

**CHRIST**  
(DEEMED TO BE UNIVERSITY)  
BANGALORE · INDIA

# **NCDs and COVID-19**

**:A PERSONAL IMPACT**

24 August 2020

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**-Medical Officer**

# NCDS COMPLICATING COVID-19 & VICE-VERSA



#NextGenNCD  
NCD DEPARTMENT

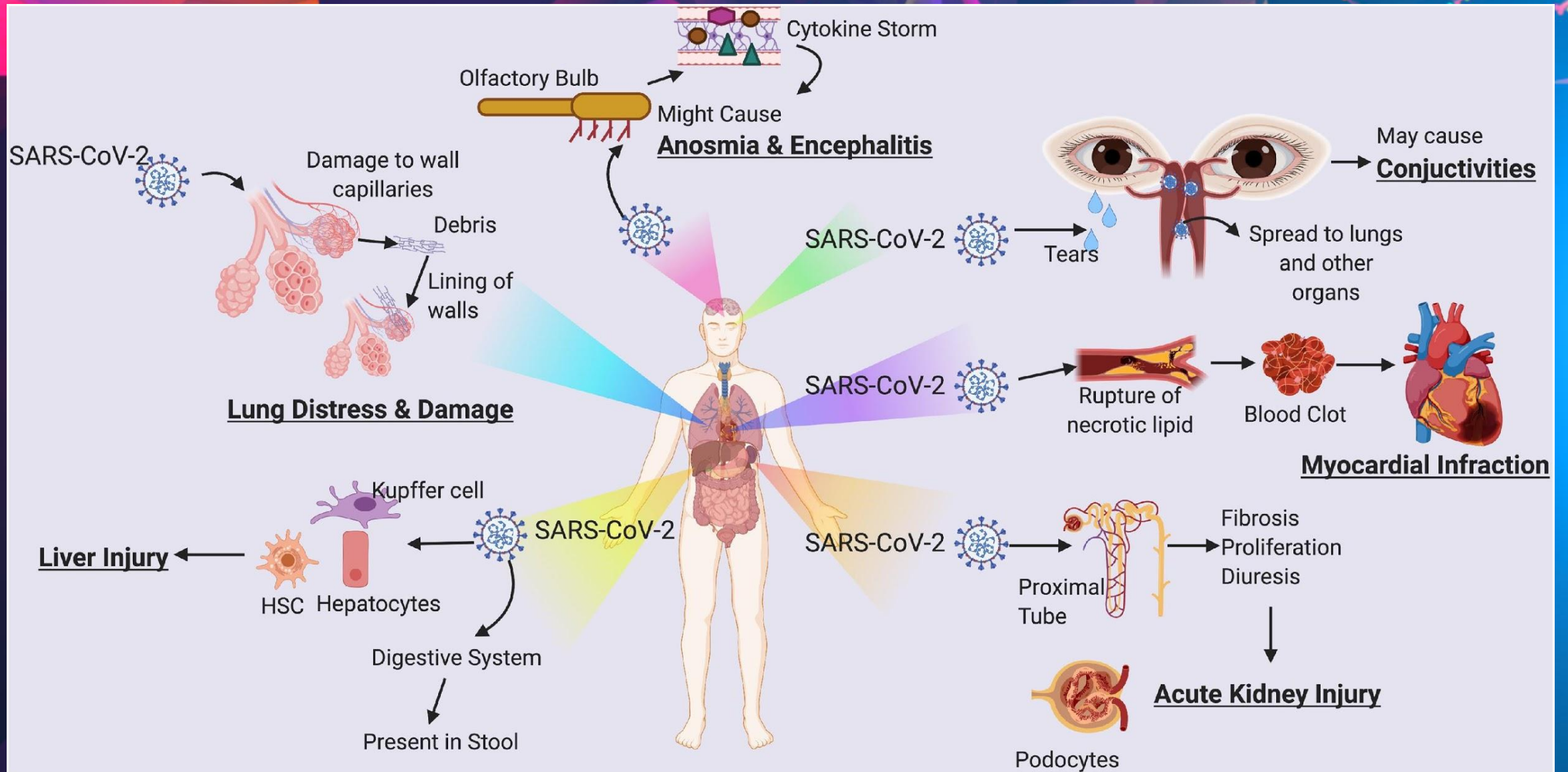
BUILD  
BACK  
BETTER

## COVID-19 AND NCDs





# SARS CoV-2 : CLINICAL SPECTRUM



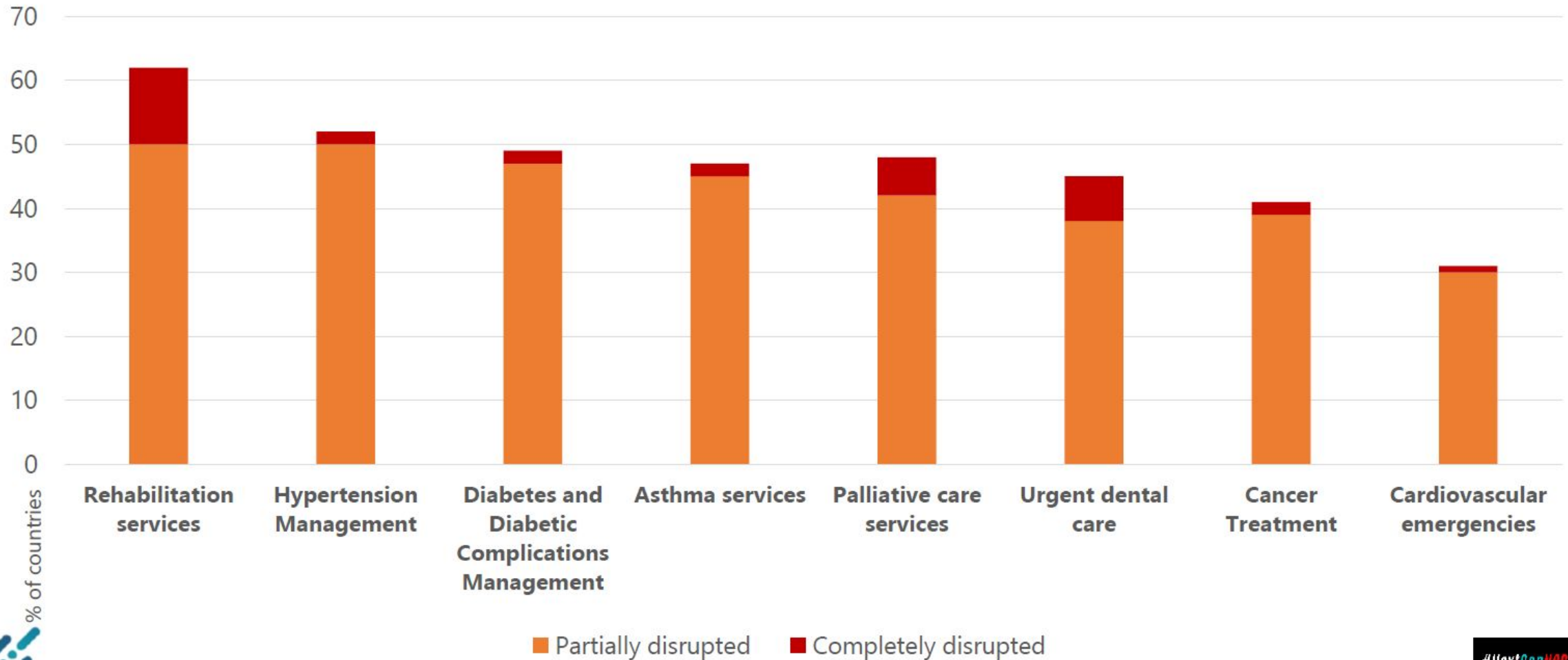
# NCD – COVID-19 CONNECTION

1. people living with NCDs are at higher risk of severe COVID-19 / complications
2. treatment services for noncommunicable diseases (NCDs) have been severely disrupted since the COVID-19 pandemic

