVE HEALTH ISSUES

### Family Planning

- Involves using contraceptives to determine number of children and spacing between pregnancies
- Benefits include:
  - Preventing pregnancy-related health risks in women
  - Reducing infant mortality
  - Reducing adolescent pregnancies

### Endometriosis

- Is when the kind of tissue that normally lines the uterus grows somewhere else (e.g. ovaries)
- Symptoms may include:
  - Very heavy periods
  - Infertility or trouble getting pregnant
  - Pain in the abdomen, lower back or pelvic areas

### Uterine Fibroids

- The most common noncancerous tumors in women
- Symptoms\* may include:
  - Infertility, multiple miscarriages or early labour
  - Lower back pain
  - Urinating often
- \*Not all women have symptoms so go for routine exams

### Sexually Transmitted Diseases (STDs)

- Spread through sexual relations with an infected person
- Include chlamydia, gonorrhoea, HIV/AIDS, syphilis
- Correctly using condoms reduces risk
- Get tested especially if you have changed partners

### Menopause

- Means the end of monthly periods in a woman's life
- Usually happens between ages 45 - 55
- Symptoms may include:
  - Hot flushes
  - Night sweats
  - Vaginal dryness
  - Thinning of bones and increased risk of fractures

### Polycystic Ovary Syndrome (PCOS)

- Happens when a woman's ovaries produce more male hormones than normal
- Symptoms may include:
  - Excessive facial or body hair growth
  - Infertility
  - Pelvic pain
  - No periods or irregular periods

**Sources**

- <https://www.webmd.com/women/ss/slideshow-women-reproductive-problems>
- <https://www.cdc.gov/reproductivehealth/womensrh/healthconcerns.html>
- <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/polycystic-ovarian-syndrome-pcos>
- <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>

Health Literacy Zambia  
HLZ





# METHODS OF CONTRACEPTION

## LONG-ACTING REVERSIBLE CONTRACEPTION

Lasts for a long time and is more than 99% effective



**Intra uterine device (IUD)**  
Lasts for 3,5 or 10 years



**Implant**  
Lasts for 5 years

## HORMONAL CONTRACEPTION

Use hormones to prevent pregnancy



**The Pill**  
Typically 92% effective



**Depo Provera Injection**  
Typically 97% effective

## BARRIER METHODS

Stop sperm from entering the vagina



**Male Condom**  
98% effective if used properly



**Female Condom**  
95% effective if used properly

## EMERGENCY CONTRACEPTION

Cannot replace regular methods of contraception



**Emergency Contraceptive Pill (ECP)**



**Copper IUD**

## PERMANENT CONTRACEPTION

Prevents all future pregnancies. Also called sterilization



**Vasectomy (For Males)**



**Tubal Ligation (For Females)**

## LACTATIONAL AMENORRHEA METHOD (LAM)

Relies on exclusive breastfeeding after birth.  
A natural and short term method; 98% effective in the first 6 months



## FERTILITY AWARENESS

Learning the signs of fertility in your menstrual cycle to help you plan or avoid a pregnancy.



Sources

<https://www.familyplanning.org/uz/advice/contraception/contraception-methods>  
<https://www.optionsforsexualhealth.org/facts/birth-control/methods/abstinence/>  
<https://www.peelregion.ca/health/sexuality/birth-control/methods/lam.htm>

Sexual education is a critical public health focus. In Zambia, there is a high fertility rate of 6.2 births per woman, with early pregnancy being identified as an issue. Pregnancies in adolescents are often unintended and lead to unsafe abortion practices. For this reason, it is important to know the various **methods of contraception** that exist, which can prevent these unintended consequences, and prevent health issues in women. Family planning is a key focus, as it prevents unwanted pregnancies, and reduces health-related risks, such as sexually transmitted diseases (STDs). Contributing factors that might influence early pregnancy, for example, include lack of available resources and insufficient knowledge of sexuality and reproduction. Due to the fact that these issues are not specific to adolescents but to older women as well, this infographic is designed for all age groups including young girls. While there are many methods of contraception, not all work for everyone. For this reason, it is important that options are discussed with a healthcare provider. Moreover, it is crucial to note that emergency contraception (pill, copper IUD) are not as effective as conventional methods of contraceptives, and should only be used in emergency situations. These situations include forgetting to use protection (barrier methods), irregular usage of hormonal contraception (the pill or injection), or forced sexual activity without contraception.





