

# What is health?



Complete the phrase "A youth is healthy when..." Write 2 or 3 sentences.

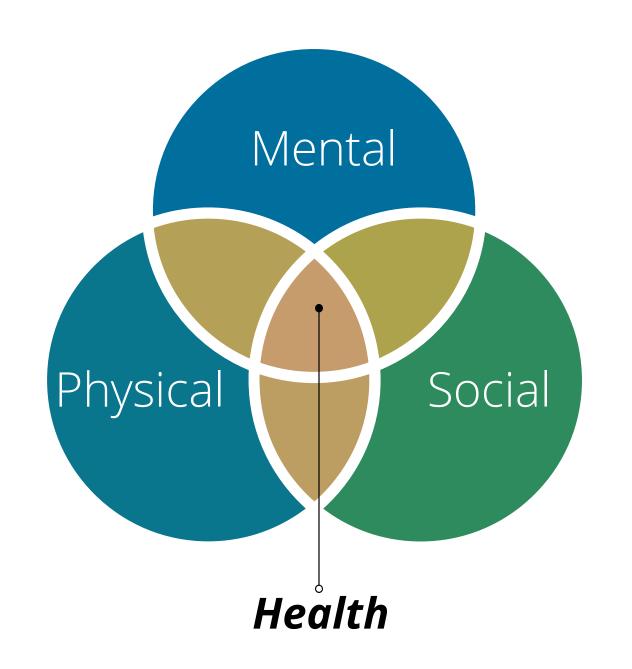






# What is Health?

Health is a state of complete **physical**, **mental** and **social well-being** and not merely the absence of disease or infirmity (WHO, 1948).



Health is an essential part of the quality of life. It is considered as a form of human capital. Poor health can affect the progress of society.

Health is also the ability of every citizen to adapt and manage physical, social and emotional challenges (Huber, 2011).







# What is Health?



# Health is a **fundamental human right** and an investment in a democratic and just society.

"The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition".





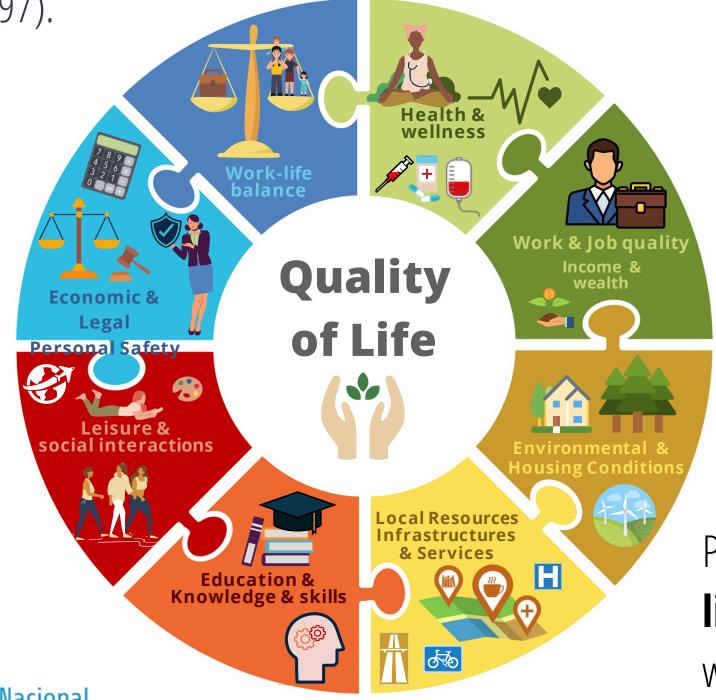
# **Quality of Life**



Quality of life is individual's perception of their position in life in the context of the culture

and value systems in which they live and in relation to their goals, expectations, standards and concerns

(WHO, 1997).





# **Positive Health**

Positive health, or well-being, is a **resource for quality of life**. Quality of life is closely connected to people's ideas about what is a "good life.



# **Quality of life**

**Quality of life** is closely connected to people ideas about what is a "good life". Has been influenced by the evolution of science and technology over the decades.





# Being.

Related to the **physical**, **psychological** and **spiritual** dimensions of individuals lives. It's about the **present**.

It's about: knowing yourselves, maintaining relationships with others, engaging with life joys and complexities, and meeting challenges.



# Belonging.

Involves the **social**, **relational** and **work environment** – knowing **where** and **with whom you belong** is integral to human existence, it shapes who you are and who you can become.



# Becoming.

Reflects the process of rapid and significant change that occurs in the early years as young children learn and grow. It emphasises **learning** to **participate fully and actively in society.** 







# Health-related quality determinant of of life It also place an imposite to the place and imposi

Health is not only a determinant of the expectancy of life.

It also plays an important role on individuals functional capabilities that in turn have an impact on their quality of life.

HRQOI







# Health-related quality of Life (HRQOL)

"An individual's or group's perceived physical and mental health over time."

# Individual

Physical and mental health perceptions (e.g., energy level, mood) and their correlates (health risks and conditions, functional status, social support, and socioeconomic status).

# Community

Community-level resources,
conditions, policies, and
practices that influence a
population's health perceptions
and functional status.





**Quality of Life** 









Quality time with family and friends

Gender gap in total hours worked

Long unpaid working hours

Satisfaction with time use

Feelings of safety when walking alone at night

Homicides & Robberies
Road Safety
Electoral participation

**Trust in institutions** 

Time spent on leisure activities

Volunteering

Social support

Time spent in social interactions

Satisfaction with personal relationships





Access to higher education Knowledge and competences



Partnerships for Science

Education



**Infrastructures** 

& Services

Ø

**Education &** 

**Knowledge & skills** 



**Labour market insecurity Employment rate** Long hours of inpaid work **Earnings** 

> **Access to basic sanitary facilities Housing affordability**

Access to recreational green space in urban areas

**Noise pollution** Exposure to outdoor air pollution

Access to libraries, schools, hospital, market, restaurants, bank, workshops, leisure and cultural **spaces** 



Energy, water, transport & telecommunication networks

Quality time with family and friends Gender gap in total hours

Long unpaid working hours

Satisfaction with time use

**Feelings of safety** when walking alone at night

> Homicides & Robberies Road Safety

**Electoral** participation Trust in institutions

> Time spent on leisure activities

**Volunteering** 

**Social support** 

**Satisfaction with** personal relationships

Time spent in social interactions

Escola Nacional

de Saúde Pública

universidade nova de lisboa

**Access to higher** education

**Knowledge and** 



Health & wellness Life satisfaction

Work & Job quality

Income & wealth

**Environmental &** 

**Housing Conditions** 



**Perceived** health

Life expectancy at birth

**Access to healthcare** 



**Employment** 

Long hours of inpaid work

**Earning** 

Quality of the working environment

Access to basic sanitary facilities

Housing affordability

Access to recreational green space in urban areas

**Noise pollution** 

**Exposure to outdoor air pollution** 

Energy, water, transport & **telecommunication** 

Access to library, schools, hospital, market, restaurants, bank, workshops, leisure and cultural spaces





**Education &** 

**Knowledge & skills** 









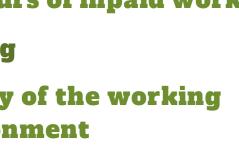






competences









- What are the major sources of health and quality of life in our community?
- What are the major issues affecting the health and quality of life in our community?
- · Which proposals do you have for the health and well-being of our community?











# Life expectancy and health determinants









Has the expectancy of life increased or decreased in the past 100 years?

Do people live longer or lesser today than they did at the beginning of the century? Why?







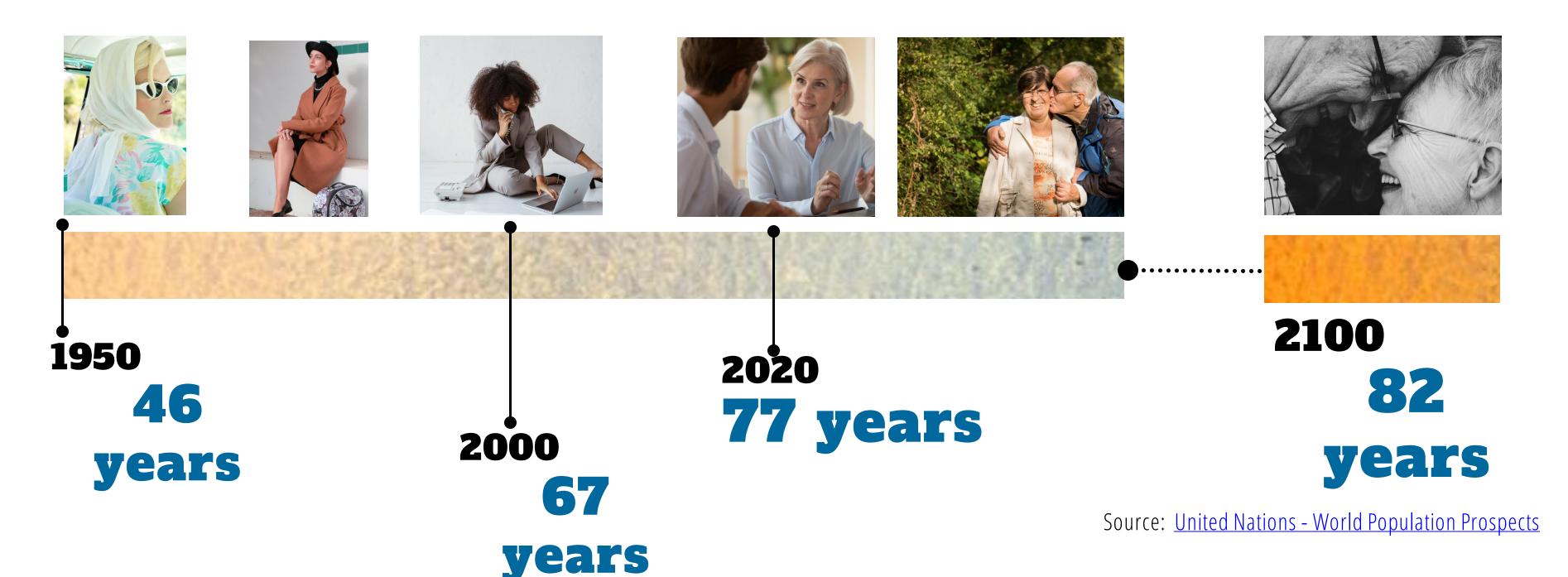








# Life expectancy has more than doubled since 1900.



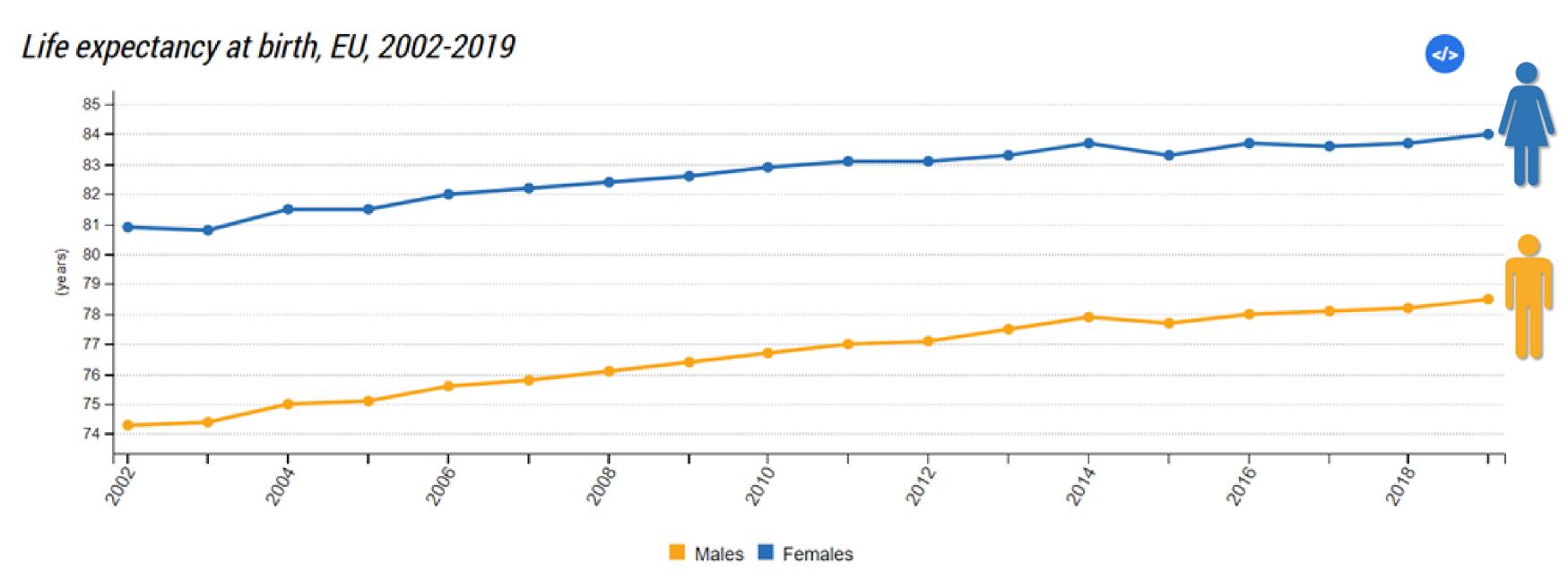
Advances in medicine - Socioeconomic development - Lifestyles - Improved living conditions







# Gender differences are found at the EU level.



Note: breaks in series for 2010, 2011, 2012, 2014, 2015, 2017 and 2019; estimate, provisional data for 2018 and 2019. Source: Eurostat (online data code: demo\_mlexpec)



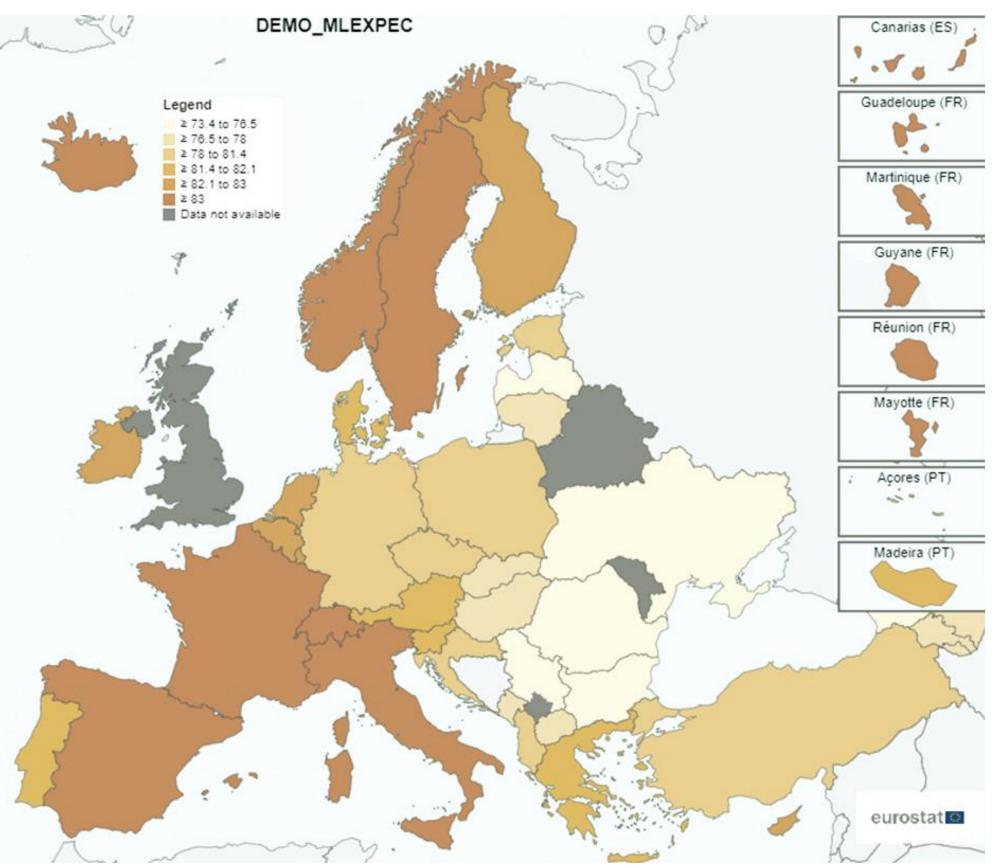






# Life expectancy changes at the country level.

In Europe, the actual expectancy of life at birth is superior to 80 years in Portugal, Greece and Cyprus, but is around 75 years in Latvia and Lithuania.



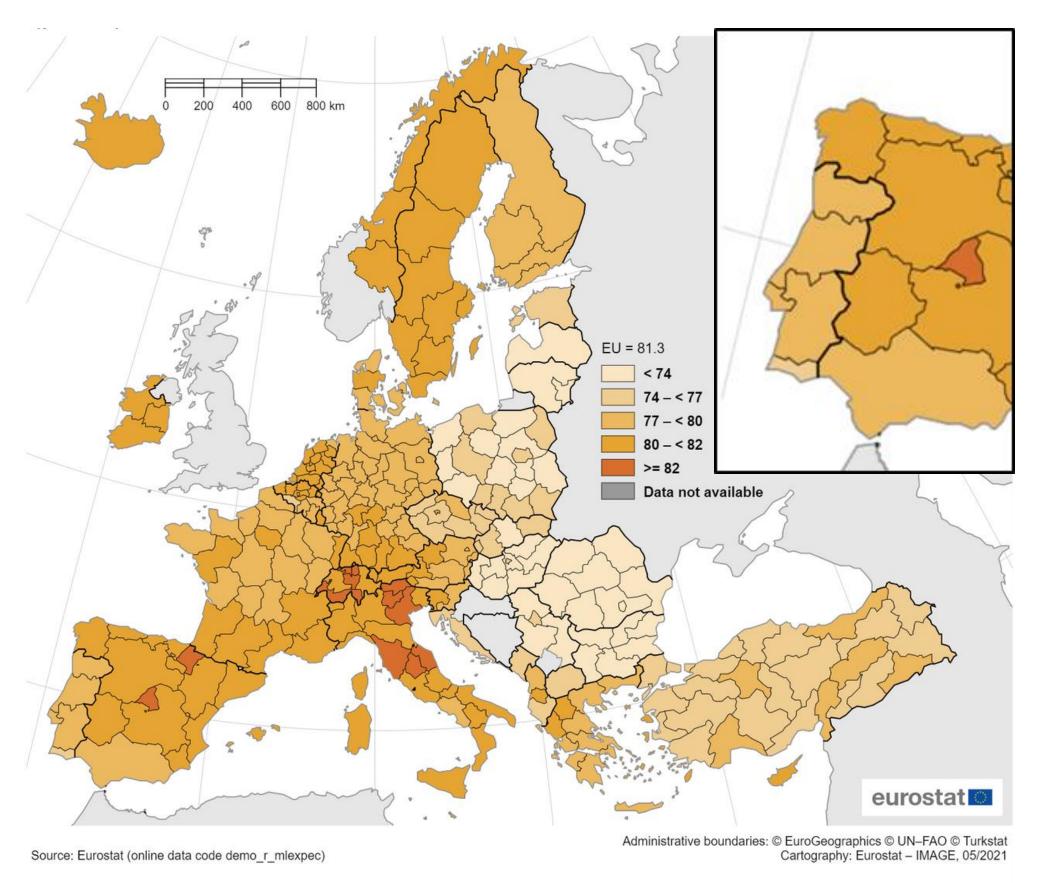






# The expectancy of life also changes at the country level according to regions.

For example, in the North and Center of Portugal, the expectancy of life is superior than in the South (Algarve).