# 122 countries reported that NCD services are disrupted



World Health Organization





# The more severe the transmission phase of the COVID-19 pandemic, the more NCD services are disrupted



World Health Organization



## PHASE 2: SPORADIC CASES

39% of countries disrupted services for **hypertension management**  
33% of countries disrupted services to treat **diabetes** and complications  
39% of countries disrupted services to treat **cancer**  
22% of countries disrupted services to treat **cardiovascular emergencies**



## PHASE 3: CLUSTER TRANSMISSION

57% of countries disrupted services for **hypertension management**  
53% of countries disrupted services to treat **diabetes** and complications  
46% of countries disrupted services to treat **cancer**  
29% of countries disrupted services to treat **cardiovascular emergencies**



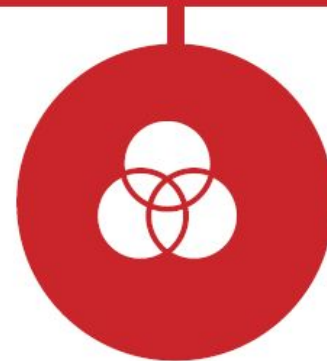
## PHASE 4: COMMUNITY TRANSMISSION

66% of countries disrupted services for **hypertension management**  
64% of countries disrupted services to treat **diabetes** and complications  
56% of countries disrupted services to treat **cancer**  
46% of countries disrupted services to treat **cardiovascular emergencies**

*Includes services that are fully disrupted, partially disrupted or have an unknown level of disruption*



Since the COVID-19 outbreak, people living with NCDs are more vulnerable to becoming severely ill or dying from COVID-19



- **Italy:** Among those dying of COVID-19 in hospitals, 68% had **hypertension** and 31% had type 2 **diabetes**.
- **India:** 30% fewer **acute cardiac emergencies** reached health facilities in rural areas in March 2020 compared to the previous year.
- **Netherlands:** The number of people newly diagnosed with **cancer** dropped by 25% as a result of the lockdown.
- **Spain:** Among patients with severe COVID-19 disease, 43% had existing **cardiovascular diseases**.

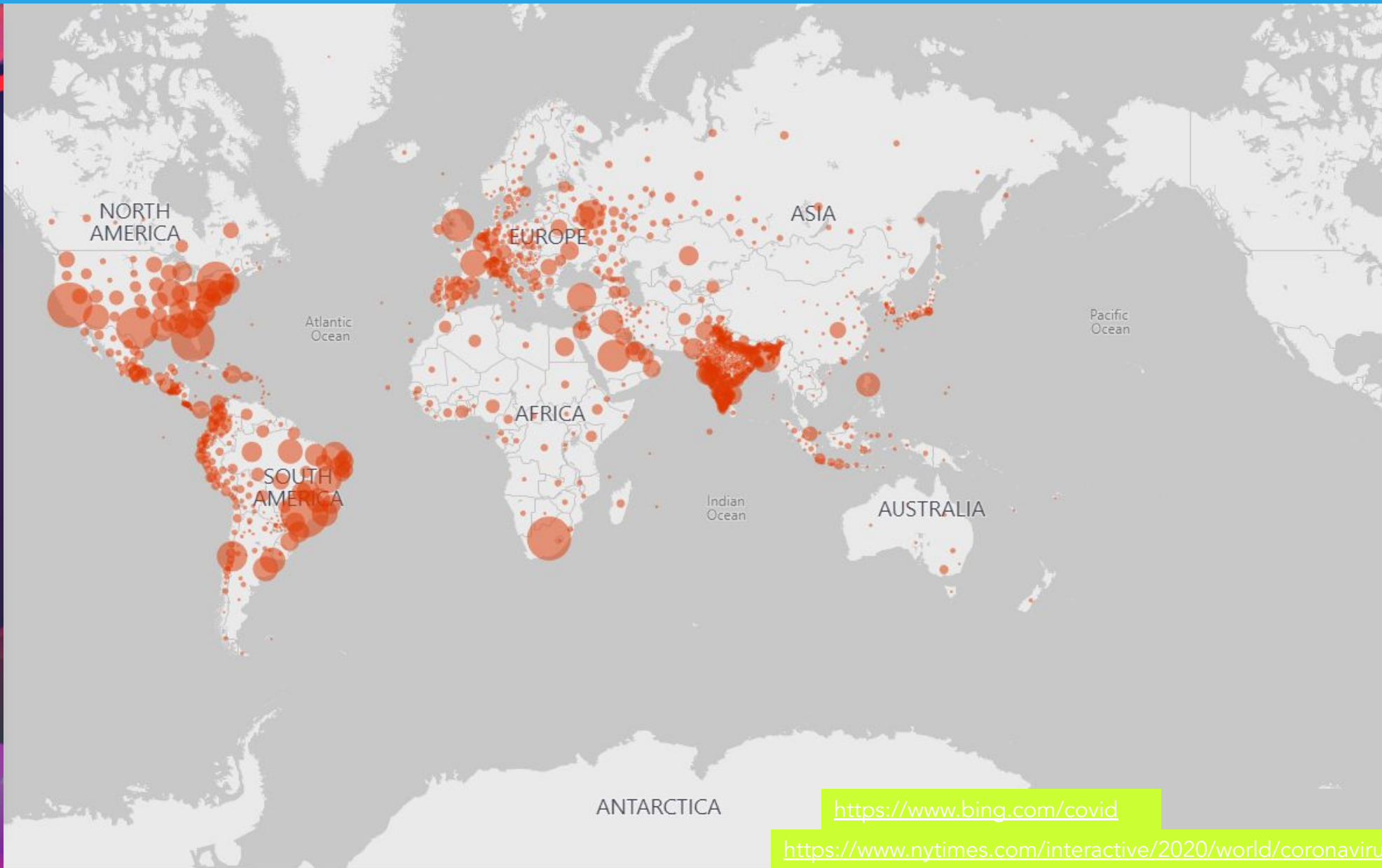


# DISRUPTION OF MEDICAL SERVICES

1. Health Staff reassigned to support COVID-19
2. Closing of OPDS and private clinics
3. Postponement of public screening programmes
4. cancellations of planned treatments (elective care)
5. Beds unavailable
6. decrease in public transport available
7. shortage of medicines, PPE, diagnostics / technologies
8. Health care workers getting infected