# NUTRITION DURING PREGNANCY

## ENJOY EATING:

VEGETABLES	FRUITS	DAIRY	GRAINS	PROTEINS
Carrots Cooked greens Spinach Sweet potato Red sweet peppers Pumpkin	Apricots Bananas Cantaloupe Grapefruit Honeydew Oranges Tomatoes	Skim or 1% milk Soymilk Fat-free or Low-fat yogurt	Cereal Porridge Nshima	Beans and peas Lean beef Nuts and seeds Poultry Kapenta Cassava leaves
<b>BENEFITS:</b> VITAMIN A & POTASSIUM	<b>BENEFITS:</b> POTASSIUM	<b>BENEFITS:</b> CALCIUM, POTASSIUM, VITAMIN A & D	<b>BENEFITS:</b> IRON & FOLIC ACID	<b>BENEFITS:</b> AMINO ACID

## AVOID THINGS LIKE:

					
Alcohol	Soda	Raw meat	Tobacco	Eggs	Oily food

## GUIDELINES FOR SAFE FOOD HANDLING:

			
WASH	CLEAN	COOK	REFRIGERATE

## TAKE:



Supplements like iron-folic acid & prenatal supplements as advised by your health care provider during Antenatal Care (ANC) check ups


 SOURCE: [HTTP://LYCN.WPENGINE.NETDNA-CDN.COM/FILES/LYCN\\_ZAMBIA-MATERNAL-NUTRITION-REPORT\\_040710.PDF](http://lycn.wpengine.netdna-cdn.com/files/lycn_zambia-maternal-nutrition-report_040710.pdf),  
 FANTAPROJECT.ORG, HOPKINSMEDICINE



**Maternal nutrition** has substantial effects on both infant and child nutrition, as well as maternal morbidity and mortality. This is significantly important in low resource settings, where poverty, food insecurity, and lack of adequate access to food is a large burden. It is recommended that, to maintain a healthy pregnancy, approximately 300 extra calories are needed each day. These calories can come from a balanced diet, which includes fruits and vegetables, dairy products, grains, and protein. Additionally, fluid intake is as important during pregnancy, if not more. Maintaining a healthy and balanced diet can also reduce some pregnancy symptoms, such as nausea and constipation, and increase milk supply. Malnourished pregnant women, and children who were malnourished during pregnancy, can develop developmental delays both physically and mentally, which can last a lifetime. It is important to avoid things like alcohol, soda, raw meat, tobacco, and oily food during pregnancy. It is also important to handle food safely in order to prevent foodborne illnesses. Properly washing all raw produce with boiled or treated water before eating, cutting or cooking; cleaning surfaces, kitchen appliances, and your hands; cooking beef, pork, poultry to a safe internal temperature; and refrigerating all perishable food, is imperative in order to prevent cross-contamination and prevent sickness. During antenatal check-ups, your healthcare provider might prescribe you with iron-folic acid supplements or other supplements and vitamins if needed. On the other hand, HIV-positive mothers need special information and support to have a healthy pregnancy and feed their babies in the best way to prevent HIV transmission.

# CHILDREN'S HEALTH

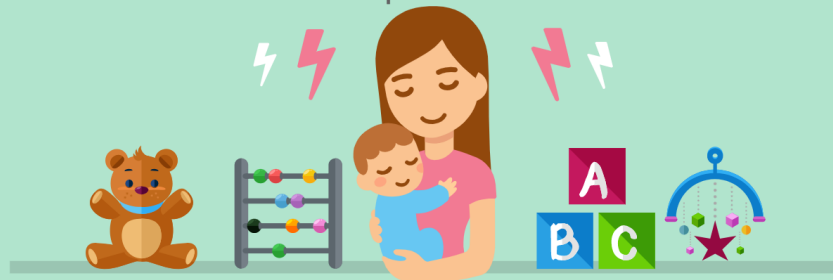




## STAGES OF CHILD DEVELOPMENT



Each child is an individual and may meet developmental milestones a little earlier or later than their peers.