# Even at the same city, the expectancy of life at birth may differ.

In Lisbon:

For those born in **São Domingos de Benfica** is 80.7 years

For those born in **Santa Maria Maior** is 74.5 years.

Source: euro-healthy project

https://healthyregionseurope.uc.pt/#/view/map/model?y=2014







# These differences may be explained by









Access to education



Access to employment



Social and labor conditions



Individual choices in relation to health



**Dynamics of local environments** 



Access to healthcare services



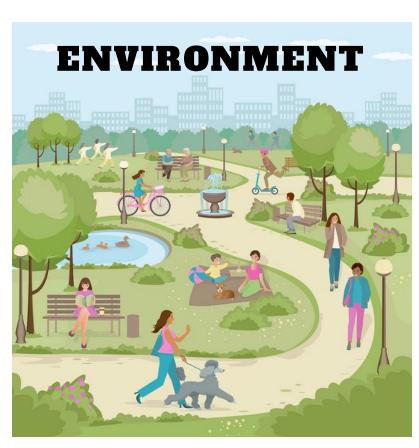
the determinants of health.

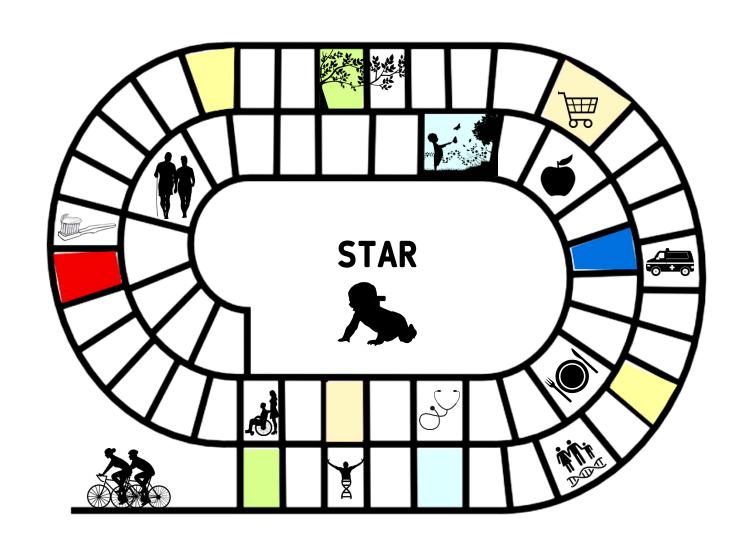


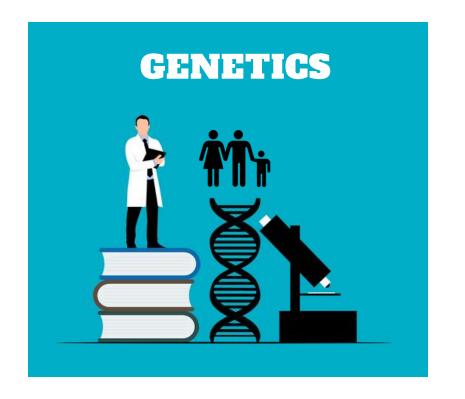
## **DETERMINANTS OF HEALTH**











# ACCESS TO HEALTHCARE

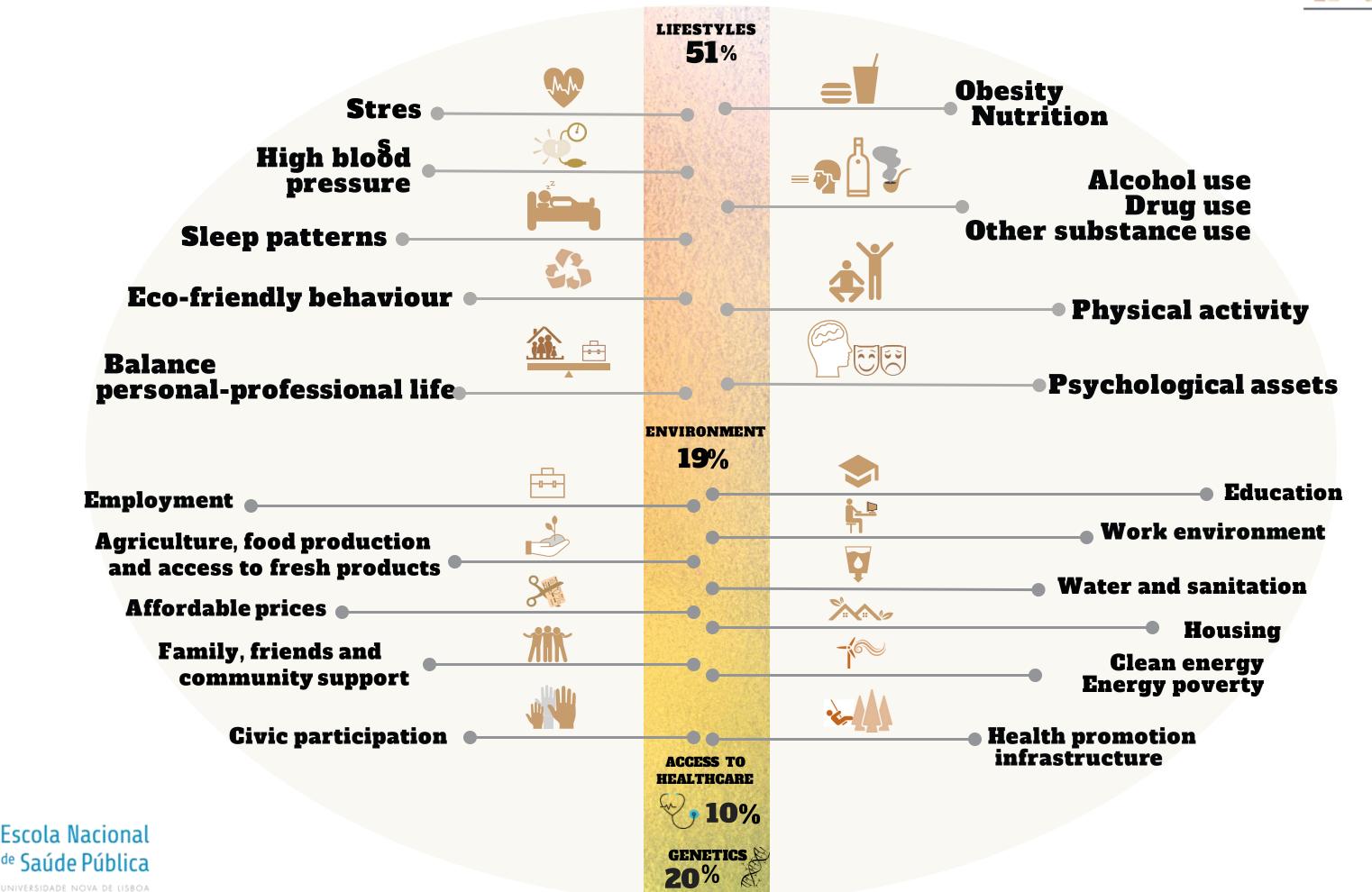






## **DETERMINANTS OF HEALTH**









# VÍDEO

## **DETERMINANTS OF HEALTH**

### LINK:

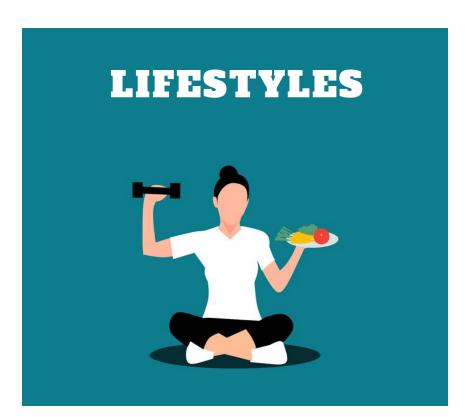
https://pafse.eu/pafse-introvideo/ (until minute 4)

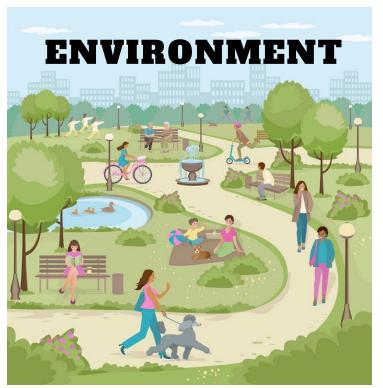






# Lifestyles (individual choices in relation to health) are influenced by environmental factors? By living environments?













# Health determinants and sustainable development goals

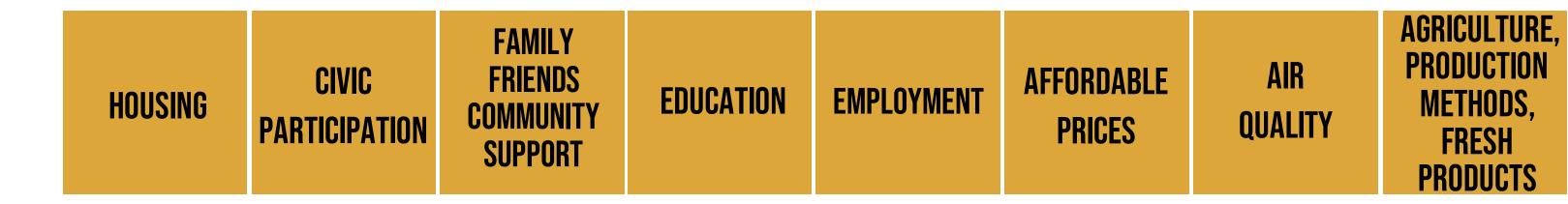








# Social and environmental determinants of Health



# United Nations Development Goals



**ENERGY** 

**POVERTY** 





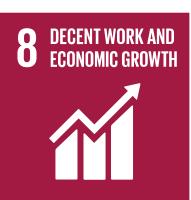


GENDER EQUALITY









THE GLOBAL GOALS

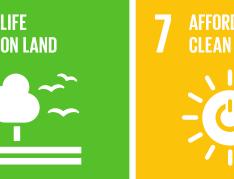




LIFE BELOW WATER















### Are SDGs connected? Is SDG 3 - good health and well being - linked with the other development goals?





# United Nations Development Goals

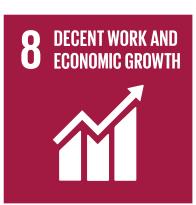




























THE GLOBAL GOALS



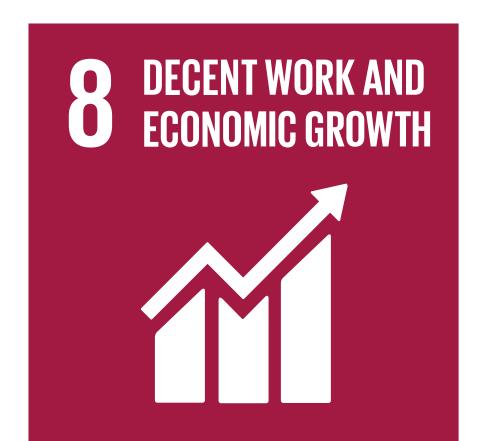


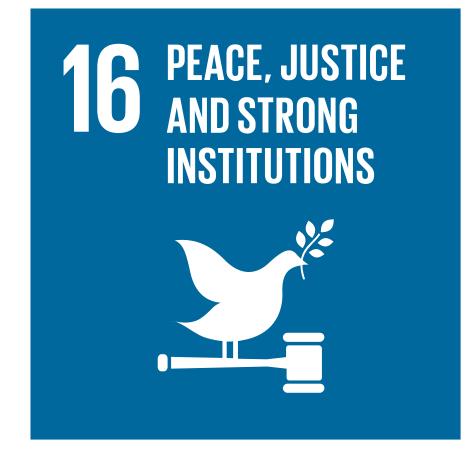






### ARE SDGS CONNECTED? IS SDG 3 LINKED WITH THE OTHER DEVELOPMENT GOALS? LETS ANSWER THIS BY MAPPING THE ATRIRITTES OF A HEALTHY COMMINITY







Sustainable and inclusive economic growth, full and productive employment, decent work for all.

Peaceful and inclusive community, access to justice for all is assured. Institutions are effective in their work, accountable, and inclusive.

People have access to local, affordable and nutritious food, live in a sustainable, inclusive, and climate-friendly community that promotes well-being for all.











# ARE SDGS CONNECTED? IS SDG 3 LINKED WITH THE OTHER DEVELOPMENT GOALS? LETS ANSWER THIS BY MAPPING THE ATRIBUTTES OF A HEALTHY COMMUNITY.



There are places to play, exercise, socialize, people use it to connect with each other.



People are connected by the purpose of creating a climate-friendly neighborhood and engage initatives.



People have the opportunity to grow food, sell and consume fresh products, such as fruits and vegetables, available in local markets.











# ARE SDGS CONNECTED? IS SDG 3 LINKED WITH THE OTHER DEVELOPMENT GOALS? LETS ANSWER THIS BY MAPPING THE ATRIBUTTES OF A HEALTHY COMMUNITY.











Eco-friendly mobility infrastructure is established, and allows easy, safe, inclusive and sustainable access to the community settlements and services.

Buildings and infrastructure are efficient in terms of energy sources, and serve the needs of community residents.

People avoid abusive use of resources and waste.

Deforestation and food insecurity due to abusive use of antibiotics and pesticides is rejected.









# ARE SDGS CONNECTED? IS SDG 3 LINKED WITH THE OTHER DEVELOPMENT GOALS? LETS ANSWER THIS BY MAPPING THE ATRIBUTTES OF A HEALTHY COMMUNITY.









No hunger, no poverty, sustainable agriculture, access of all to education, to health literacy, access to quality water and sanitation, affordable prices for goods, no racism, no unequal and/or unjust distribution of opportunities among members of the community.













# What do the following images suggest?







### SOME FEATURES OF POSITIVE NEIGHBORHOODS: HEALTHY & ECO-FRIENDLY



















## SOME FEATURES OF POSITIVE NEIGHBORHOODS: HEALTHY & ECO-FRIENDLY



















### SOME FEATURES OF POSITIVE NEIGHBORHOODS: HEALTHY & ECO-FRIENDLY





Walking clubs **Walking meetings** 

**Public campaigns creating** awareness about risks

Walking and cycling trails

Infrastructure to walk-to-school and bike-to-school

Healthy food options

Public, accessible, safe and clean transportation modes

Community gardens























#### **VÍDEO**

ATRIBUTES OF HEALTHY COMMUNITIES

LINK:

HTTPS://PAFSE.EU/PART-1-DETERMINANTS-OF-HEALTH/







# Health and disease burden









# Health and disease burden

A disease serious when...









#### **BURDEN OF DISEASE**

#### **Burden of disease**

is a concept developed in the 1990s by the Harvard School of Public Health, the World Bank and the World Health Organization to describe death and loss of health due to diseases, injuries and risk factors for all regions of the world.

The burden of a certain disease or health condition represents the impact and magnitude of the problem.

The burden of a disease is measured by DALYs (Disability Adjusted Life Years).





Years lived with pour

health or disability







Years of life lost due to premature mortality





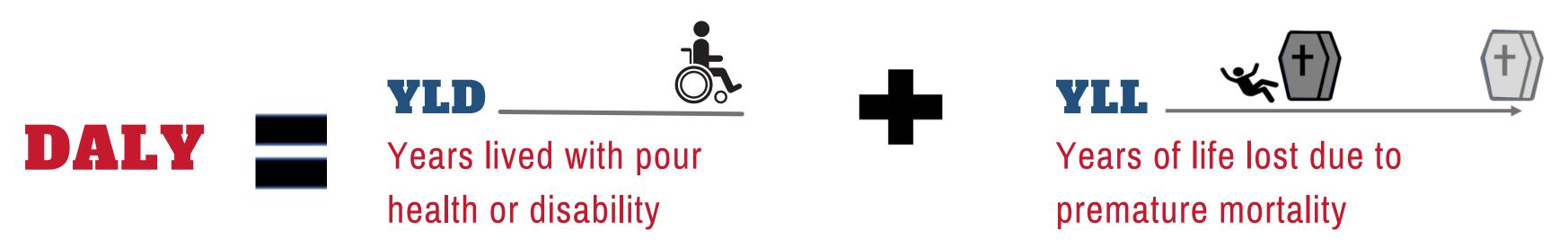
#### **BURDEN OF DISEASE**



#### **Burden of disease**

By adding together the Years of Life lived with Disability or Poor Health (YLD) and Years of Life Lost due to premature death (YLL) we get a estimate of global disease burden (DALY).

The number of DALYs evidences the health impact of a certain disease.