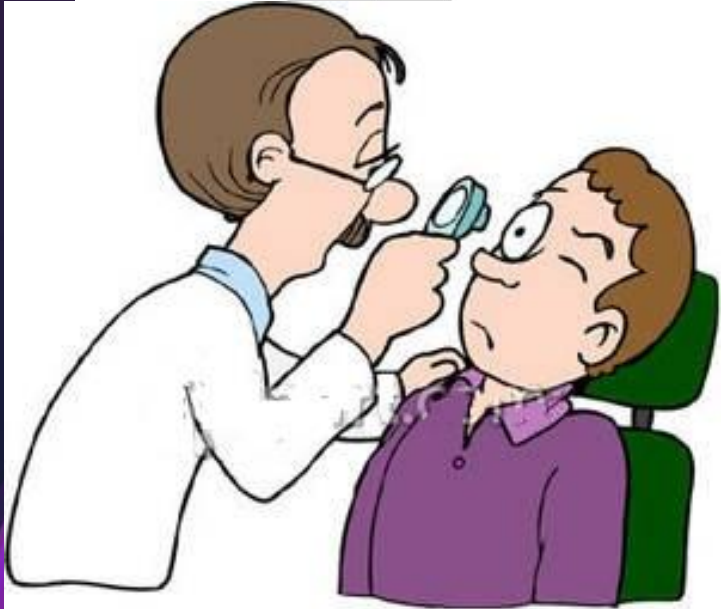
# Coronavirus Map: Tracking the Global Outbreak



# In this Session: Identify and deal with NCDs

1. What should I look for?
2. What can I do at home?
3. When should I worry?
4. When should I go to hospital?

# SELF CARE DURING COVID-19





# Common Health Conditions: 40-65 Age Group

Diabetes

Hypertension (high BP)

Arthritis

Asthma, Bronchitis

Coronary heart disease

Mental disorders

Genitourinary disorders

Strokes

# Other Health Conditions:

Pregnancy

Paediatric Health

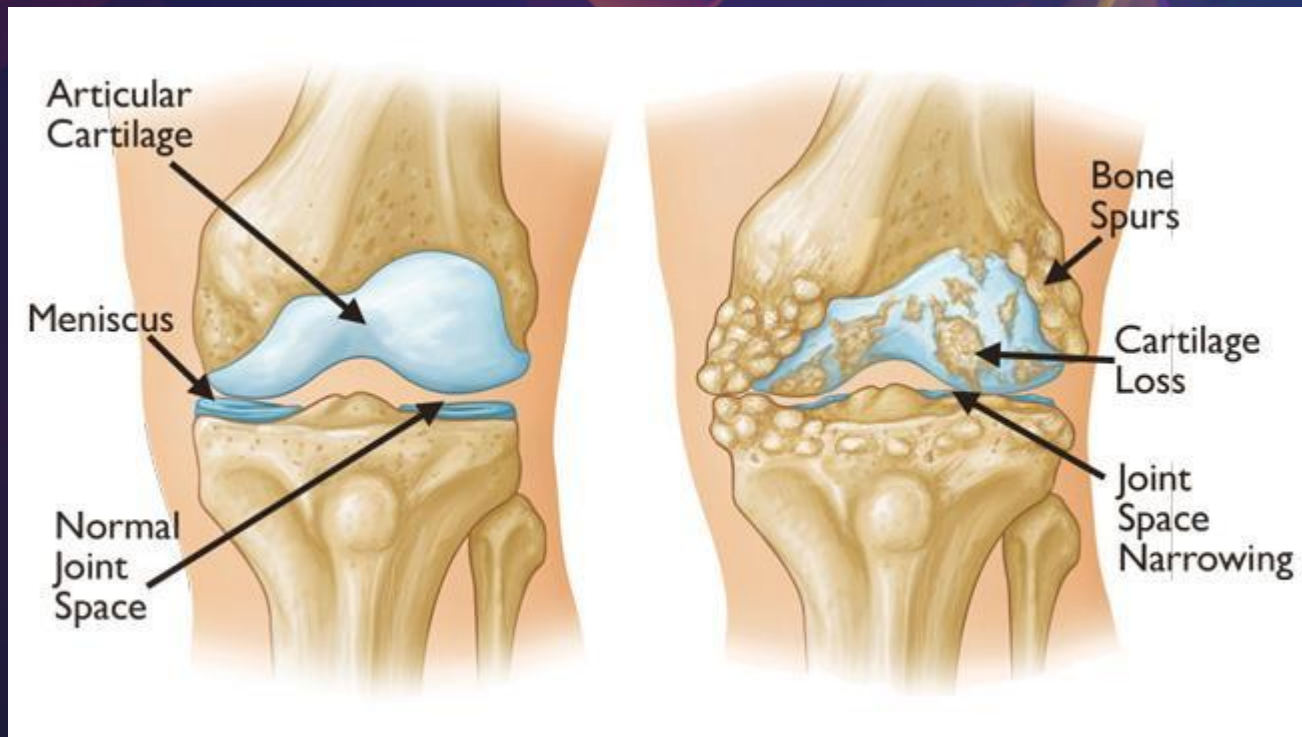
Geriatric Health

# Arthritis





# Osteoarthritis v/s Rheumatoid Arthritis

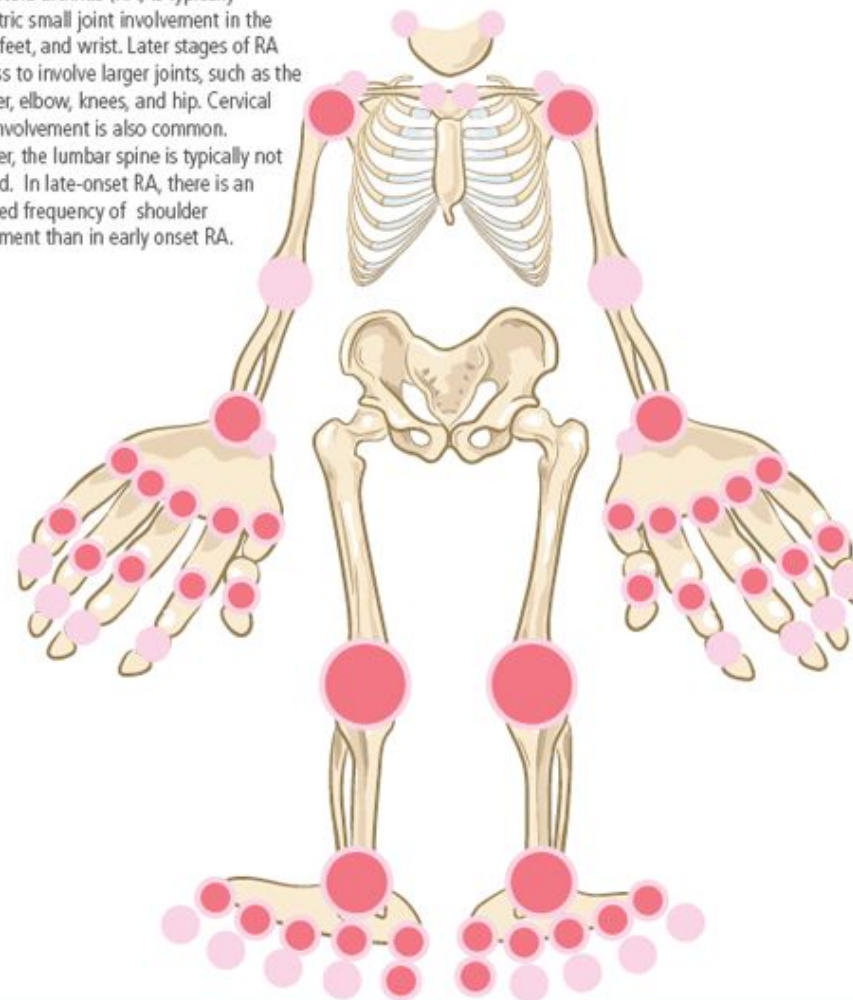


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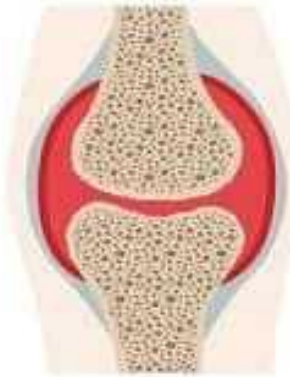
## clinical signs

The pattern of affected joints early in rheumatoid arthritis (RA) is typically symmetric small joint involvement in the hands, feet, and wrist. Later stages of RA progress to involve larger joints, such as the shoulder, elbow, knees, and hip. Cervical spine involvement is also common. However, the lumbar spine is typically not involved. In late-onset RA, there is an increased frequency of shoulder involvement than in early onset RA.