### COGNITIVE DEVELOPMENT

These are thinking skills—learning, understanding, problem-solving, reasoning, and remembering.



### SOCIAL & EMOTIONAL DEVELOPMENT

Connecting and having relationships with others, cooperating, and responding to others' feelings.



### SPEECH & LANGUAGE DEVELOPMENT

Speaking, using body language and gestures, and understanding what others say.



### FINE MOTOR SKILLS DEVELOPMENT

Fine motor skills include using hands to eat, draw, dress, play, and write. They develop over time and also involve hand-eye coordination.



### GROSS MOTOR SKILLS DEVELOPMENT

These are movements using the body's large muscles and include sitting, standing, walking, running, keeping balance, and changing positions.



<http://www.howkidsdevelop.com/developSkills.html> | [https://www.caringforkids.cps.ca/handouts/your\\_childs\\_development](https://www.caringforkids.cps.ca/handouts/your_childs_development)

The joy of parenthood is watching your child grow and develop from the first smile to the first step, and from the first word to the first day at school. Developmental milestones refer to skills developed during specific periods. Examples of developmental milestones include a six-month-old baby learning to sit up with some support, a twelve-month-old baby saying their first word, and a five-year-old child learning to skip. This infographic further highlights the five areas of **child development**: cognitive development, social and emotional development, speech and language development, fine motor skill and gross motor skill development. Every child is unique and may develop earlier or later than their peers. If your child's development concerns you, discuss it with your healthcare provider.



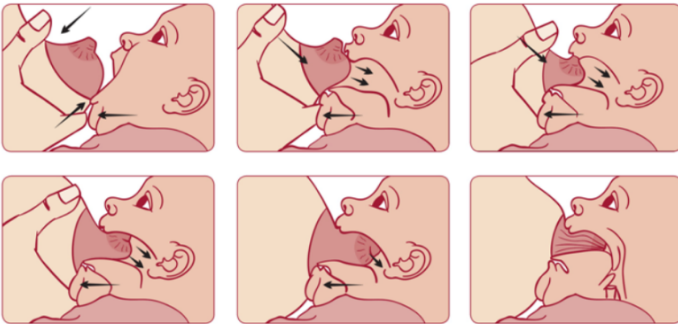
# Breastfeeding

*"Breast is Best"*



**Essential  
for child  
survival and  
good health**

Attachment: Key to Successful Breastfeeding



Benefits For  
The Child

Benefits For  
The Mother



**Better  
Nutrition**

**Better  
Cognitive  
Development**



**More Antibodies**



**Lower  
Risk  
of:**

Obesity  
Being Overweight  
Type II Diabetes  
Diarrhea  
Pneumonia  
Asthma

**Lower  
Risk  
of:**

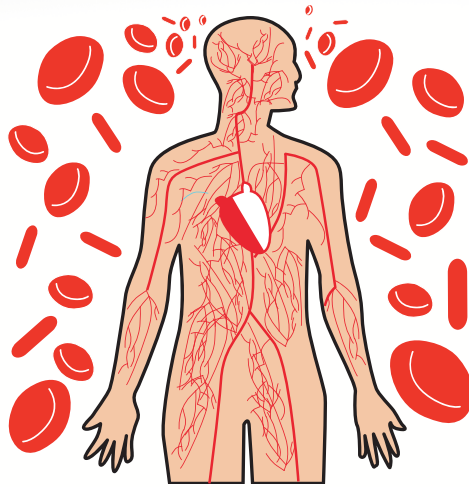
Postpartum Depression  
Breast Cancer  
Ovarian Cancer  
Type II Diabetes



**Breastfeeding** has the greatest impact on a child's survival and health development. Children that are breastfed are 6 times more likely to survive compared to non-breastfed children. It is important to breastfeed a child until 2 years of age. UNICEF and WHO recommend that a mother should start breastfeeding her child within the first hour of birth, exclusively breastfeed her child for the first 6 months (no other foods or liquids, including water), and then continue for the next 2 years while gradually introducing other foods and liquids into their diet. Overall, 61% of children in Zambia are exclusively breastfed. However, there is a large drop in the amount of children being breastfed throughout the first 6 months. For the first 2 to 3 months, 65% of children are exclusively breastfed, but the number drops to 35% at 4 to 5 months of age. It is important to follow the recommendations set by the WHO and UNICEF to ensure both the child and mother are getting the most health benefits. Breastfeeding helps prevent acute respiratory infections and diarrhoea, which are the two most common reasons affecting child survival in developing countries, as well as other infectious diseases. It is a safe, clean and scientifically proven method for providing a child with the essential nutrients needed for healthy physical and cognitive development.