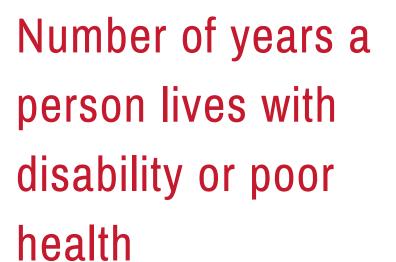




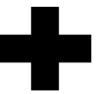








YLD









Number of years a person loses as a consequence of dying early (below 70 years)





#### **HOW WE MEASURE DISEASE BURDEN?**



#### DALY

Time lost through premature death and time lived in states of less than optimal health



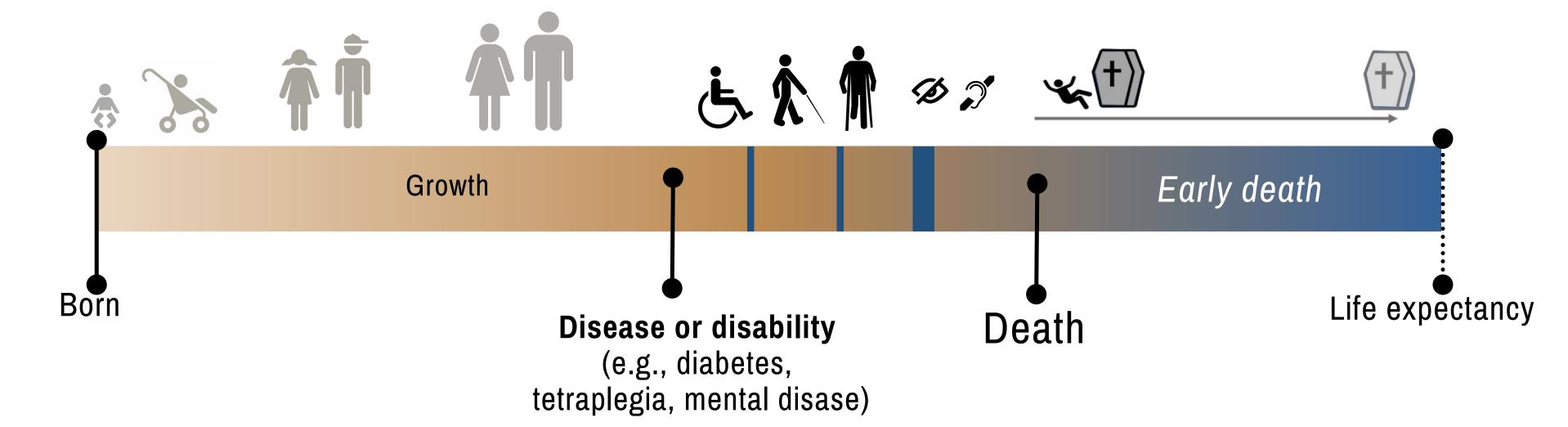
#### YLD

Years lived with pour health or disability



#### YLL

Years of life lost due to premature mortality









## What are the leading causes of premature deaths and disability in the world?







Partnerships for Science Education

**Source: WHO** 

	Cause	DALYs
	Ischaemic heart disease	180,847
	Stroke	139,429
1042	Diabetes mellitus	70,411
PE	Lower respiratory infections	105,652
	Diarrhoeal diseases	79,311
	Road injury	79,116
	Chronic obstructive pulmonary disease	73,981

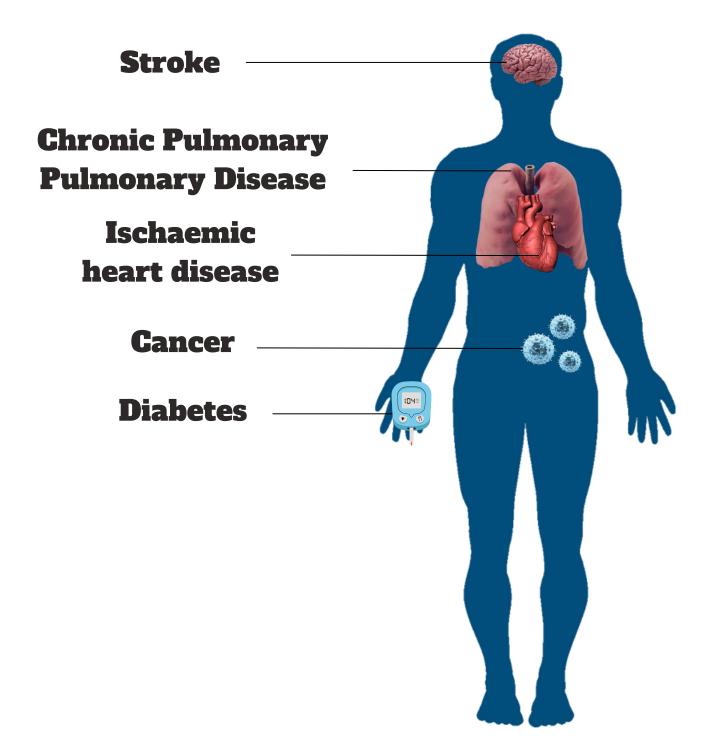


**Chronic conditions!** 



#### **BURDEN OF NON-COMMUNICABLE DISEASES**





The burden of non-communicable diseases (also called chronic conditions) is increasing worldwide due to changes in lifestyles.











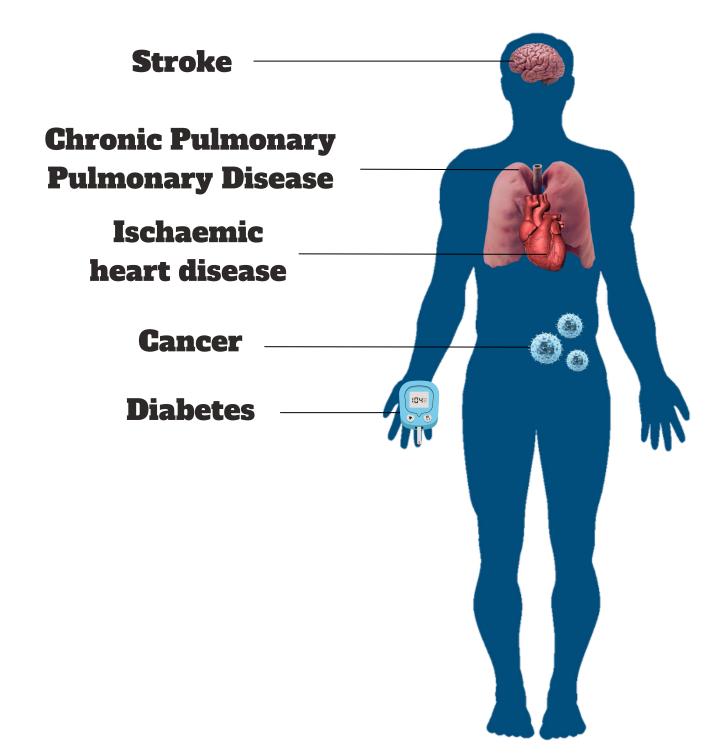
## deaths globally

15M

premature deaths 30-69 years

85%

of premature deaths occurs in low and middle income countrys









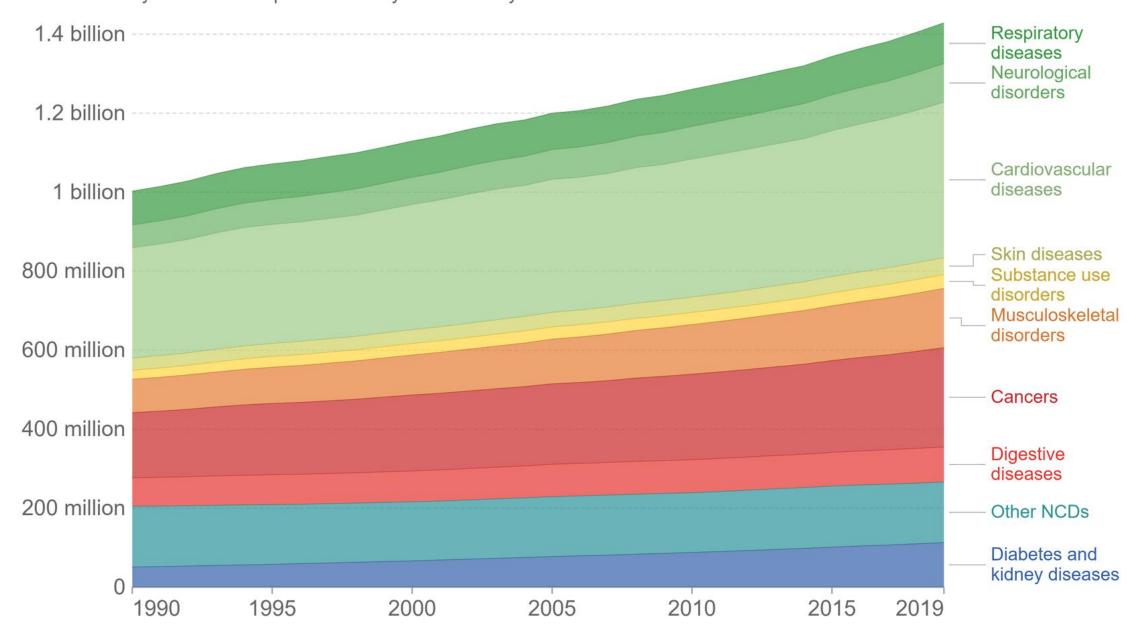
#### **BURDEN OF NON-COMMUNICABLE DISEASES**

#### The burden from non-communicable diseases is increasing.

Disease burden from non-communicable diseases, World, 1990 to 2019



Total disease burden from non-communicable diseases (NCDs), measured in DALYs (Disability-Adjusted Life Years) per year. DALYs are used to measure total burden of disease - both from years of life lost and years lived with a disability. One DALY equals one lost year of healthy life.







### CVD BURDEN ATTRIBUTABLE TO MODIFIABLE RISK FACTORS



#### **2019 RANK**



1. High systolic blood pressure



2. Dietary risks



3. High LDL cholesterol



4. Air pollution



5. High body-mass index



6. Tobacco



7. High fasting plasma glucose



8. Kidney dysfunction



9. Non-optimal temperature



10. Other environmental risks



11. Alcohol use



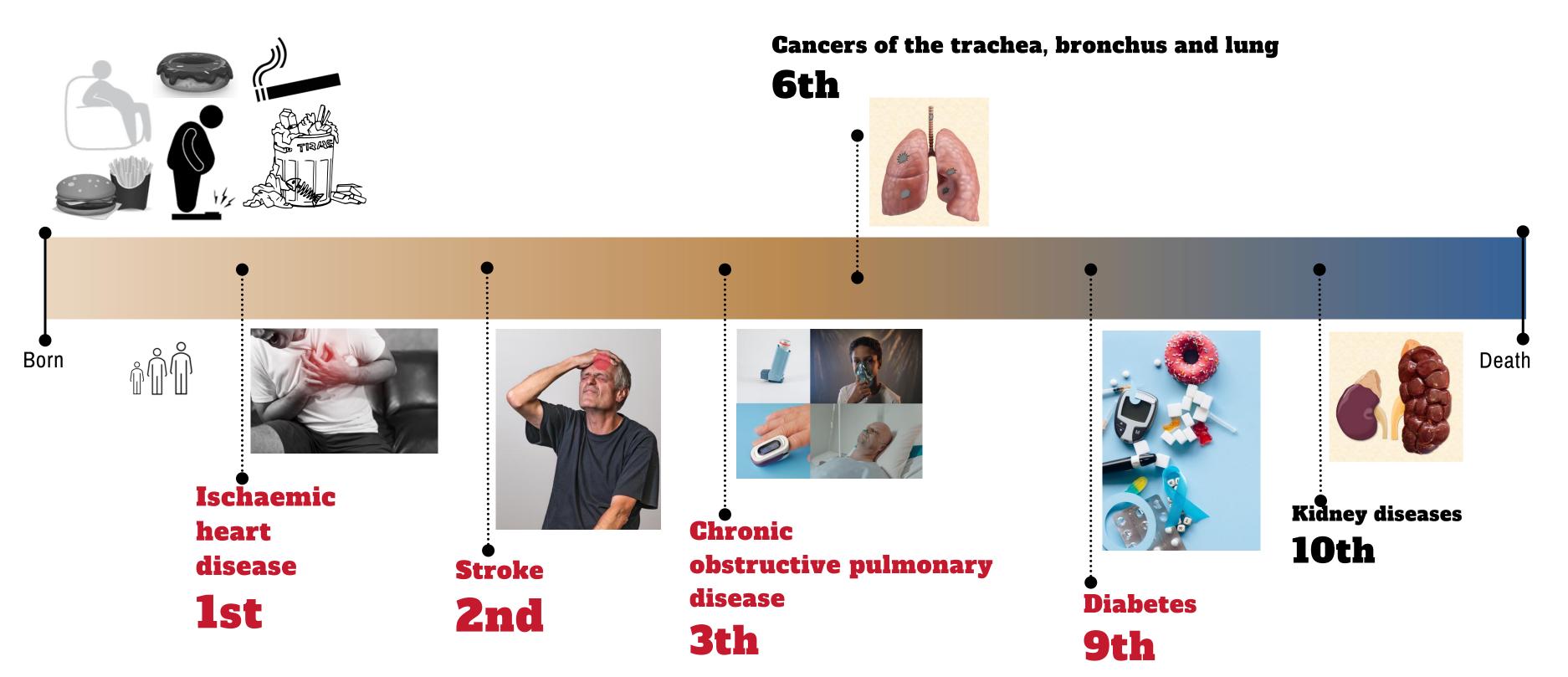
12. Low physical activity





#### NON-COMMUNICABLE DISEASES! ON THE TOP CAUSES OF DEATH





4th position - Lower respiratory infections / 5th position - Neonatal conditions/ 7th position- Alzheimer disease and other dementias/ 8th position - Diarrhoeal diseases

Source: OMS - Top 10 global causes of death in 2019







#### NON-COMMUNICABLE DISEASES! ON THE TOP CAUSES OF POOR HEALTH, DISABILITY AND PREMATURE DEATHS

#### **DALYs**

Time lost through premature death and time lived in states of less than optimal health



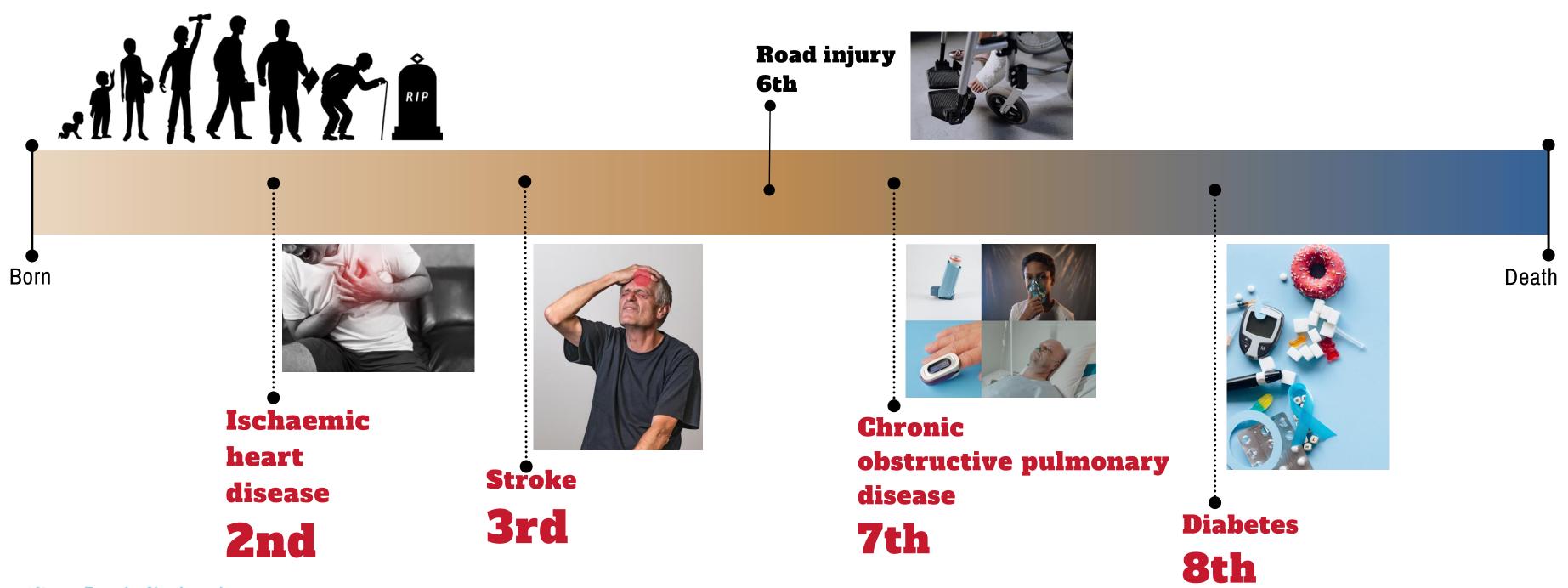
YLD

Years lived with poor health or disability



YLL

Years of life lost (premature death)











# Every 2 seconds someone dies prematurely

from heart and lung diseases, stroke, cancer and diabetes aged between 30 and 70 years









# Health and disease burden









# Major noncommunicable diseases

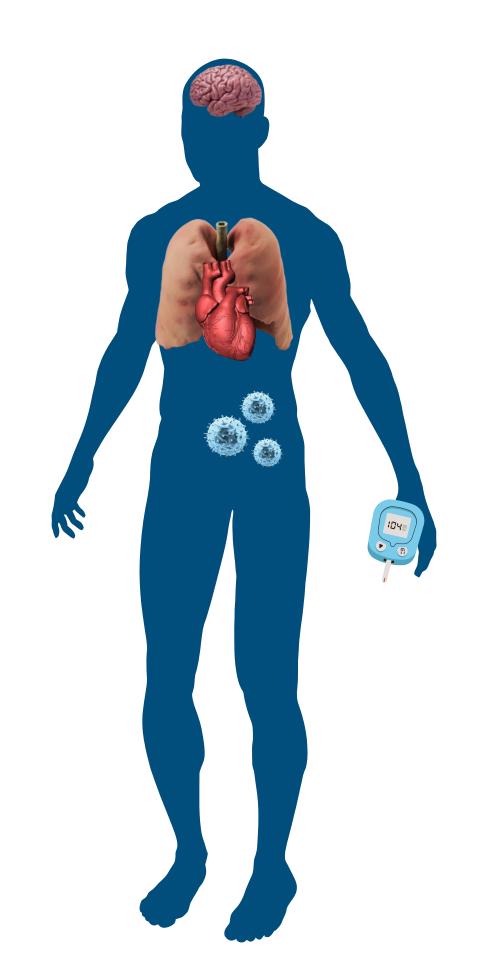








**Risk factors Levels of prevention** Cardiovascular diseases O **Lung diseases Cancer Diabetes** How to act











Complete the phrase "We can prevent non communicable diseases by...