# Rheumatoid Arthritis v/s Osteoarthritis

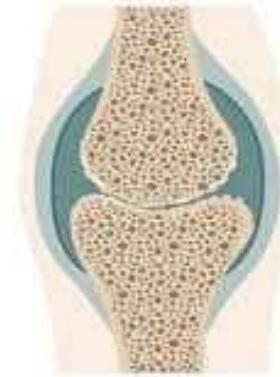
## Rheumatoid arthritis



Swollen inflamed  
synovial membrane  
Erosion of bone  
Autoimmune disease  
Symmetrical

Pain, stiffness and inflammation  
Morning stiffness lasting  
more than 30 minutes

## Osteoarthritis



Loss of articular cartilage  
Bone's ends rub together  
Degenerative disease  
Asymmetrical

Pain and stiffness in movement  
Morning stiffness lasting  
less than 30 minutes

## Symptoms





Early Signs That Point To  
**RHEUMATOID ARTHRITIS**

**LOOK OUT FOR THE 'S'  
FACTOR**

**Stiffness:** morning stiffness >30 minutes

**Swelling:** hot to touch?

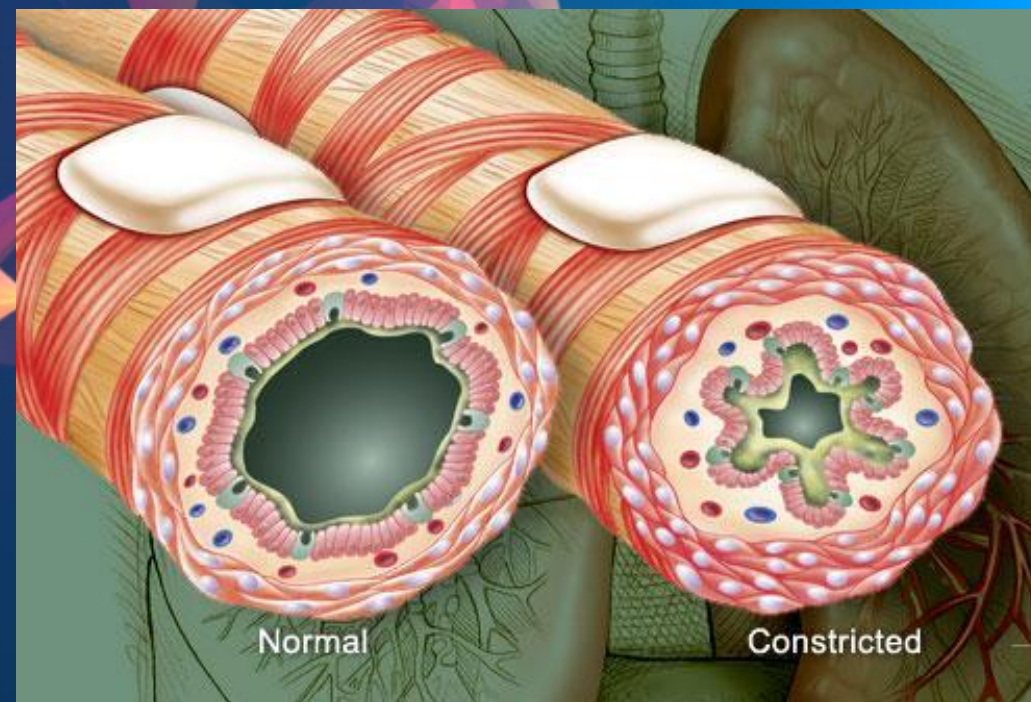
**Squeeze:** pain or tenderness?



# LIVING WITH ARTHRITIS

- Physical challenges – everyday tasks
- Mental challenges– avoid socialization, depression
- Employment, loss of income?