# NON-COMMUNICABLE DISEASES



Affecting 1.13 billion people worldwide, **hypertension**, also known as high or raised blood pressure, is a serious condition in which the blood vessels have persistently raised pressure. Blood pressure is created by the force of blood pushing against the walls of blood vessels (arteries) as it is pumped by the heart, to the rest of the body. The higher the pressure, the harder the heart has to pump. Having hypertension increases your risk of heart, brain, kidney disease, and can cause strokes, kidney failure, brain damage, and blindness. Moreover, hypertension affects 1 in every 4 men, and 1 in every 5 women. Two thirds of the hypertension burden is found in low- and middle-income countries due to increased risk factors in those populations. Some risk factors include obesity, unhealthy diets, sedentary lifestyle, and the use of tobacco and alcohol. Symptoms of hypertension include early morning headaches, nosebleeds, irregular heart rhythms, nausea, vomiting, confusion, anxiety, chest pain, and muscle tremors. It is found that less than 5 people with hypertension have it under control and that many people with hypertension do not notice the symptoms, and therefore are not aware they have the condition. If left untreated, hypertension can cause persistent chest pain, heart attacks, heart failure, and an irregular heartbeat, which can lead to a sudden death. Detection using a blood pressure test with a device called a sphygmomanometer, is quick and painless. If your numbers are 140/90 or above, you probably have high blood pressure. Preventative measures include maintaining a healthy diet and lifestyle, avoiding alcohol and tobacco products, and engaging in physical activity.

# HYPERTENSION



**1.13 billion people worldwide have hypertension**

## What is it?

Hypertension, also known as **high or raised blood pressure**, is a condition in which the blood vessels have persistently raised pressure

## It can:

### INCREASE RISK OF:



Heart Attack



Kidney Failure



Stroke



Blindness

## It affects:



1 in 4 Men



1 in 5 Women

## Less than:

5 people with hypertension have it under control

*\* Most people don't know they have it \**

## If your numbers are:

140 / 90

You probably have high blood pressure



## Prevent by:



Reduce salt to less than 5g daily



Eat fruits and vegetables daily



Avoid saturated fats and trans fats



Avoid tobacco products



Reduce alcohol consumption



Engage in physical activity daily

Source: WHO





# DIABETES

## WHAT IS IT?

A disease where the body cannot use or produce enough insulin, causing high blood sugar.

Having high blood sugar can cause damage to organs, blood vessels, and nerves.



## TYPES OF DIABETES

### TYPE 1

People with Type 1 diabetes are **not able to produce** their own insulin (cannot regulate their blood sugar).

### TYPE 2

People with Type 2 diabetes are **not able to produce enough insulin** or **cannot properly use** the insulin made by their bodies.

### Pre-Diabetes

Blood sugar levels are high but not high enough to be diagnosed with diabetes.

### Gestational Diabetes

Having diabetes during pregnancy.