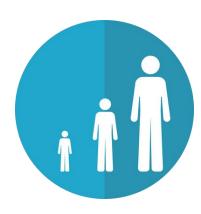




#### Non - Modifiable risk factors



Genetic

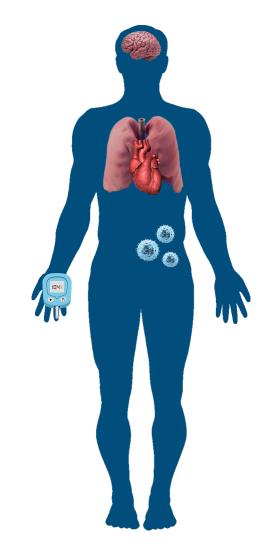


Age



Family history



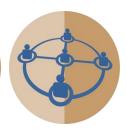




Social context



Economic context



Political context





Physical activity





**Modifiable risk factors** 

Diet



**Stress** 





Sleep patterns







Gender











Tobacco use

Alcohol consumption









inactivity







**Diabetes** 























# 4 MODIFIABLE RISK FACTORS

4 DISEASES







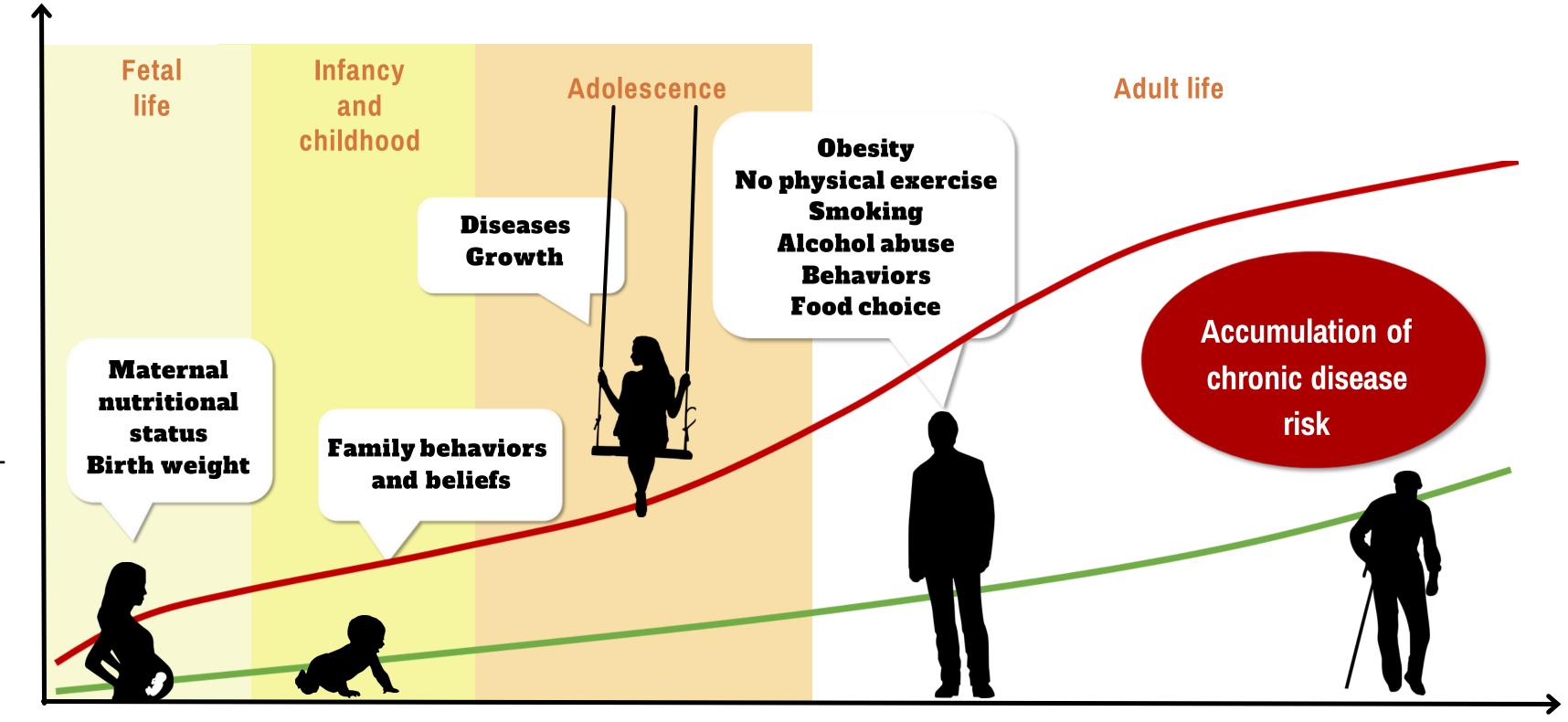




#### FACTORS THAT ELEVATE DISEASE RISK



#### ACCUMULATE GRADUALLY OVER THE LIFE COURSE



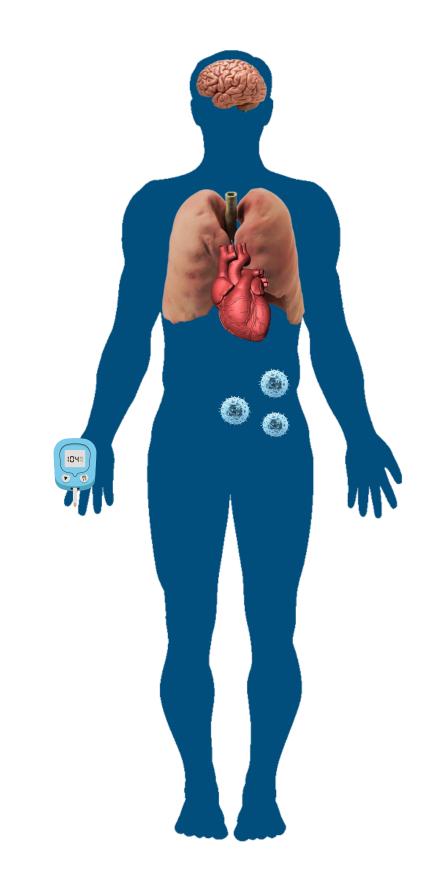






#### **CARDIOVASCULAR DISEASES**

# MAY YOU IDENTIFY A COUPLE OF CARDIOVASCULAR DISEASES?



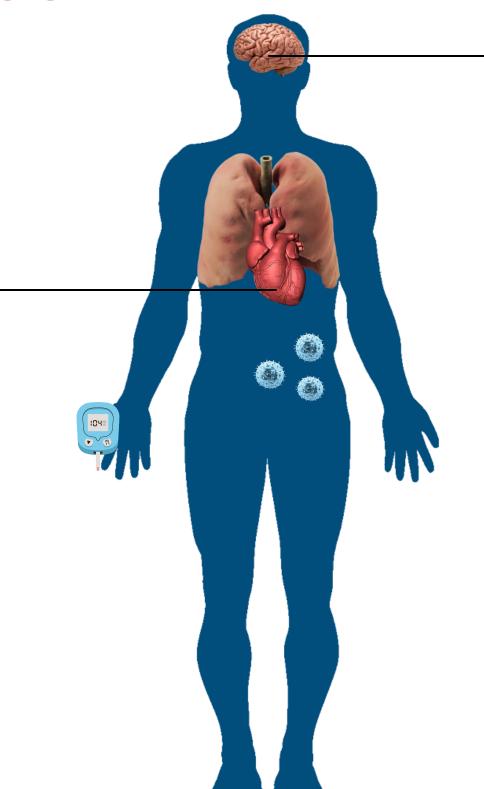






#### **MAJOR CARDIOVASCULAR DISEASES**

# Ischaemic heart disease











#### MAJOR CARDIOVASCULAR DISEASES

**Stroke** 

Ischaemic heart disease



annual deaths worldwide

40% are in Europe

1/3 deaths under70 years of age



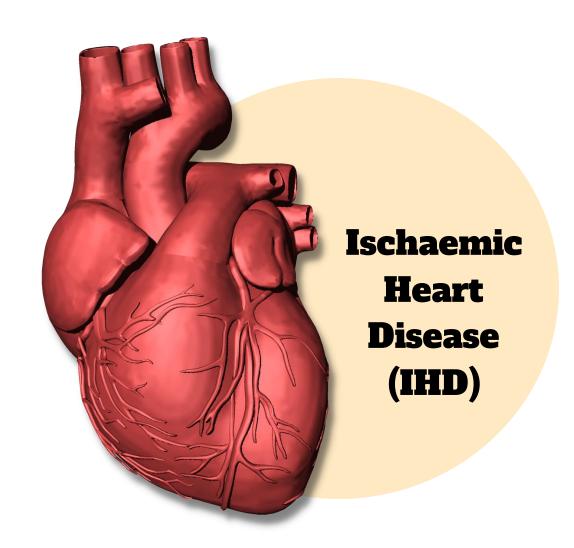
https://www.who.int/health-topics/cardiovascular-diseases#tab=tab\_1 https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates





#### **MAJOR CARDIOVASCULAR DISEASES**





IHD is the leading cause of death, disability and human suffering globally. It is expected to increase in population over 65 years

126 million

individuals affected globally in 2017

1,72% of the world's population

2019

\*\*\*\*\*\*

2050



Sources:

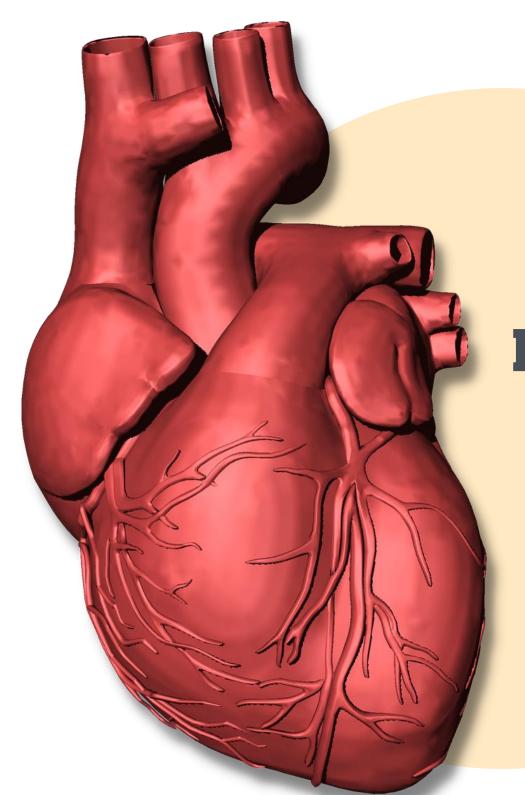
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7384703/; https://www.who.int/health-topics/cardiovascular-diseases#tab=tab; https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates\_1



### Partnerships for Science Education

#### **MAJOR CARDIOVASCULAR DISEASES**

#### **SYMPTOMS**



Ischaemic heart disease

**Chest Pain** 

Lightheadness

**Breathleness** 

Sweathing

Nausea

Heart palpitations

Constant fatigue

Sources:

https://www.who.int/health-topics/cardiovascular-diseases#tab=tab\_1; https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates







#### **MAJOR CARDIOVASCULAR DISEASES**

**SYMPTOMS** 

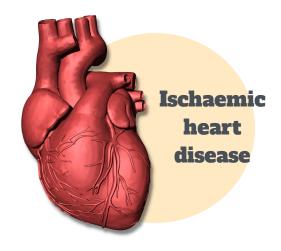








## MAJOR CARDIOVASCULAR DISEASES SYMPTOMS



Suggested video: https://www.youtube.com/watch?v=cAB-zL1HFzE From minute 0 to 2:13





#### **ISCHAEMIC HEART DISEASE**

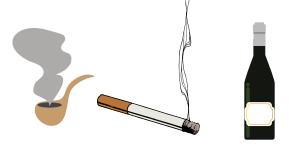






#### what can I do?





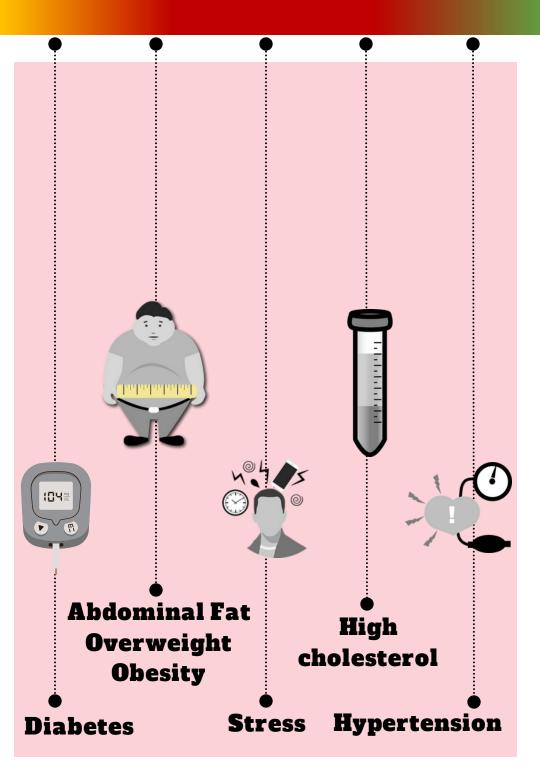
Smoking
Alcohol
consumption







Inactivity







Commit to SDG 11 (sustainable cities and communities) and SDG 13 (climate action)

Short my ecological footprint





No smoking Avoid alcohol consumption

Commit to Mediterranean diet





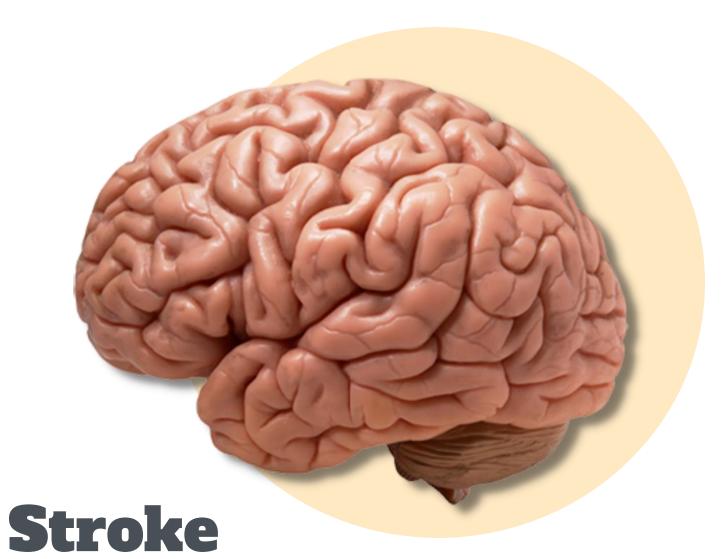
Take regular physical exercise







#### **MAJOR CARDIOVASCULAR DISEASES**



6 million

deaths in 2019 worldwide

101,5 million

individuals affected in 2019, globally



For 10 people who die of stroke, 4 could have been saved if their blood pressure had been regulated

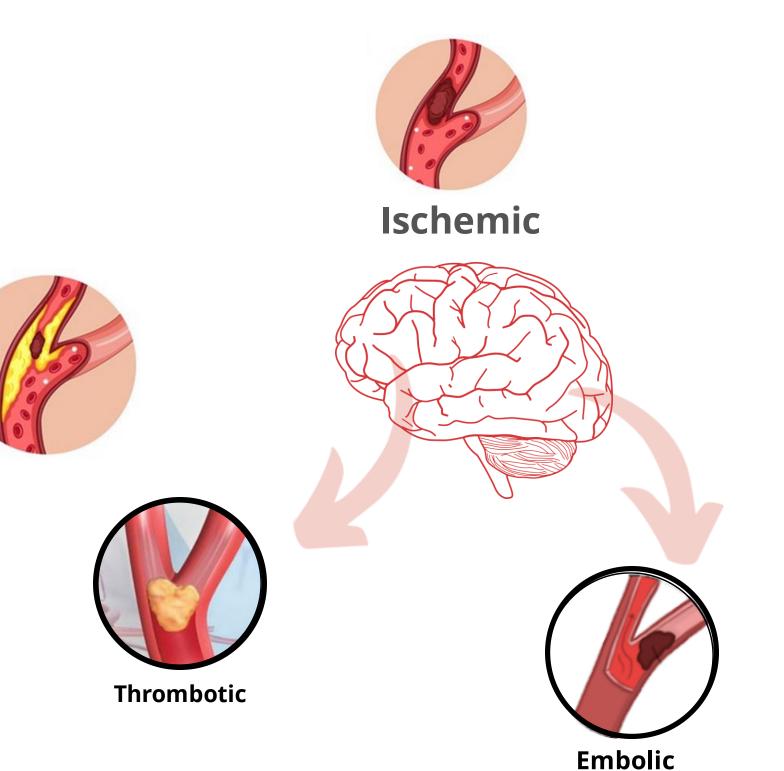




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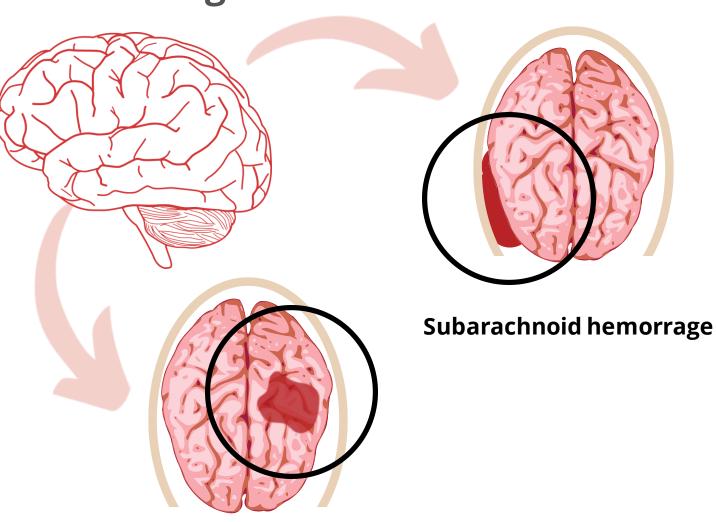
#### **MAJOR CARDIOVASCULAR DISEASES**

#### **STROKE TYPES**









Intracerebral Hemorrhage



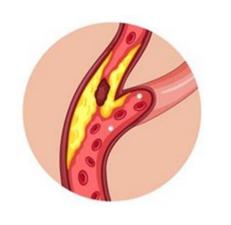


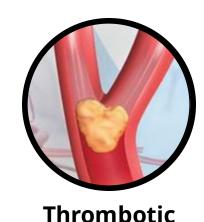


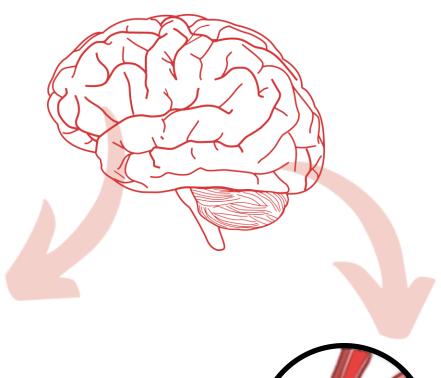
### Partnerships for Science Education

#### **MAJOR CARDIOVASCULAR DISEASES**











#### Embolic

#### **STROKE TYPES**

Most strokes are ischemic strokes.

Ischemic strokes are caused by a **lack of blood flow** or **oxygen to the brain**.

Causes of stroke include **blockage of the small arteries** in the brain, **fatty deposit** in the larger arteries leading to the brain and **heart disease**, like arrhythmia.