# Asthma



# ASTHMA

## SIGNS AND SYMPTOMS



**SHORTNESS  
OF BREATH**



**DIFFICULTY  
BREATHING**



**DRY COUGH**



**NIGHT COUGH**



**WHEEZING**



**CHEST PAIN  
OR TIGHTNESS**

Shortness of breath

Difficulty breathing

Dry cough

Night cough

Wheezing

Chest pain or tightness

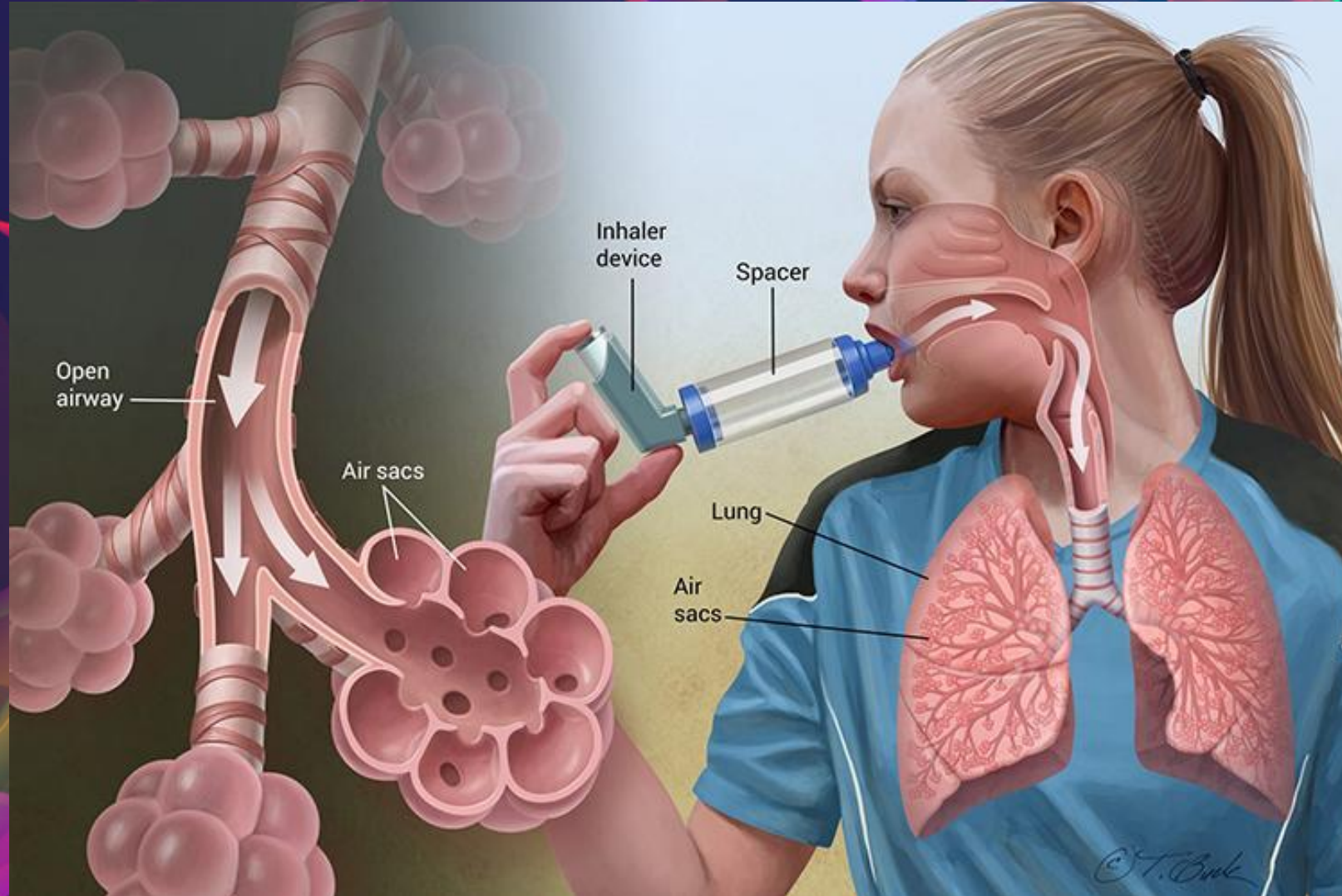


# Asthma Triggers

- Stress
- Anger
- Pollution
- Strong odours
- Smoke
- Dust
- Pets
- Fungus spores
- Cold air
- Chemical fumes
- Bugs - home
- Pollen
- Exercise

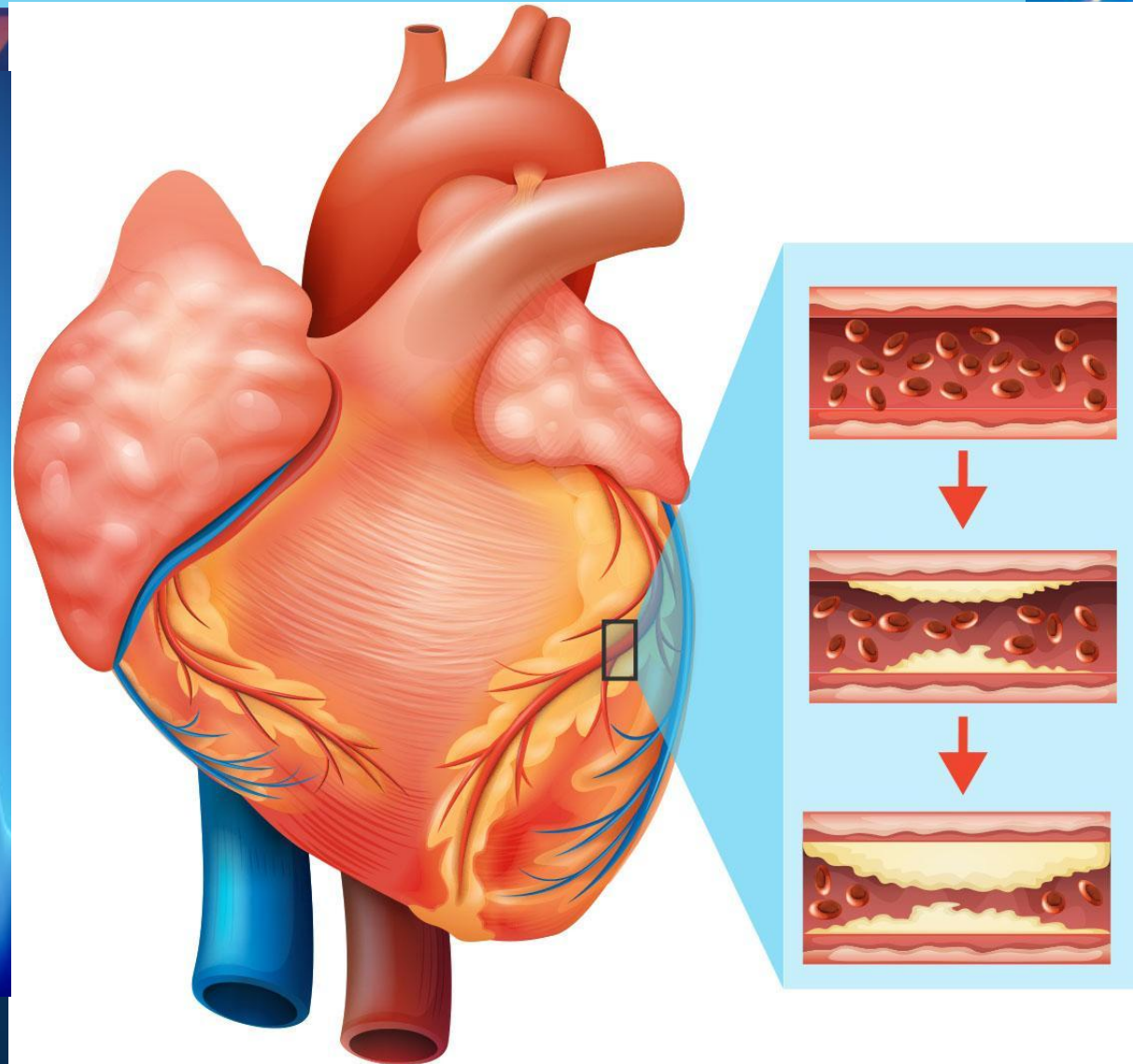


# Asthma - Treatment





# Coronary Heart Disease





# Heart Attack – Myocardial Infarction (MI)

- chest pain heaviness, tightness, burning, squeezing
- these can be mistaken for heartburn or indigestion.
- pain in the arms or shoulders, radiating to the jaw or the left arm
- shortness of breath
- sweating
- dizziness

# Symptoms In Women

- nausea
- vomiting
- back pain
- jaw pain
- shortness of breath without chest pain

# Risk for Coronary Artery Disease

- high blood pressure
- high cholesterol levels
- tobacco smoking
- diabetes mellitus
- obesity
- inactivity

- unhealthy eating habits
- obstructive sleep apnea
- emotional stress
- excessive alcohol consumption
- history of preeclampsia during pregnancy