## RISK FACTORS

Older  
Age

Family  
History

Lack of  
Exercise

Overweight

## HOW TO PREVENT IT?

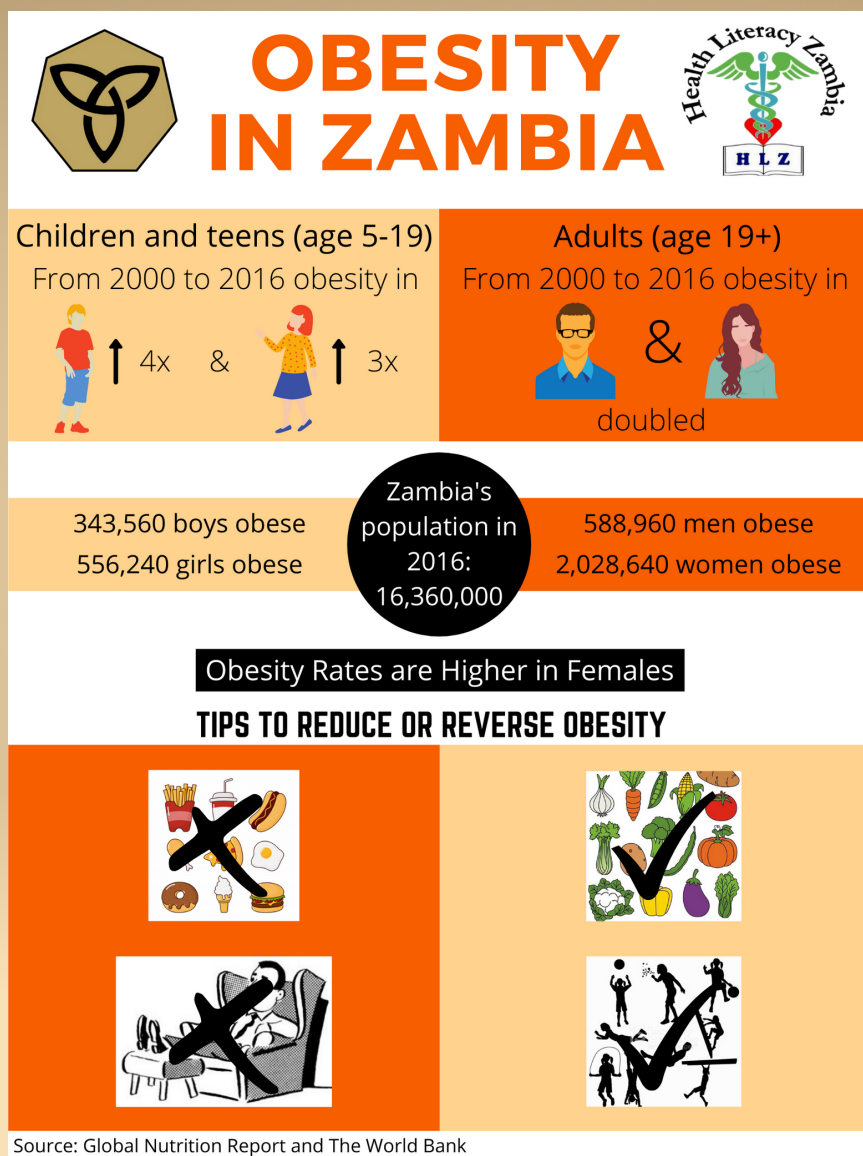


Eat  
Healthy Foods



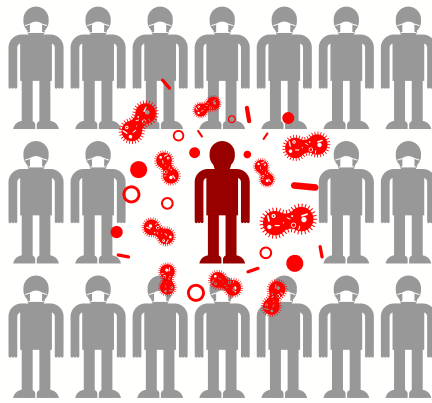
Exercise

**Diabetes** is one of the most common chronic diseases in the world that can cause premature death and disability. People with diabetes have high blood sugar levels because their bodies are unable to produce or use insulin, the hormone produced in the pancreas that regulates blood sugar. There are two main types of diabetes, Type 1 and Type 2. A person with Type 1 diabetes is insulin-dependent, meaning their bodies cannot produce enough insulin to regulate blood sugar levels, and require a daily dose of insulin in order to survive. This is mostly seen in children and adolescents. A person with Type 2 diabetes is non-insulin dependent, meaning their bodies are able to produce insulin but are not able to use it effectively. This is mostly seen in adults but a higher percentage of children are reported of being diagnosed with Type 2 diabetes in the past few years. Adults with diabetes are 2 to 3 times more likely to have heart attacks and strokes, and is one of the leading causes of kidney failure. Diabetes can also cause leg amputation, vision loss, nerve damage and other severe life-long health problems that have a significant impact on one's quality of life. Risk factors like being overweight or obese, have been estimated to cause a large percentage of the worldwide prevalence of diabetes. Other risk factors include ethnicity, family history, diet, smoking and physical inactivity. It is essential to engage in regular physical activity and eat a proper diet for diabetes prevention and management.