#### Sources:

https://www.stroke.org/en/about-stroke/types-of-stroke/ischemic-stroke-clots https://www.freepik.com/search?format=search&from\_query=brain+hemorrhage&page=2&query=brain&selection=1



### Partnerships for Science Education

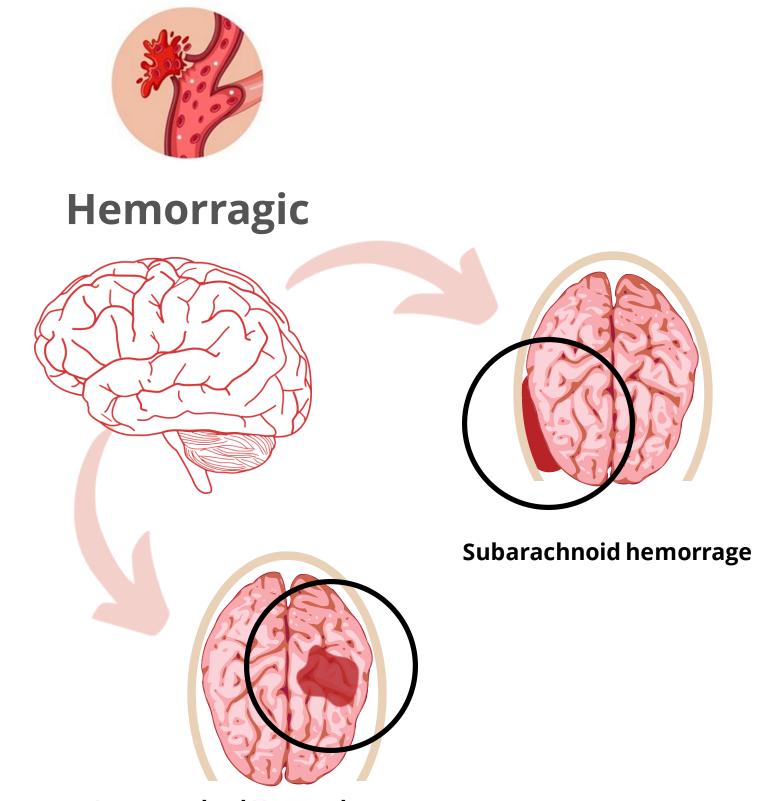
#### **MAJOR CARDIOVASCULAR DISEASES**

#### **STROKE TYPES**

A **haemorrhagic stroke** happens when an artery in the brain leaks blood or ruptures.

Leaked blood puts too much pressure on brain cells, which damages them.

The risk factors include **previous stroke** and **hypertension**.











#### **MAJOR CARDIOVASCULAR DISEASES**

#### **STROKE TYPES**

Suggested video: https://www.youtube.com/watch?v=BDk9wRbW40Q

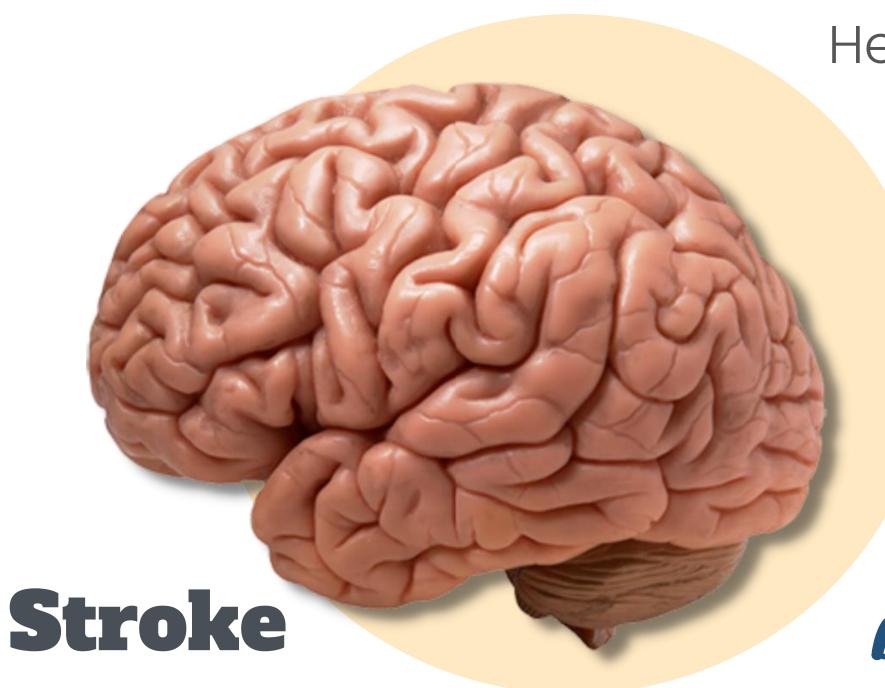






#### **MAJOR CARDIOVASCULAR DISEASES**

#### **SYMPTOMS**



Headache

Dizziness

Confusion

Paralysis of 1 side of the body

Difficulty Swallowing

Speech difficulty

**Blurred Vision** 

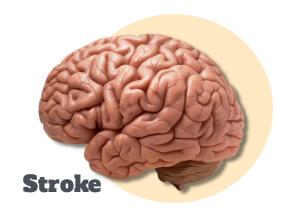






#### **MAJOR CARDIOVASCULAR DISEASES**

#### **SYMPTOMS**



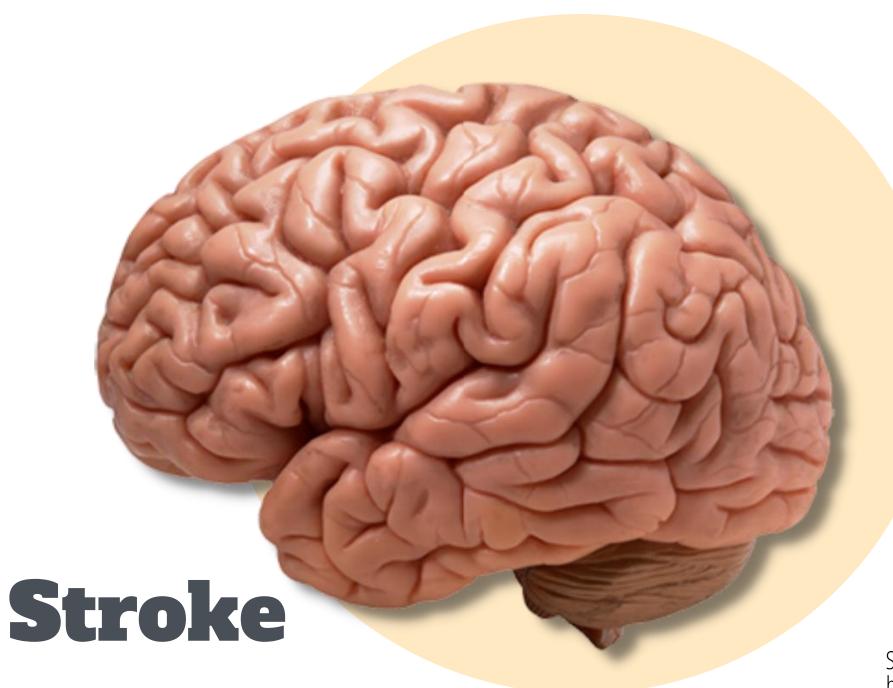
Suggested video: https://www.youtube.com/watch?v=-NJm4TJ2it0 From minute 0:00 to 2:46







#### **MAJOR CARDIOVASCULAR DISEASES**



## Stroke warning signs

ace (dropped at 1 side)

rms (weekness or numbness)

Secondary of the sec

ime (get help as soon as possible)

Sources:

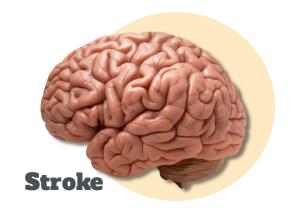
https://www.nhs.uk/conditions/stroke/; https://www.who.int/health-topics/cardiovascular-diseases#tab=tab\_1 https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates





#### **MAJOR CARDIOVASCULAR DISEASES**

#### **WARNING SIGNS**



Suggested video: https://www.youtube.com/watch?v=mkpbbWZvYmw









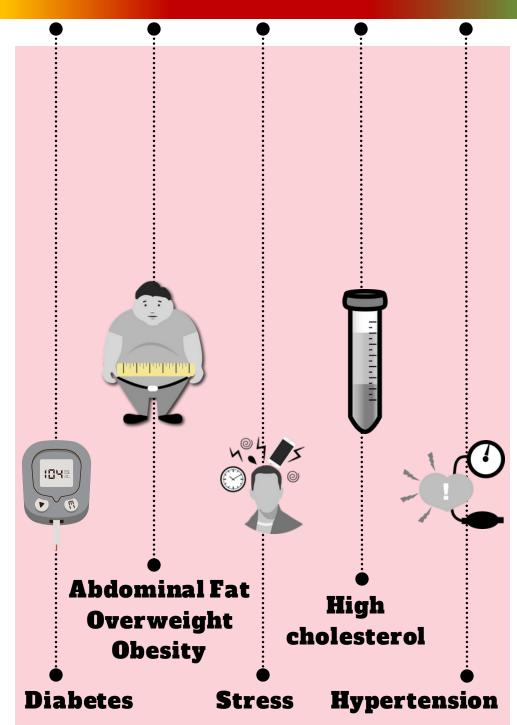




## CONSEQUENCES AND INTERMEDIARY CONDITIONS

#### what can I do?









Commit to SDG 11 (sustainable cities and communities) and SDG 13 (climate action)

Short my ecological footprint





No smoking Avoid alcohol consumption

Commit to Mediterranean diet





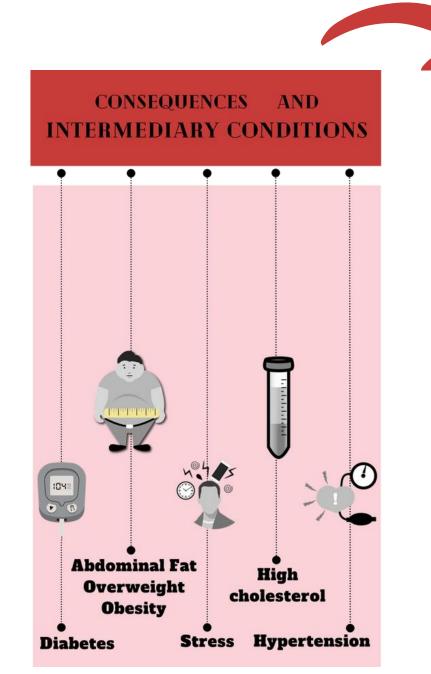
Take regular physical exercise







#### **CARDIOVASCULAR DISEASES**



ISCHAEMIC HEART DISEASE



STROKE



Primary preventio

avoids disease

Secondary prevention

limits disability

#### what Should I do?





Commit to SDG 11 (sustainable cities and communities) and SDG 13 (climate action)

Short my ecological footprint



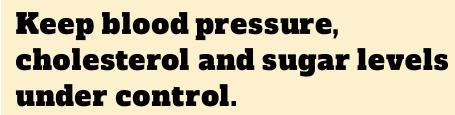
No smoking Avoid alcohol consumption





Take regular physical exercise











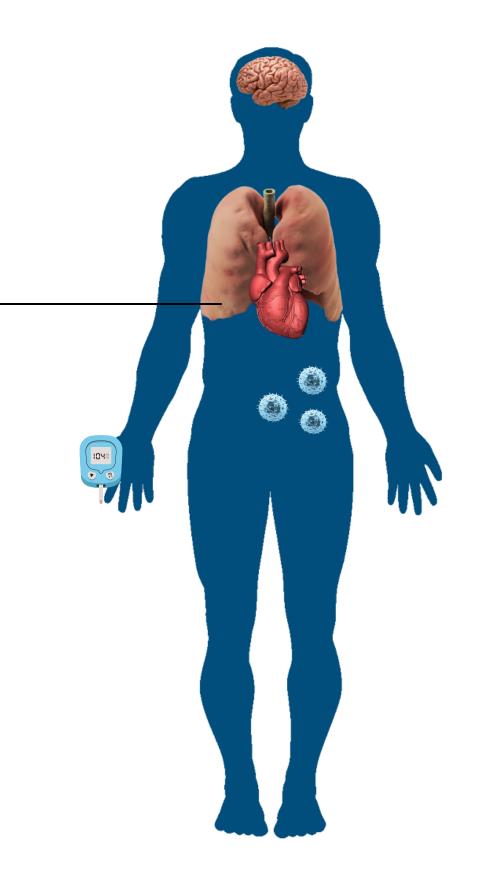
Take medication Follow medical advice Regular health checkups







Chronic
Obstructive
Pulmonary
Disease

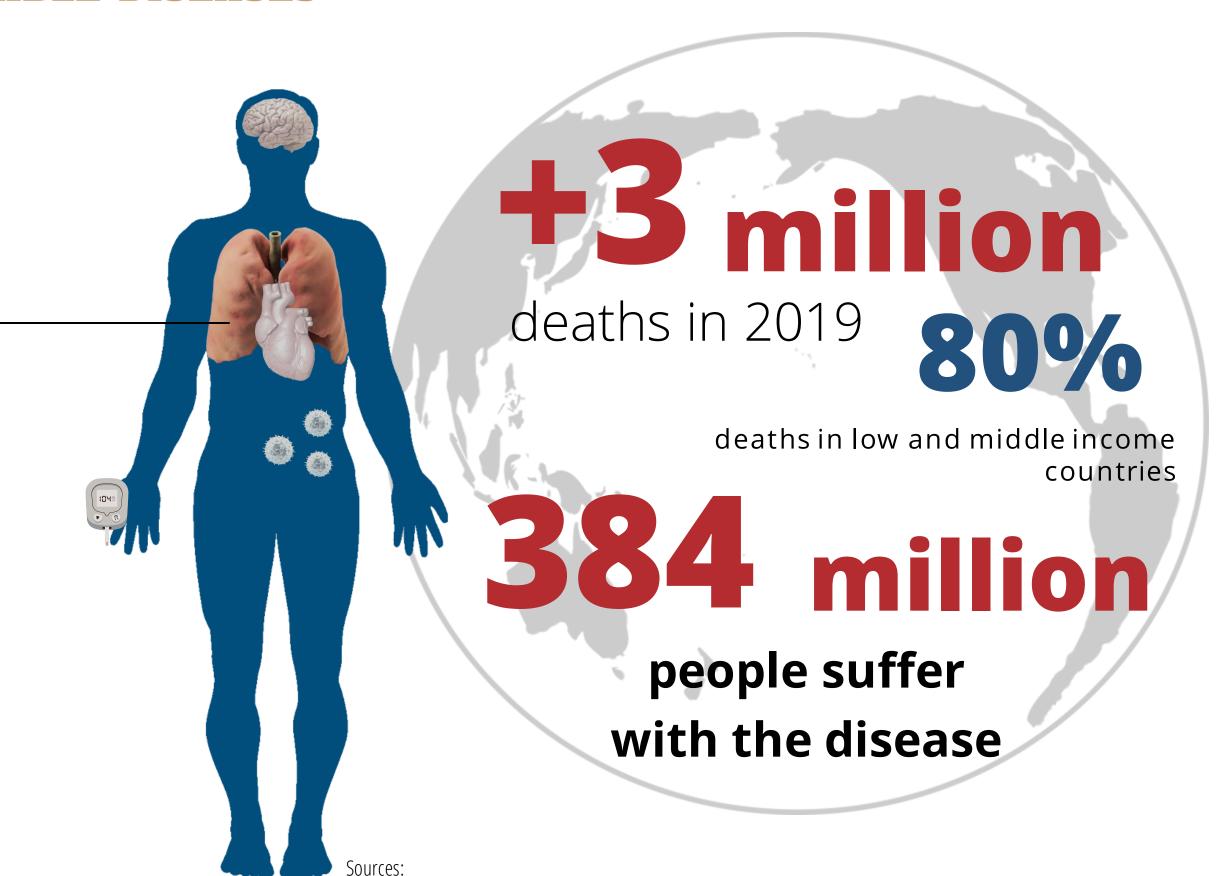








Chronic
Obstructive
Pulmonary
Disease



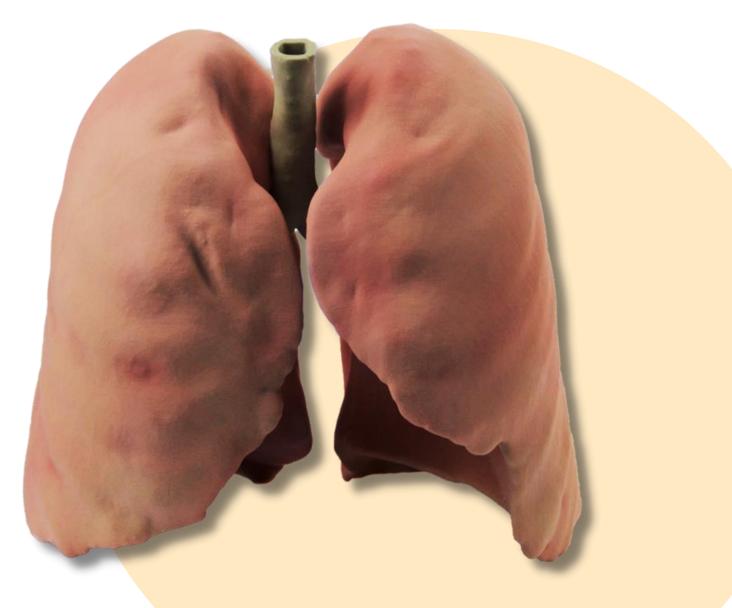




## Partnerships for Science Education

#### **CHRONIC OBSTRUCTIVE PULMONARY DISEASE**

#### **SYMPTOMS**



Difficulty breathing

**Swelling** 

**Tiredness** 

Inflammation

Cough

Mucus

**Chronic Obstructive Pulmonary Disease** 

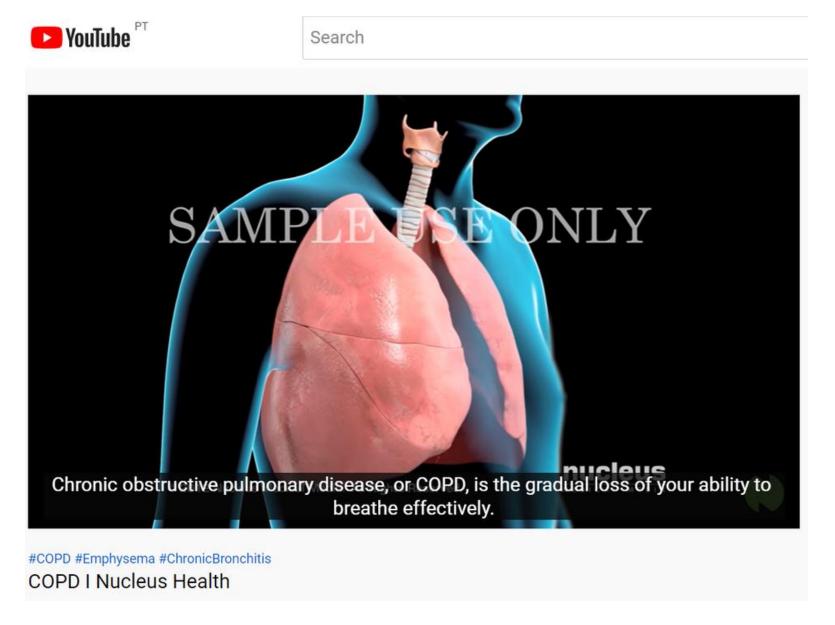








#### **SYMPTOMS**



Suggested video: https://www.youtube.com/watch?v=2nBPqSiLg5E&t=110s From minute 0:00 to 1:36