# Lifestyle Risk Factors





# Lifestyle Changes- Reduce Risk of Heart Disease





# Hypertension

*Current estimate - India: (TOI-2108)*

**20 to 40% - urban**  
**12 to 17% - rural**





**No Hypertension**  
**Heart Pumping Normally**



**Blood flows easily**  
**through vessels**

**Hypertension**  
**Heart Pumping Harder**



**Blood may not flow**  
**easily through vessels**

# Hypertension: Lifestyle Risk Factors



# Hypertension: Other Risk Factors

Age / Sex

High Salt Intake

Diet high in Fat and Cholesterol

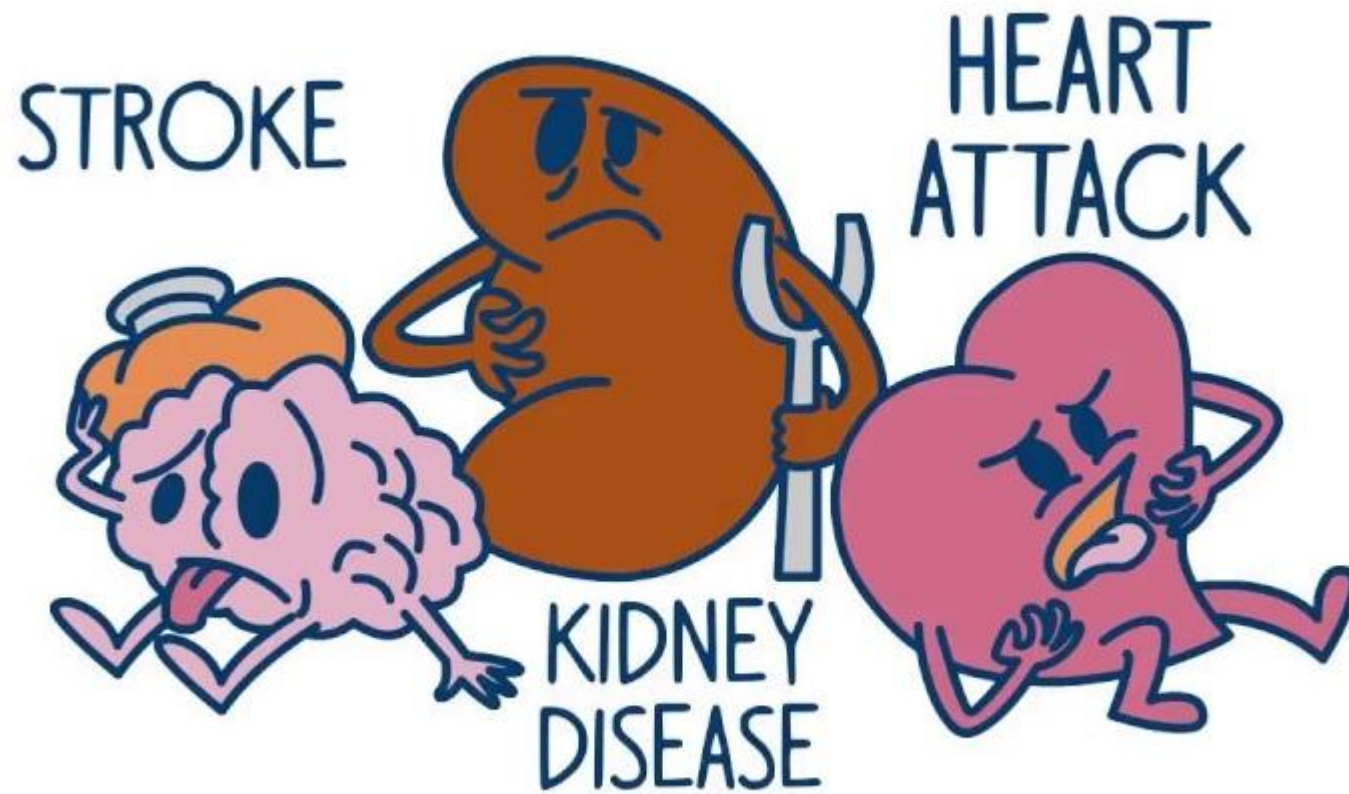
Obstructive Sleep Apnoea

Family history

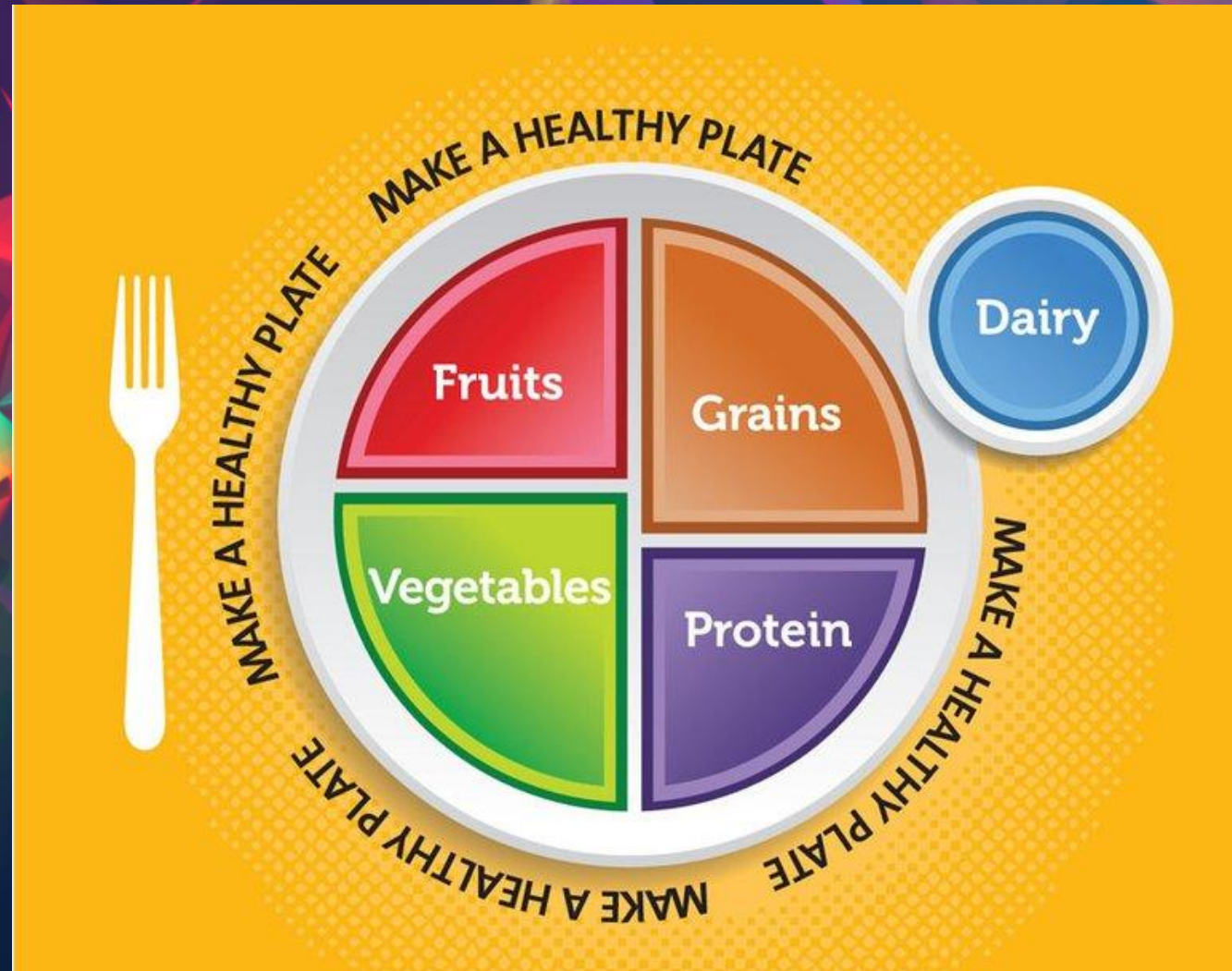
Pre-existing NCDs- CKD, DM, etc



# Hypertension: Complications:



# DASH Diet- Dietary Approaches to Stop Hypertension





# DASH Diet



## SALT INTAKE

N - 6g salt = 2400 mg Na (1 tsp/d)