The infographic represents statistics about **obesity** specific to the Zambian context from 2000 to 2016. The information is categorized into two age groups: 5-19 years and above 19 years. Although the rate of increase in obesity was higher for boys than girls (4 times versus 3 times), the number of girls that are obese is much higher than boys (556,240 versus 343,560). For adults, however, the rate of increase in obesity was about the same for both men and women (2 times, also known as double). Similar to girls being more obese than boys, women were also more obese than men (2,028,640 versus 588,960). Out of the Zambian population of 16,360,000 in 2016, in total 932,520 males (343,560 + 588,960) had obesity, meaning 5.7% males were obese. Likewise, out of the 16,360,000 population in Zambia in 2016, in total 2,584,880 females (556,240 + 2,028,640) had obesity, meaning 15.8% females were obese. Hence, females are at higher risk of obesity than males. The second half of the infographic provides tips for how to reduce the chances of developing obesity or if someone has obesity, how to reverse it to a healthy weight. The two major recommendations are to avoid fast foods and oily foods, along with avoiding sedentary lifestyle. Instead, one should make more healthy food choices, including green vegetables and meals with low fat and low sodium. It is also important to be physically active daily, while achieving a minimum of 150 minutes of exercise per week. Zambia is already suffering from infectious diseases, for example tuberculosis, malaria, HIV/AIDS, and meningitis; however, with the influence of Western culture, Zambia is also suffering from non-communicable diseases like obesity, hypertension, and diabetes. Therefore, Zambia is experiencing a double burden of disease. To reduce this burden, one can make better choices to avoid developing diseases and lead a healthy life.

# COMMUNICABLE DISEASES





# TUBERCULOSIS



In 2018 in Zambia

**60,000**  
**Newly Infected**

**17,000**  
**Died**

**25,000**  
**Undetected**



TB is most common in adults between 25-44 years  
High risk groups:



**TB is preventable and curable**

Source: Ministry of Health Zambia and World Health Organization

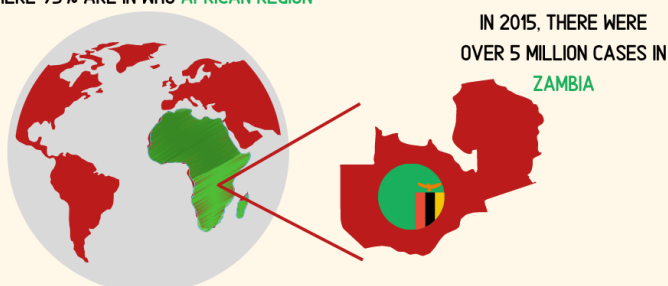
**Tuberculosis (TB)** is a bacterial infection caused by *Mycobacterium tuberculosis*, which usually affects the lungs, but can also attack other parts of the body, including the central nervous system and joints. TB is a major cause of morbidity and mortality in Zambia. Specifically, in 2018, the incidence of TB was 60,000, meaning there were 60,000 new people detected to have been infected with TB. Along with that, 17,000 individuals with TB died in 2018 and, unfortunately, 25,000 were not even detected for having TB. It is important to note that majority of the people with the illness have latent TB infection (LTBI) and do not display symptoms, which is probably why people are undetected. The graph provides a representation of how many of the 60,000 people newly infected with TB in 2018 were males and females. As clearly evident, there was greater incidence in men than women (66% versus 34%). The graph also demonstrates that TB is most common among adults between the ages of 25 to 44 years. This leads into the second section of the infographic which describes which groups of people are at a high risk of developing TB. These populations include: children, elders, people with HIV/AIDS, prisoners, and miners. TB typically spreads in overcrowded areas, which is why prisoners, for example, are at a high risk. The final section of the infographic emphasizes the point that TB is preventable and curable, which means precautions can be taken to avoid being infected and medications are available for treatment. However, there is increasing concern due to multi-drug resistant (MDR) TB, which is the result of patients not completing their course of treatment for TB. That is why it is essential to comply with the prescription to effectively help eliminate TB from the world.