#### CHRONIC obstructive pulmonary disease



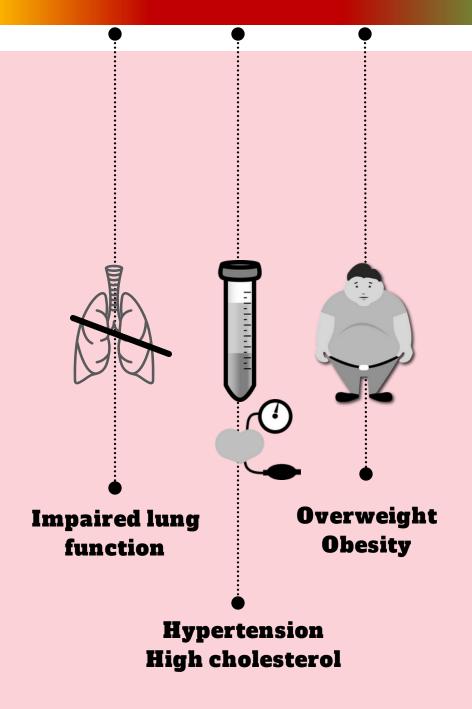




## CONSEQUENCES AND INTERMEDIARY CONDITIONS

#### what can I do?









Commit to SDG 11 (sustainable cities and communities) and SDG 13 (climate action)

Short my ecological footprint





Ask medical advice for vaccination (pneumonia, influenza, coronavirus)

Reduce exposition to the smoke of biomass fuels used for cooking Stop smoking





Commit to Mediterranean diet

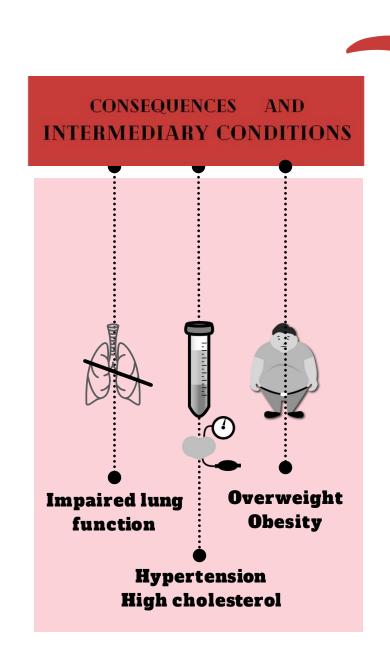
Take regular physical exercise



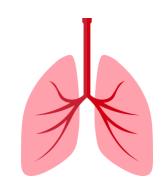








**CHRONIC OBSTRUCTIVE PULMONARY** DISEASE



**Primary** preventio avoids disease

**Secondary** prevention limits disability

#### what Should I do?





**Commit to SDG 11** (sustainable cities and communities) and **SDG 13 (climate action)** 

Short my ecological footprint





Ask medical advice for vaccination (pneumonia, influenza, coronayirus)

Reduce exposition to the smoke of biomass fuels used for cooking Stop smoking



Take regular exercise



Commit to Mediterranean diet



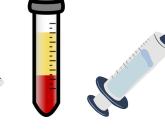
Keep blood pressure and cholesterol levels under control. keep vaccines up to date.



prevention

to maintain

in secondary

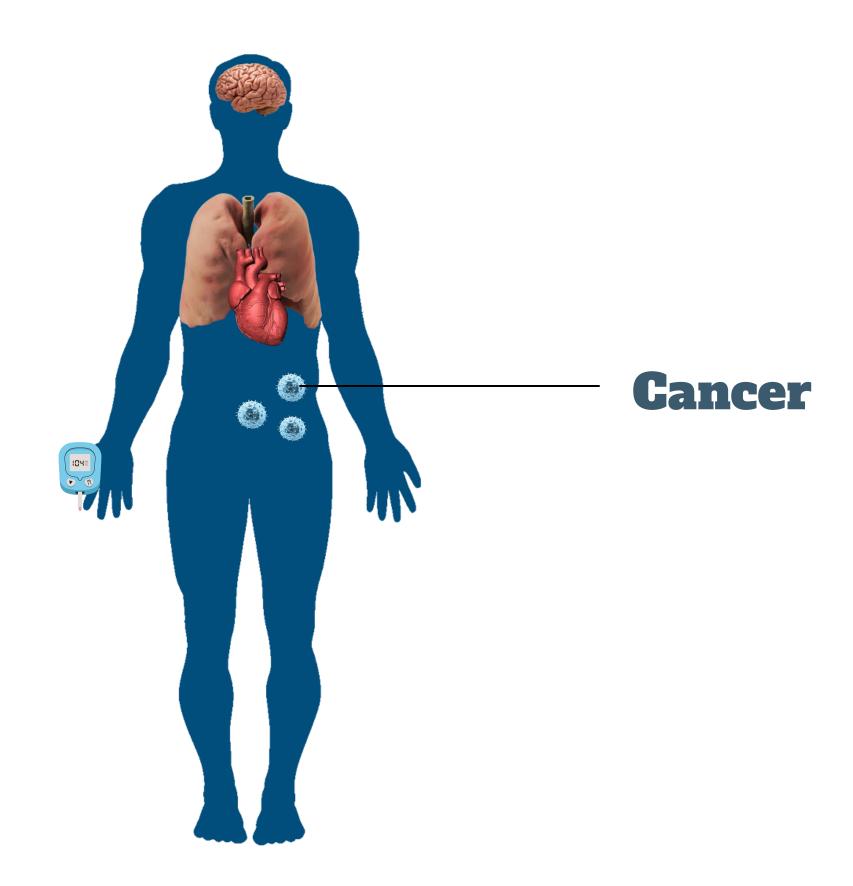


Take medication Follow medical advice Regular health checkups





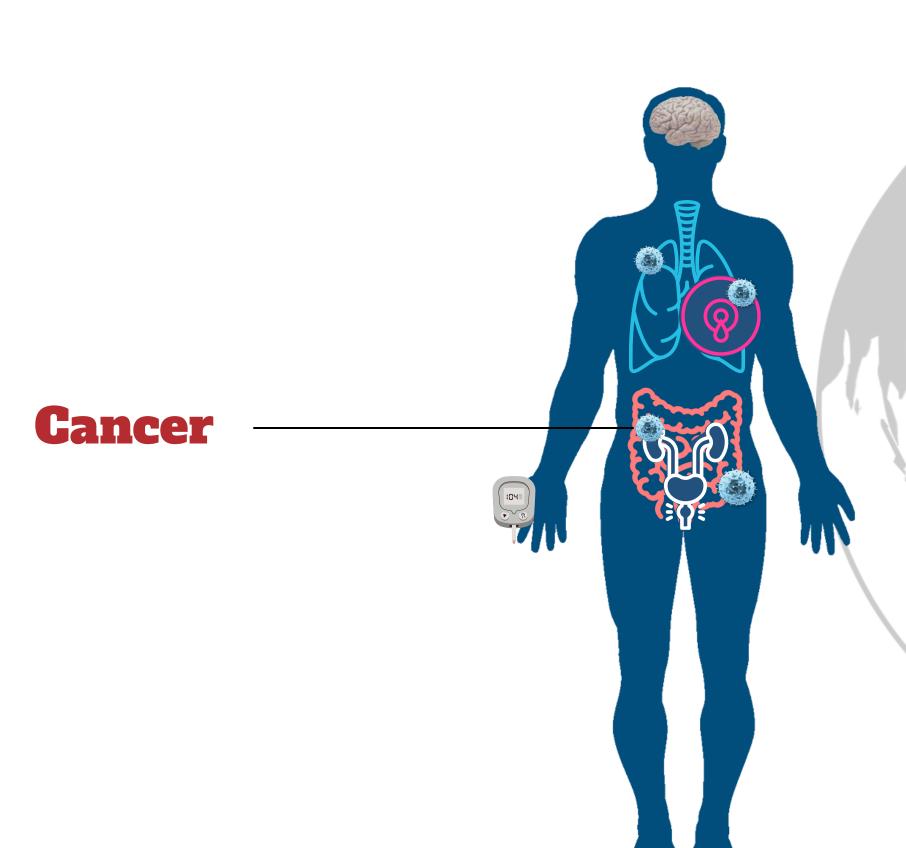












10 million

deaths in 2020

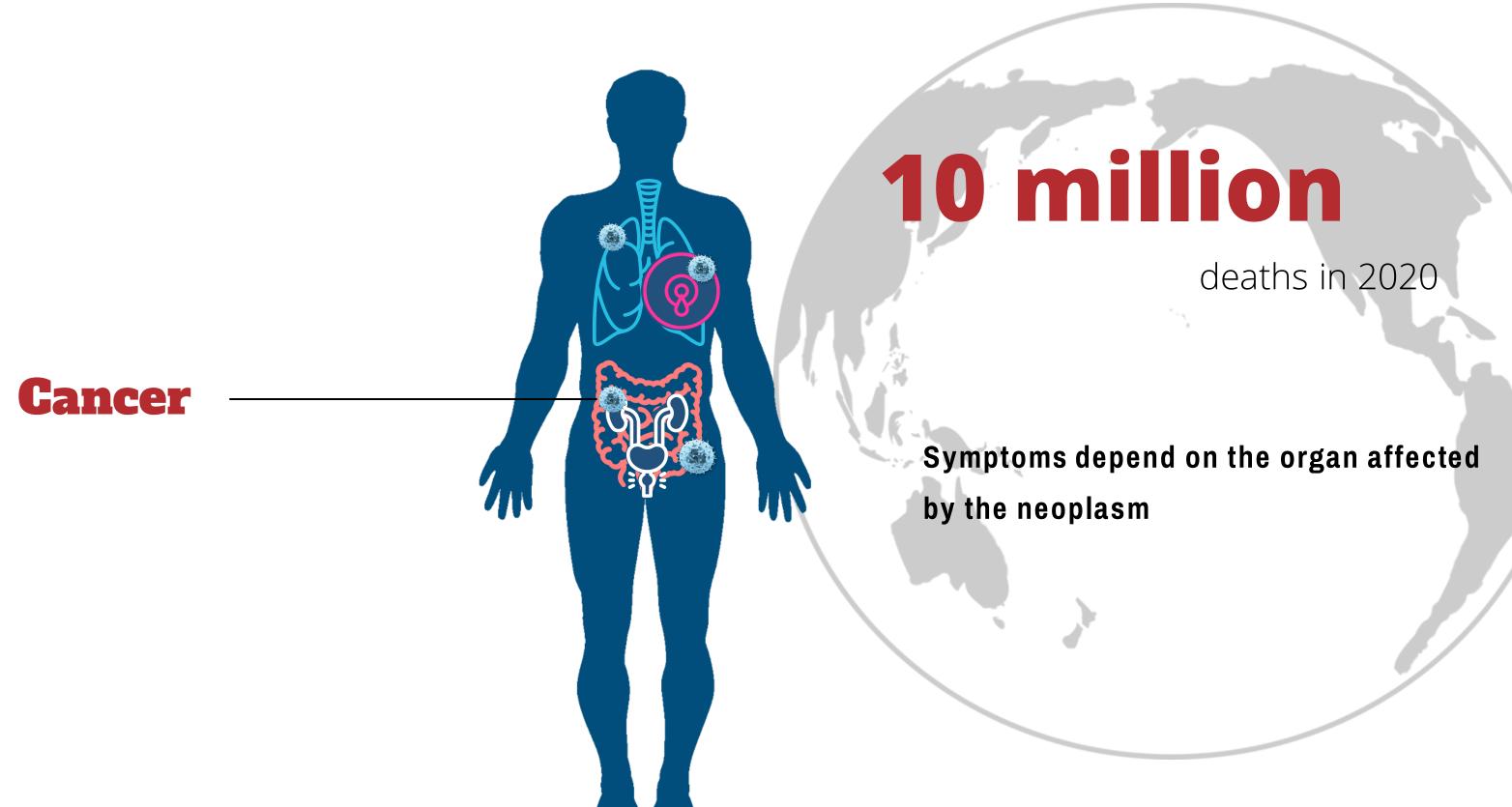
Major cause of disability and death.

Symptoms depend on the organ affected by the neoplasm





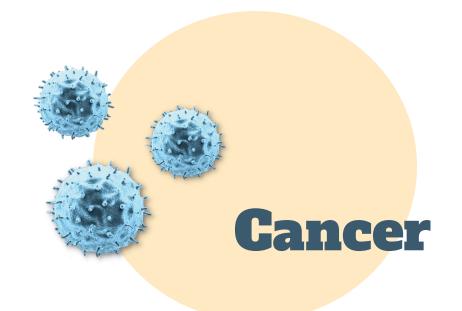








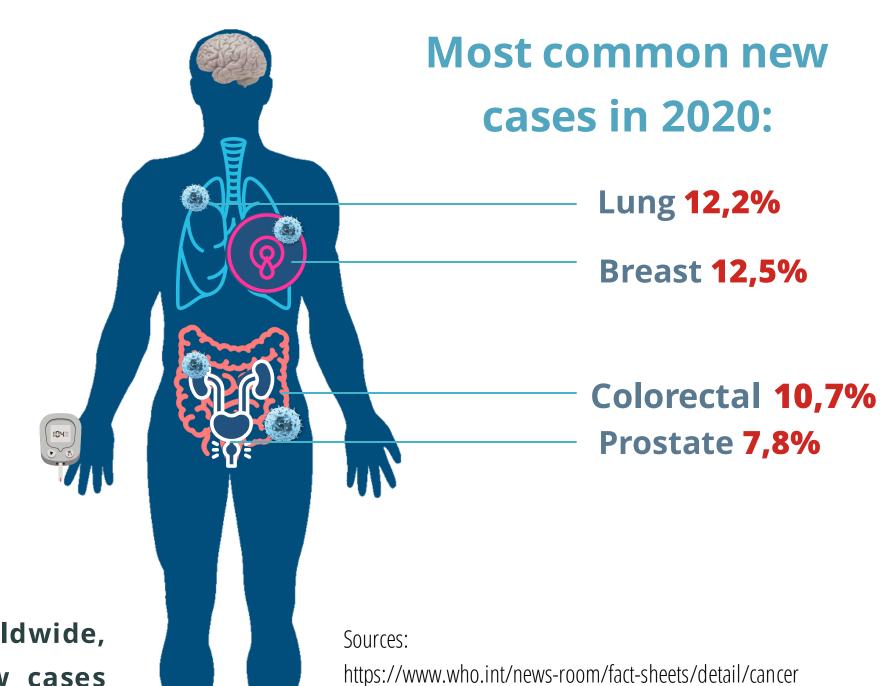




# 10 million

deaths in 2020

Breast and lung cancers were the most common cancers worldwide, contributing 12.5% and 12.2% of the total number of new cases diagnosed in 2020.