< 2300 mg Na □ reduces BP

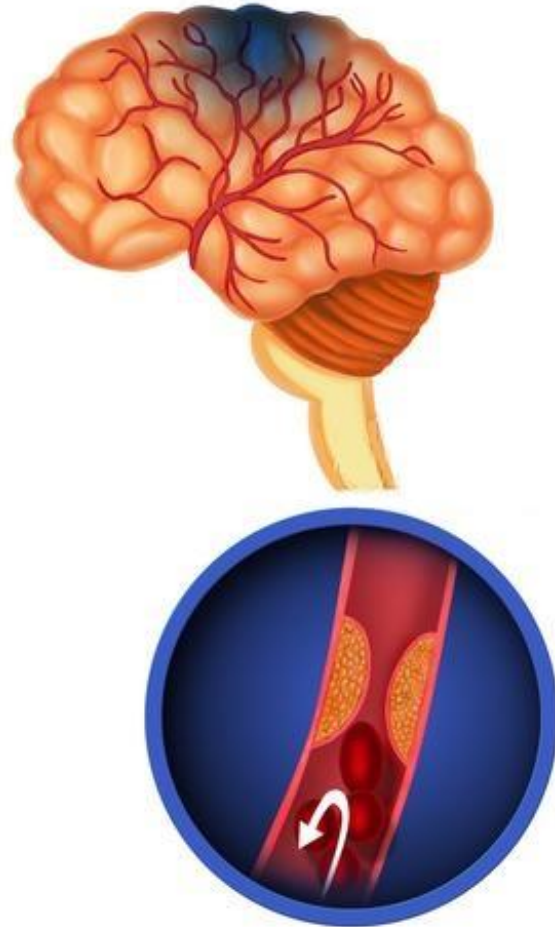
< 1500mg Na □ lowers sys BP by 7 -12 mm Hg

**DASH diet has also been shown to increase 'good' HDL cholesterol and decrease 'bad' LDL cholesterol and triglycerides**



# Stroke

**Ischemic Stroke**



**Blockage of blood vessels**

**Hemorrhagic Stroke**



**Rupture of blood vessels**

# Signs of a Stroke – **F A S T**



**F**ACE DROOPING



**A**RM WEAKNESS



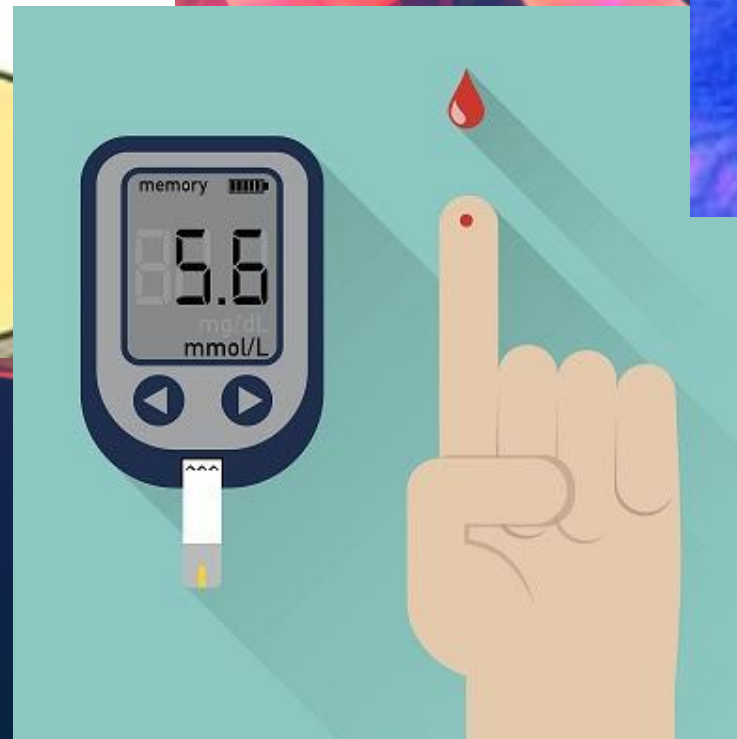
**S**PEECH DIFFICULTY



**T**IME TO CALL 911



# Medical Risk Factors





# Stroke: Lifestyle Risk Factors

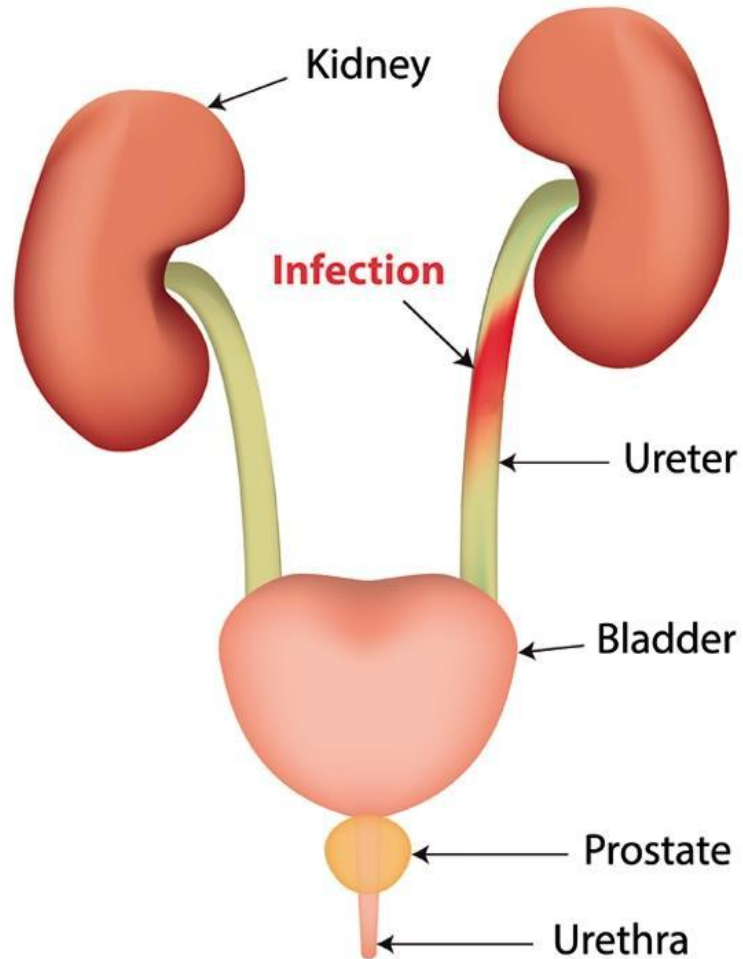




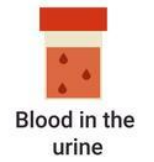
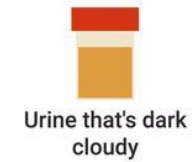
# Lifestyle Changes- Reduce Risk of Stroke