# MALARIA



IN 2018, THERE WERE 228 MILLION CASES OF MALARIA **WORLDWIDE**  
WHERE 93% ARE IN WHO **AFRICAN REGION**



## WHO IS THE CULPRIT?



MALARIA IS CAUSED BY PARASITES THAT ARE TRANSMITTED TO PEOPLE THROUGH  
THE BITES OF **INFECTED FEMALE ANOPHELES MOSQUITOES**

- THEY ARE ATTRACTED TO STANDING WATER
- THEY ARE PREVALENT IN TROPICAL AND SUB-TROPICAL REGIONS

## WHO IS AT RISK?



PREGNANT WOMEN



CHILDREN UNDER 5



HIV/AIDS PATIENTS



MIGRANTS & MOBILE  
POPULATIONS

## SYMPTOMS

(APPEAR 10-15 DAYS AFTER BITE)



FEVER



CHILLS



MUSCLE ACES



HEADACHE



NAUSEA, VOMITING, OR  
DIARRHEA

## PREVENTION



INSECTICIDE-TREATED BED  
NETS (ITN)



INDOOR RESIDUAL  
SPRAYING

## TREATMENT



ARTEMISININ-BASED COMBINATION  
THERAPY (ACT)


SOURCE: WHO, NMEC.ORG

**Malaria** continues to pose a great global threat in tropical and sub-tropical regions around the world, especially in sub-Saharan Africa. The WHO African Region carries disproportionately a high burden of the global malaria burden, and is home to 93% of malaria cases and 94% of malaria deaths. Caused by the genus *Plasmodium*, and transmitted by female *Anopheles* mosquitoes, this disease accounted for an estimated 405,000 deaths in 2018 worldwide. While there has been a significant reduction in the prevalence and incidence related to this disease, it continues to cause great devastating damage affecting mostly children under the age of five, which accounted for 67% (272,000) of malaria deaths worldwide in 2018. Other populations at risk includes pregnant women, individuals with HIV/AIDS, and migrants and mobile populations. After getting bitten by an infected mosquito, symptoms do not present right away and begin to appear any time after 10-15 days. Symptoms of malaria include fever, shaking chills, muscle aches, headache, and nausea, vomiting, or diarrhea. If malaria is not treated within 24 hours, it can lead to severe illness, often leading to death. Although underlying factors such as temperature and health status play a major role in influencing the prevalence of malaria, preventative measures such as using insecticide treated bed nets (ITNs) or insecticide repellent spraying (IRP), show great effectiveness in reducing infections and cutting chains of transmission. Moreover antimalarial combination therapies (ACTs) are successfully able to treat and cure individuals from the disease. However, the path to malaria elimination continues.




Since first appearing in China in late 2019, SARS-CoV-2 (better known as **COVID-19**) has spread all over the world. The symptoms one exhibits when infected with COVID-19 are common to other respiratory infections, such as coughing, fever, trouble breathing, chest pains, and a headache. It is important to note that infected individuals may not show any signs or symptoms and it may take up to 14 days for symptoms to develop. From young to old, anyone can become infected with COVID-19. However, there are factors that place individuals at a higher risk of complications and death. Individuals over the age of 65, those already sick or immunocompromised, and those with chronic conditions such as obesity, diabetes, and heart disease are at the greatest risk. Even though COVID-19 seems to have spread everywhere, one should not despair. There are many precautions that can be taken to protect oneself from infection. Precautions include: washing your hands regularly, avoiding touching your face, while in public wearing a mask and staying 2 metres away from others, avoiding those who may be sick, and covering your cough. Zambia has been lucky as it has been spared the high infection rates that have affected many other countries. As of June 25th, 2020, there are only 1,497 COVID-19 cases and there has only been 18 deaths attributable to the virus. With proper precautions and vigilance, the spread of COVID-19 can be stopped. Remember, we're all in this together!