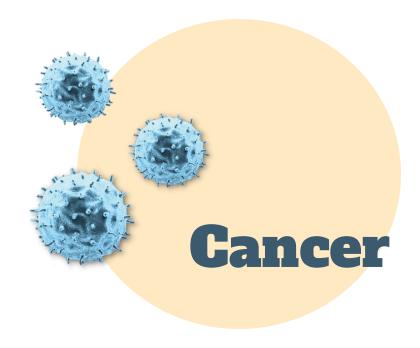


https://www.wcrf.org/dietandcancer/worldwide-cancer-data/

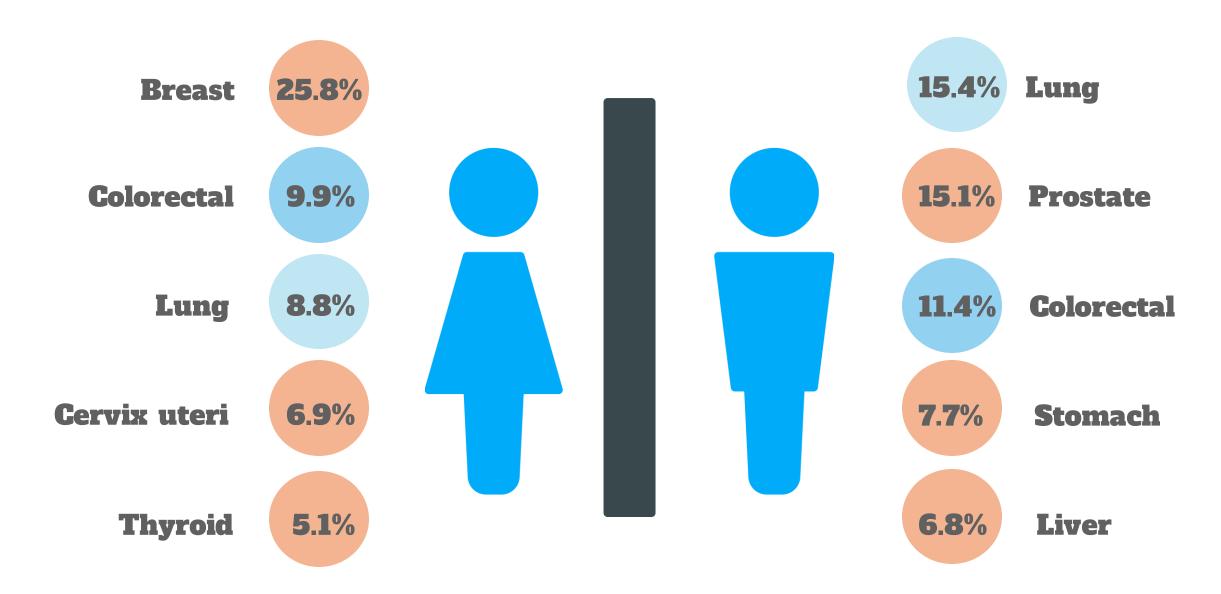








#### Cancer worldwide - new cases in 2020











Suggested video: https://www.youtube.com/watch?v=KMkmkpitAH0

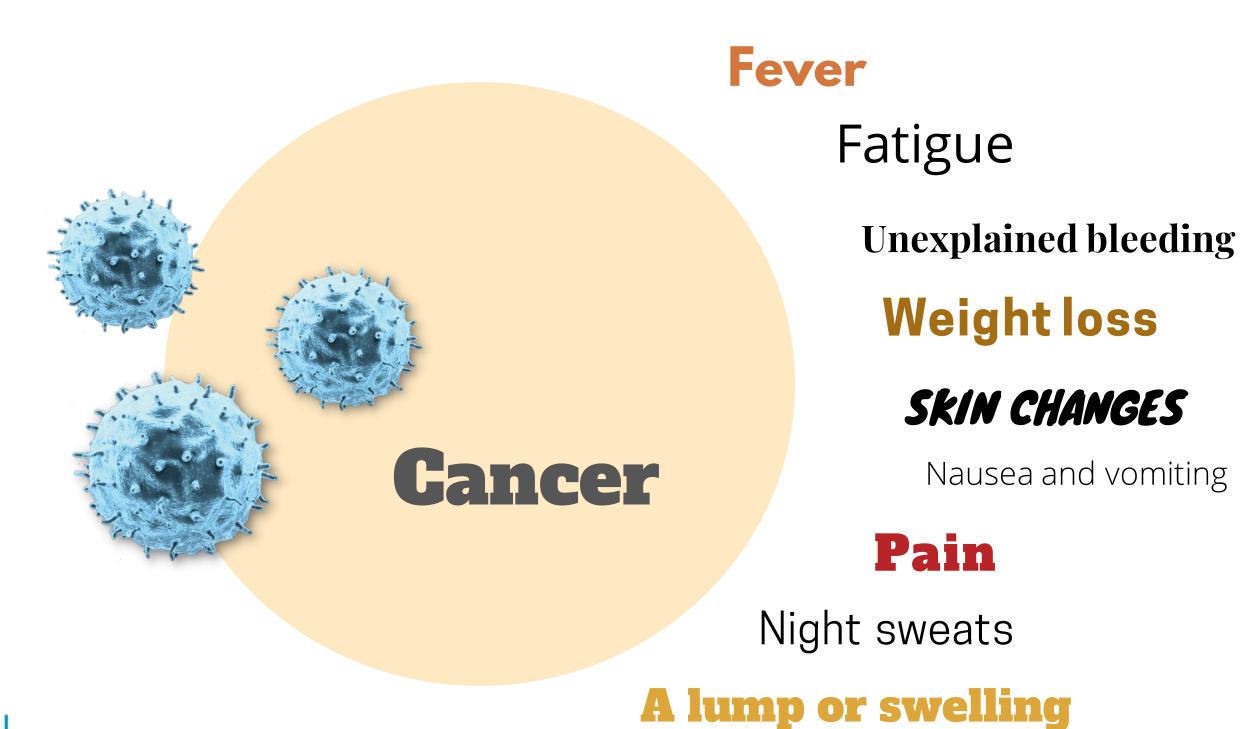








CANCER











Suggested video: https://www.youtube.com/watch?v=KMkmkpitAH0









Suggested video: https://www.youtube.com/watch?v=OcigJn8UJNQ











#### Risk factors

## CONSEQUENCES AND INTERMEDIARY CONDITIONS

#### what can I do?





Outdoor and indoor air pollution



**Exposition to ultraviolet radiation** 

**Smoking Alcohol consumption** 





**Chronic infections** 

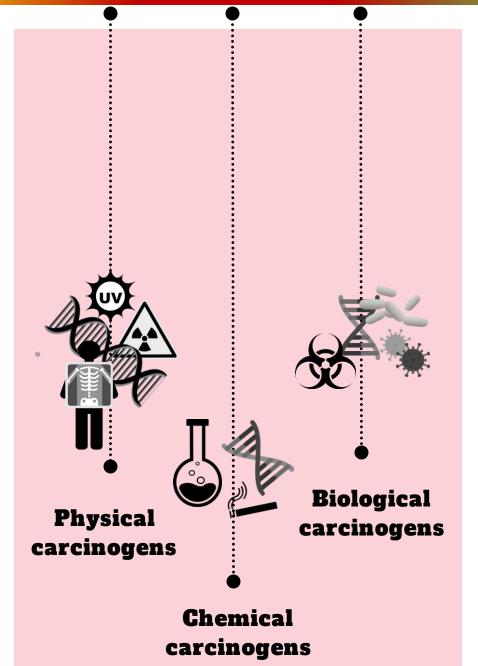
**Unhealthy diet** 







Inactivity







Commit to SDG 11 (sustainable cities and communities) and SDG 13 (climate action)

Moderate exposure to the sun and artificial tanning devices





No smoking

Avoid alcohol consumption

Commit to
Mediterranean diet





Join awareness campaigns (symptoms, screening, vaccination)







## CONSEQUENCES AND **INTERMEDIARY CONDITIONS** CANCER Biological **Physical** carcinogens carcinogens **Chemical** carcinogens



#### what Should I do?





Commit to SDG 11 (sustainable cities and communities) and SDG 13 (climate action)

Moderate exposure to the sun and artificial tanning devices



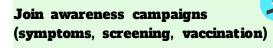
Stop smoking

**Avoid alcohol consumption** 













Keep blood pressure, cholesterol and sugar levels under control. Keep vaccines up to date.



**Take medication** Follow medical advice Regular health checkups

**Secondary** prevention

> limits disability

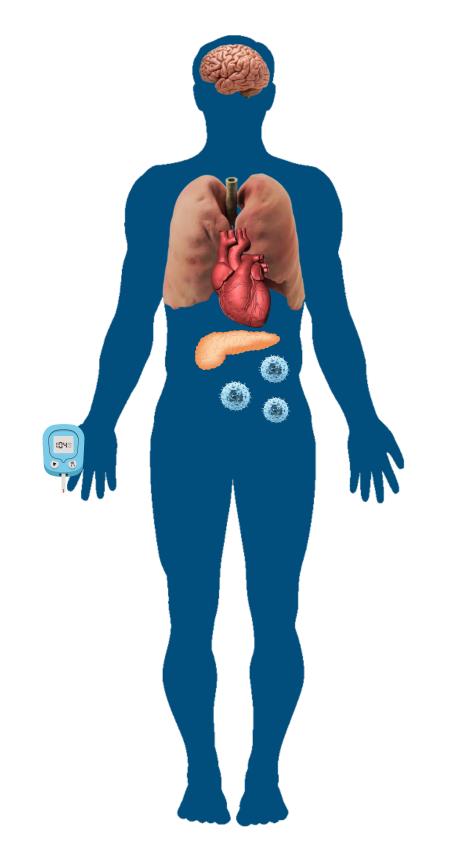








#### **Diabetes**



Pancreas does not produce insulin or Insulin does not work properly, which leads to an increase in blood sugar.

**Diabetes** 







# What are the most important complications of diabetes?

537 million

adults are living with diabetes

6.7 million

deaths in 2021

is preventable

#### Sources:

https://www.who.int/news-room/fact-sheets/detail/diabetes https://diabetesatlas.org/ https://diabetesatlas.org/data/en/indicators/1/



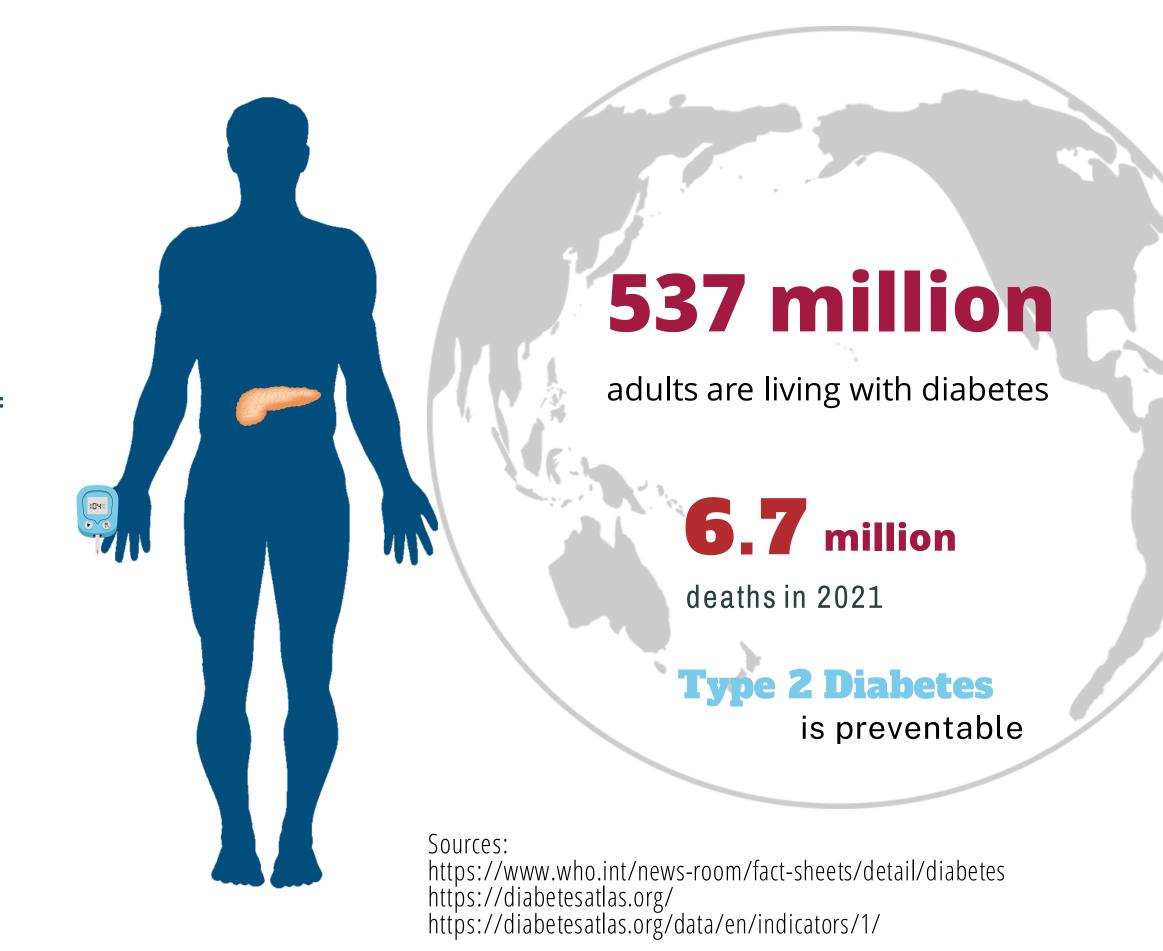
**Diabetes** 





#### **Diabetes**

The major complications of diabetes are blindness kidney failure heart attacks stroke lower limb amputation

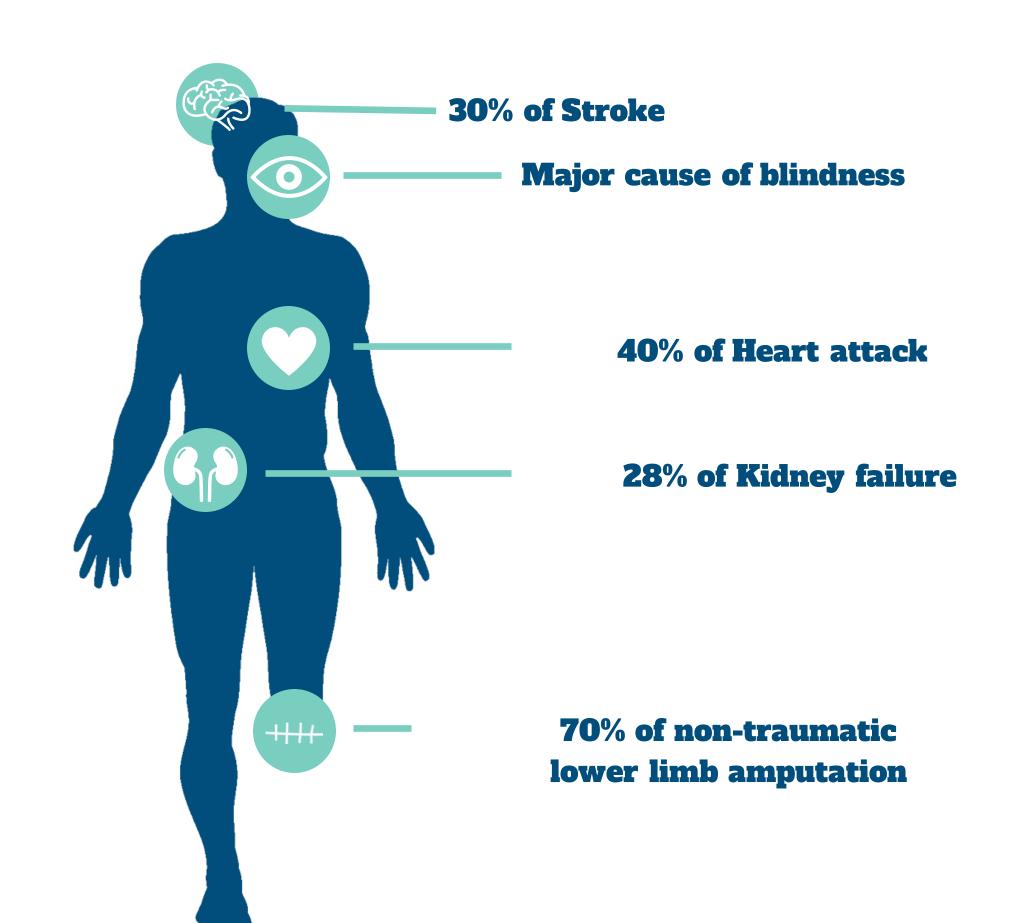






#### **Diabetes is responsible for:**

- Blindness
- kidney failure
- Heart attack
- Stroke
- Lower limb amputation











1 person dies of Diabetes

every 5 seconds

48% deaths under 70 years of age



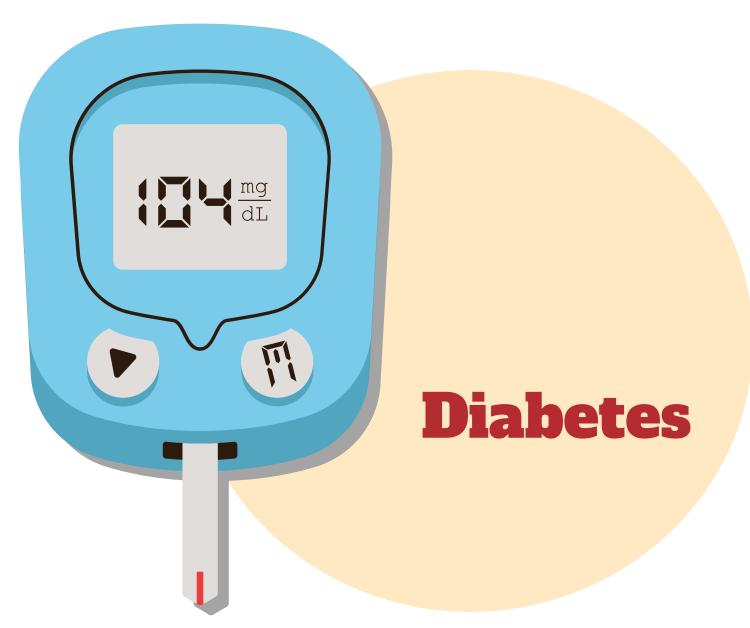






#### **DIABETES**

#### **SYMPTOMS**



### Weight loss

#### **Lack of energy**

Increased appetite

Hunger

**Thirst** 

Frequent urination

**Blured vision** 





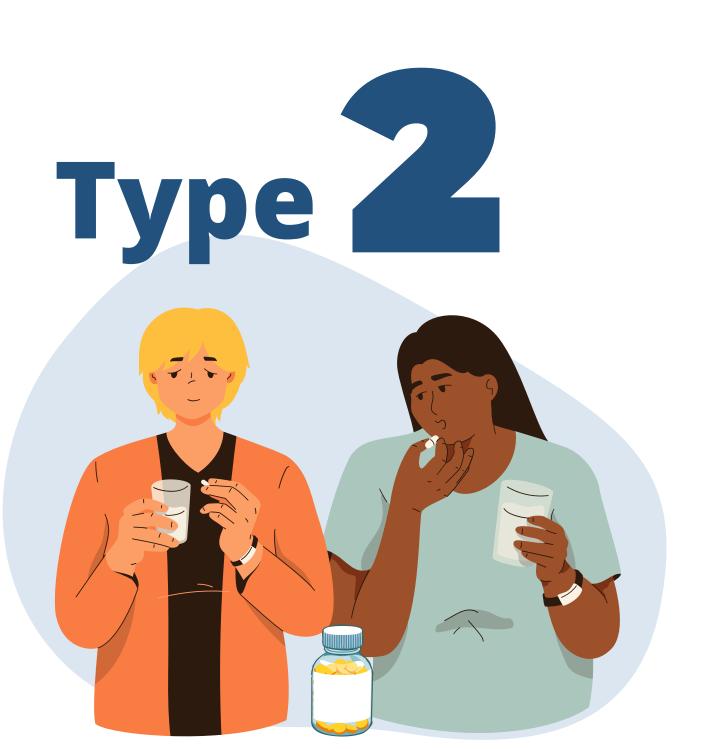


**DIABETES** 

#### TYPES OF DIABETES

















#### **DIABETES**



Suggested video: https://www.youtube.com/watch?v=C3AQIfgthh4&list=PLQDITVSOXD9FLUbjyC\_dtXl\_PJ9IaX3xl











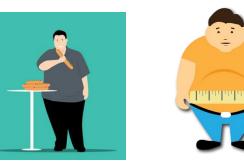
#### Risk factors

## CONSEQUENCES AND INTERMEDIARY CONDITIONS

#### what can I do?

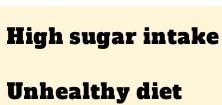


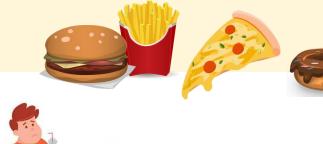






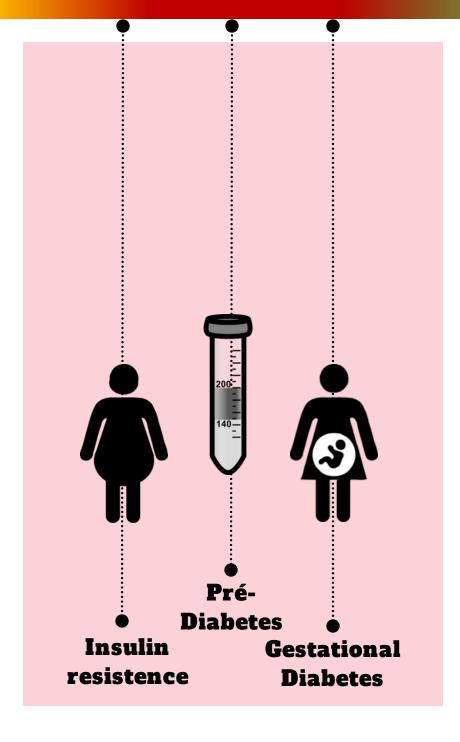
**Abdominal fat** 







**Inactivity** 







Commit to SDG 11 (sustainable cities and communities) and SDG 13 (climate action)

Take medication and follow medical advice



Regularly do risk assessment for diabetes



Commit to healthy diet

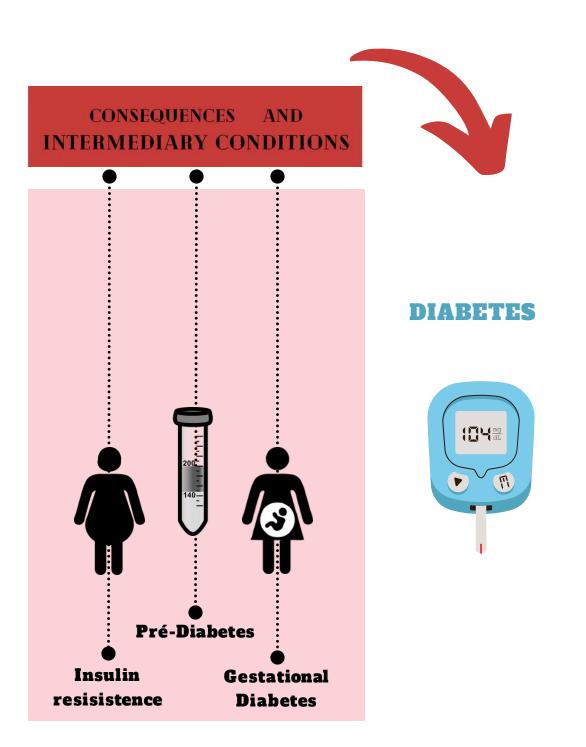


Take regular physical exercise













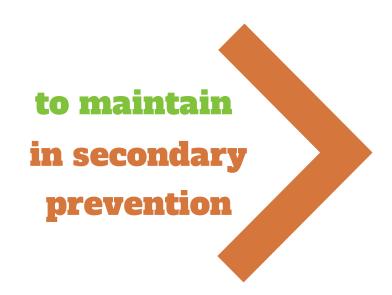


Take regular exercise

what Should I do?