# HIV/AIDS




### TRUE OR FALSE?


You can live a normal life with HIV 


HIV is caused by witchcraft 

You can cleanse yourself of HIV 


### PROTECT YOURSELF


 Practice safe sex


Know your status 

 Don't share needles

### GLOBAL STATS

38 million are living with HIV 


 24.5 million are on antiretroviral therapy

8 million do not know they have HIV 

### In Zambia:


**1.2 Million**

Are living with HIV



**11%**

Of adults have HIV



**48 000**

New cases in 2018

Currently	Target
<ul style="list-style-type: none"> <li>• 87% know their status</li> <li>• 78% are on treatment</li> <li>• 58% are virally suppressed</li> </ul>	<ul style="list-style-type: none"> <li>• 90% know their status</li> <li>• 90% are on treatment</li> <li>• 90% are virally suppressed</li> </ul>

Sources:  
<http://www.unaids.org/en/resources/fact-sheet>  
<http://www.unaids.org/en/regionscountries/countries/zambia>  
<https://www.theguardian.com/global-development/2018/01/11/155551-andrew-doctor-takes-on-witchcraft-malaria-malnutrition-and-snakes-in-zambia>  
<https://www.schulich.uwo.ca/about/news/2017/december/world-aids-day-top-5-myths-about-hiv-aids.html>

Since the beginning of the **HIV** pandemic that started in the early 1980s, over 75 million people worldwide have been infected and 32 million have died. In the early days of the pandemic, there was confusion over what exactly caused the disease and what the best course of treatment was, however, due to medical and pharmaceutical advancements, incredible advancements have been made. The mass adoption of antiretroviral drugs and other medications such as PrEP has allowed millions to live perfectly normal lives. HIV is no longer a death sentence. Out of the estimated 38 million individuals who are currently living with HIV, 24.5 million are on antiretroviral therapy. Unfortunately, there are still approximately 8 million individuals who do not know that they are HIV+. This presents the biggest hurdle to controlling and eradicating HIV. All individuals should get tested for HIV, regardless if they think they have it or not. Aside from getting tested, there are several other preventative measures which can be taken, such as practicing safe sex and not sharing needles. Even though the world has known about HIV for 40 years, there are still misconceptions about what it is and how it is transmitted. HIV is a virus that is transmitted from person to person. HIV is not caused by supernatural forces and you can not cleanse or cure yourself of HIV. There is no current cure for HIV. In Zambia, there are 1.2 million individuals living with HIV, or 10% of adults.

**Meningitis** is a serious infection of the meninges, which consist of the membranes covering the brain and spinal cord. It remains a major public health challenge because it is a devastating disease. Although this disease can be caused by many pathogens like fungi or viruses, bacterial meningitis accounts for the highest global burden. Meningococcal meningitis is the one with the potential to produce large epidemics, and can affect anyone of any age. However, it mainly affects babies, preschool children and young people. The largest burden occurs in the meningitis belt, which is an area of sub-Saharan Africa that stretches from Senegal in the west to Ethiopia in the east. Meningitis is spread from person-to-person through droplets of respiratory or throat secretions from infected individuals. This means it is spread through coughs, sneezing, kissing, or even living in close quarters with an infected person. Symptoms, which may appear any time between 2-10 days include stiff neck, high fever, sensitivity to light, confusion, vomiting, and headache. This disease is so devastating that even with early diagnosis and adequate treatment, 5-10% of patients die, typically within 24-48 hours after the appearance of symptoms. Contracting bacterial meningitis may result in brain damage, hearing loss, and learning disabilities. This is why it is so important that preventative measures be taken, and these include vaccination (been available for more than 40 years), effective hand hygiene, and avoiding sharing things such as food with others. Treatment for this disease exists and consists of antibiotics such as ciprofloxacin or ceftriaxone/ceftriaxone.



# MENINGITIS



**MENINGITIS IS A SERIOUS INFECTION OF THE MENINGES, THE MEMBRANES COVERING THE BRAIN AND SPINAL CORD.**



## SYMPTOMS



STIFF NECK



HIGH FEVER



SENSITIVITY TO LIGHT



CONFUSION



VOMITING



HEADACHE

## CAUSED BY



BACTERIA



FUNGI



VIRUS

**BACTERIAL MENINGITIS (MOST COMMON) MAY RESULT IN**



BRAIN DAMAGE



HEARING LOSS



LEARNING DISABILITY

## PREVENTION



VACCINE



HAND HYGIENE



AVOID SHARING THINGS

**RISK AREAS: MENINGITIS BELT**



## TREATMENT



ANTIBIOTICS

SOURCE: CDC, WHO

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