Commit to SDG 11

(sustainable cities and



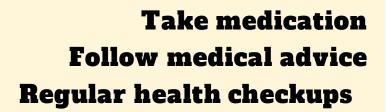
Secondary prevention

limits complications

Keep blood pressure, cholesterol and sugar levels under control.

Control the weight.











# Game









## Game

Students are organized in groups of 5 or 6. A member of each group has 60 seconds to explain the word/concept to other members without showing or using that one particular word.

Every correct answer gives 10 points to the group.









Cancer
Heart attack
Liv
Life expectancy
Premature death
Climate change
Sustainable development goal

Sunscreen

**Alcohol** 

**Check-up** 

**Exercise** 

**Socioeconomic conditions** 

**Green Spaces** 

**Diabetes** 

**Quality of life** 

**Community garden** 

SDG3

**Screening** 

Retinopathy

**Blood** sugar

Insulin

**Mediterranean diet** 

**Socioeconomic status** 

**Living conditions** 

Inactivity

**Chronic respiratory disease** 

**Quality of life** 

**Energy poverty** 

**Ecological footprint** 

**Smoking** 

Lung

Cough

**Urbanization** 

**Physical activity** 

Air quality

**Screening** 

**Prevention** 



**Stroke** 

**Blood** 

Health

**Pollution** 

**Local market** 

Lifestyle

**Brain** 

**Stress** 

**Disability** 

**Paralysis** 

**Bicycle** 

**Healthcare center** 







## Prevention of major noncommunicable diseases





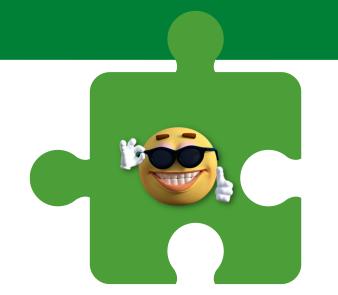




Primary prevention

avoids disease

To prevent the onset of disease



Identify 5 relevant actions related with primary prevention.









avoids disease

To prevent the onset of disease



Join awareness campaigns







Take regular exercise









(symptoms, screening, vaccination)

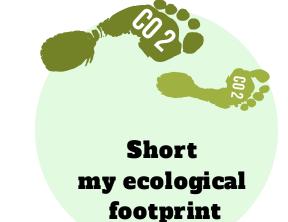


**Avoid overweight** 



Commit to SDG 11 (sustainable cities and communities) SDG 13 (climate action)

Ask medical advice for vaccination (pneumonia, influenza, coronavirus)

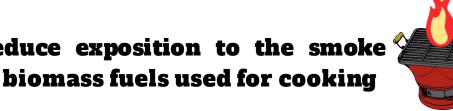


Moderate exposure to the sun and artificial tanning devices



**Stop smoking Avoid alcohol consumption** 

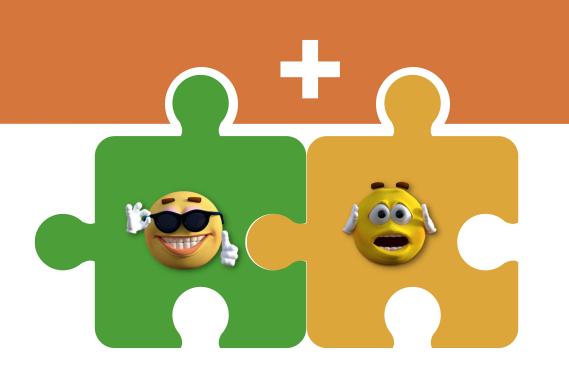












Secondary prevention

limits complications

To detect and treat early disease.

## Identify 5 relevant actions related with secondary prevention.





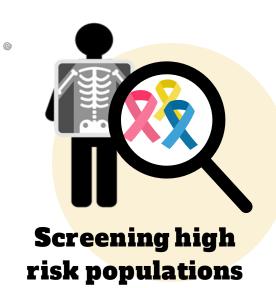




**Secondary** prevention

complications

To detect and treat early disease







necessary

Keep blood sugar and cholesterol levels in range.





Keep blood pressure and weight under control

Keep vaccination plan up to date

Vaccines indicated for risk groups (pneumonia, influenza, coronavirus)



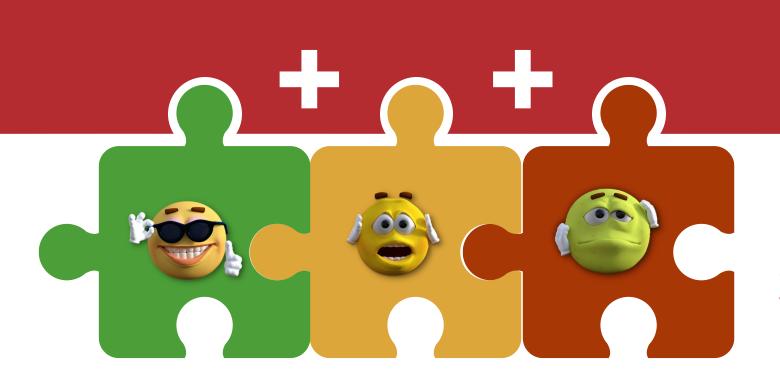
Take medication Follow medical advice

Regular health checkups









Terciary prevention

limits disability handicap

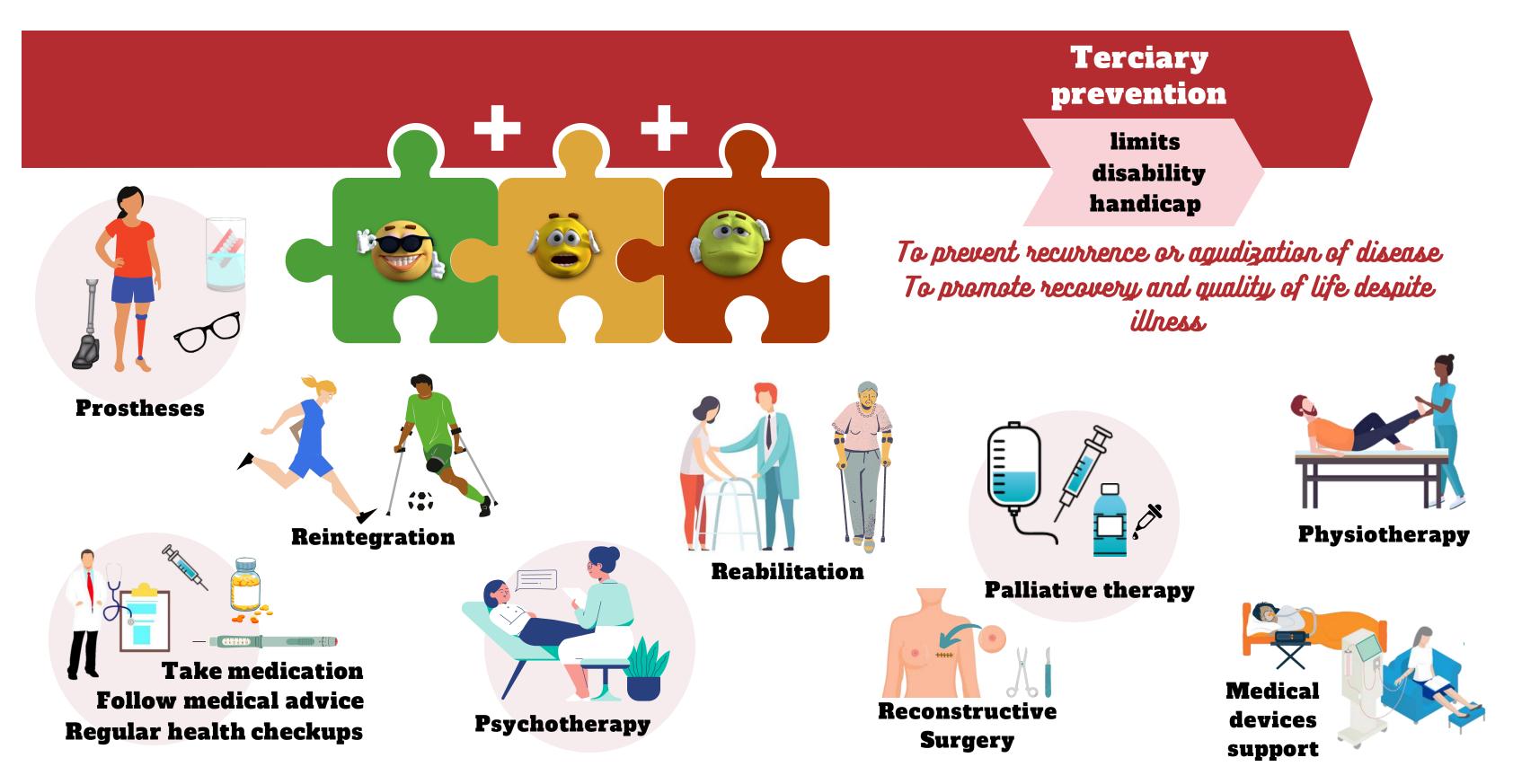
To prevent recurrence or agudization of disease
To promote recovery and quality of life despite illness

## What should we do if primary and secundary prevention fails?















#ToBelieve #Choice #Willing





















## Major noncommunicable diseases

#### Prevention

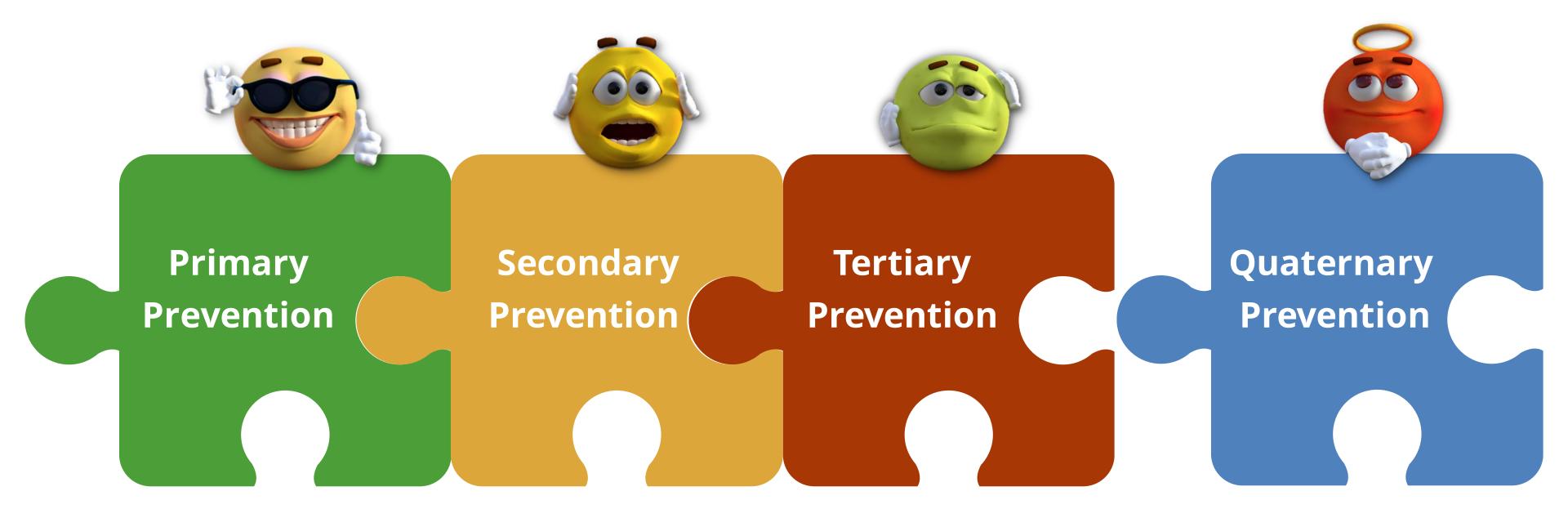






#### **TYPES OF PREVENTION**





Acting before the onset of the disease

Early detection and treatment of the disease. Minimize the effects of existing disease and prevent complications

Rehabilitate to prevent disability in already complicated disease

Avoid iatrogenics, avoiding unnecessary interventions and treatments







## Prevention<br/>Types

To the Doctor

Disease

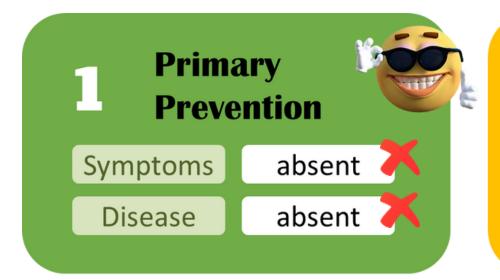
Absent

Present

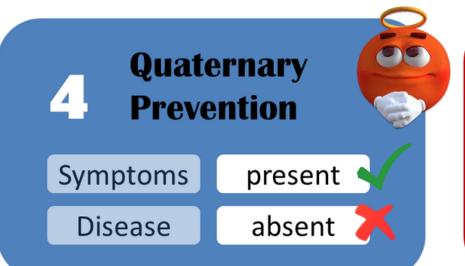
To the Patient

Disease

Absent Present



















Choose Health

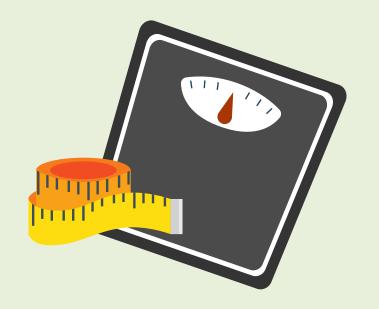
Be smart

Be active

Be happy

Be responsible

#Beforeitbegins



# PREVENTION IS BETTER THAN

CURE

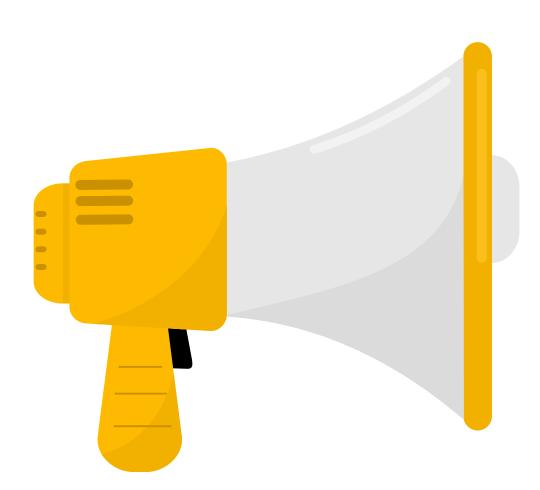












#Beinformed #Adheretoscreenings

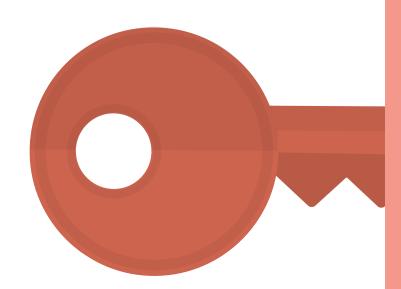
## IT IS EASIER AND CHEAPER TO PREVENT DISEASE THAN TO FIGHT IT.







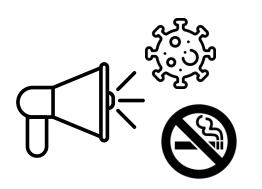
Choose Health
Be informed
Adhere



## PRIMARY AND SECONDARY

## PREVENTION ARE THE KEY TO A LONG AND HEALTHY LIFE

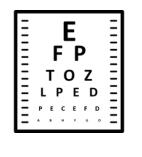




Get involved in awareness and prevention campaigns

Screening high risk populations







Take medication follow medical guidelines

Early exams detection







Updated vaccination plan





Early detection
Early treatment

#YesYouCan

#DoitforyourHealth

#### Partnerships for Science Education

## THE BETTER YOU TREAT YOUR HEALTH

THE BETTER YOU FEEL











#### WE CAN ALWAYS DO SOMETHING

#BELIEVE #DO #CREATINGGOODHABITS #PREVENT









### IN CHRONIC DISEASES

### ACT BEFORE DISEASE

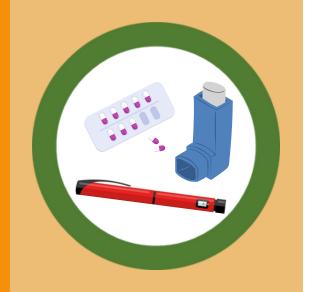
Create and maintain healthy life habits





WE CAN EVER DO

# BELIEVE # DO # TO MAINTAIN # PREVENT









### IN CHRONIC DISEASES

#### THROUGHOUT THE ILLNESS

Avoid and control risk factors

Comply with recommended medication

Do regular reassessment