# Genitourinary Disorders



## Symptoms of cystitis





# Prevention of UTI



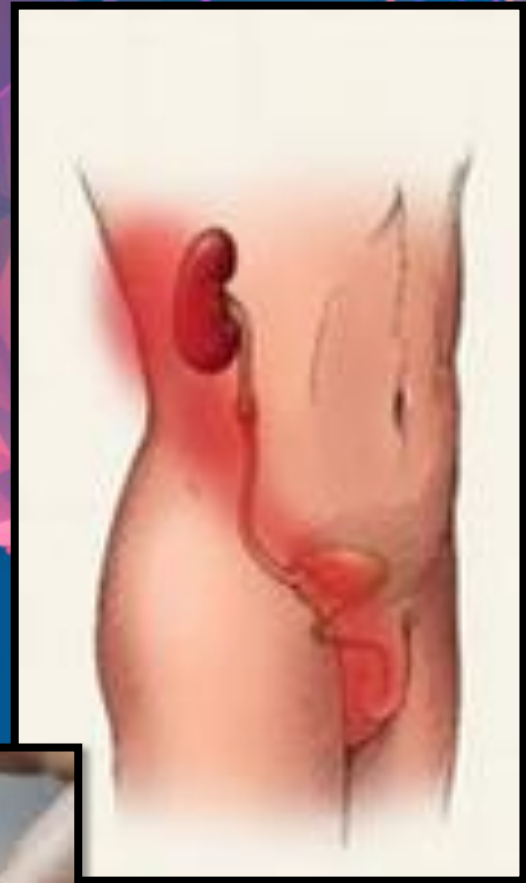
# Kidney Stones



Normal Kidney

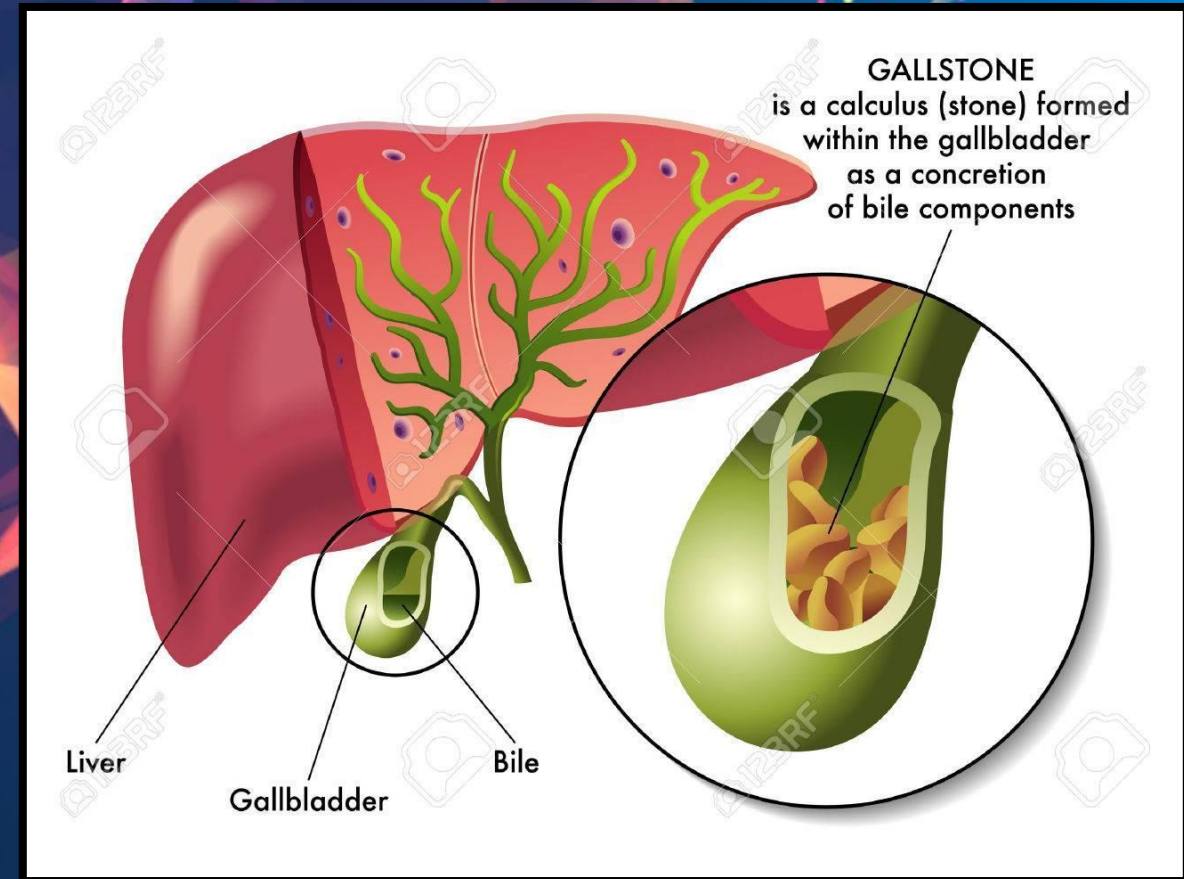
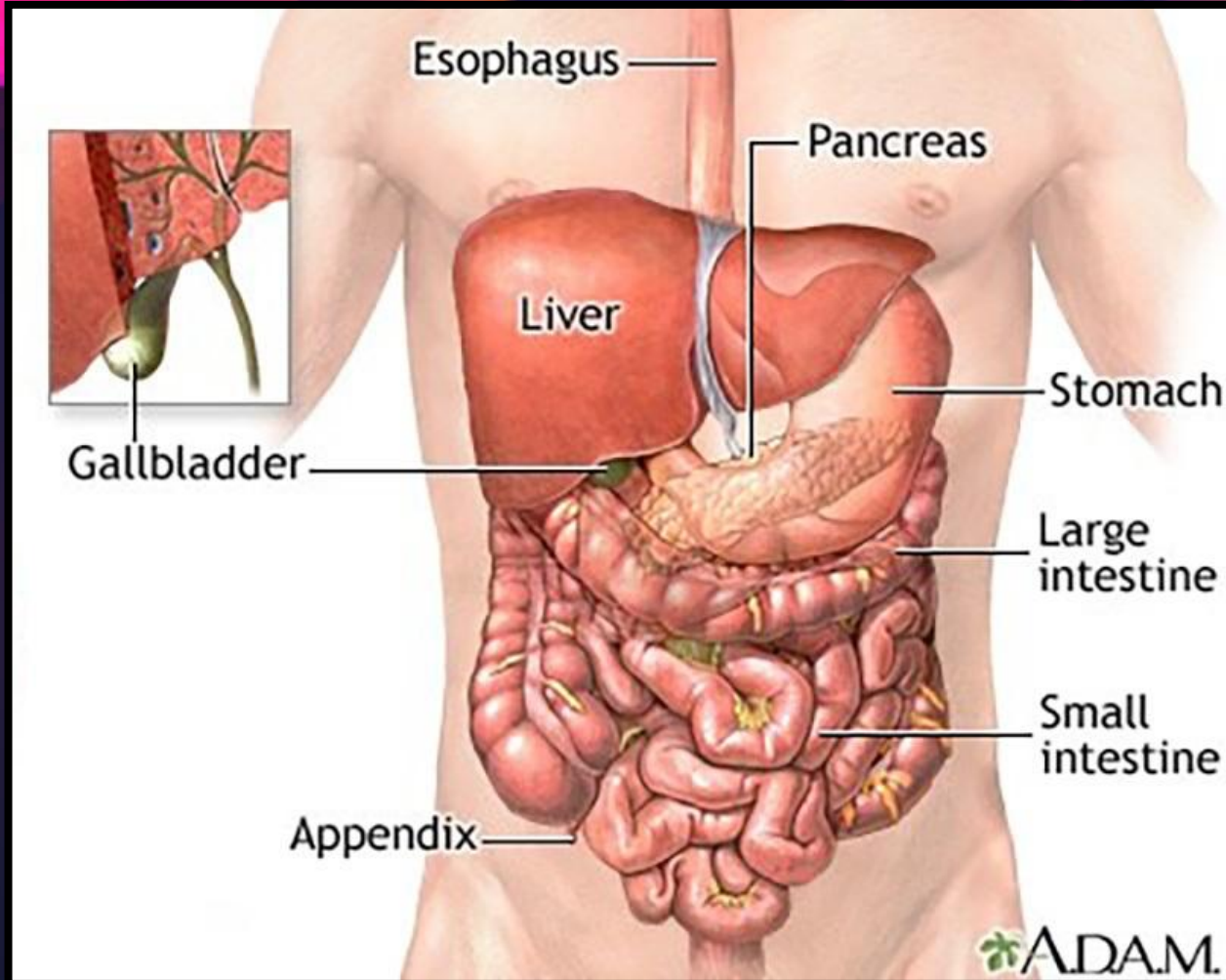


Kidney Stones





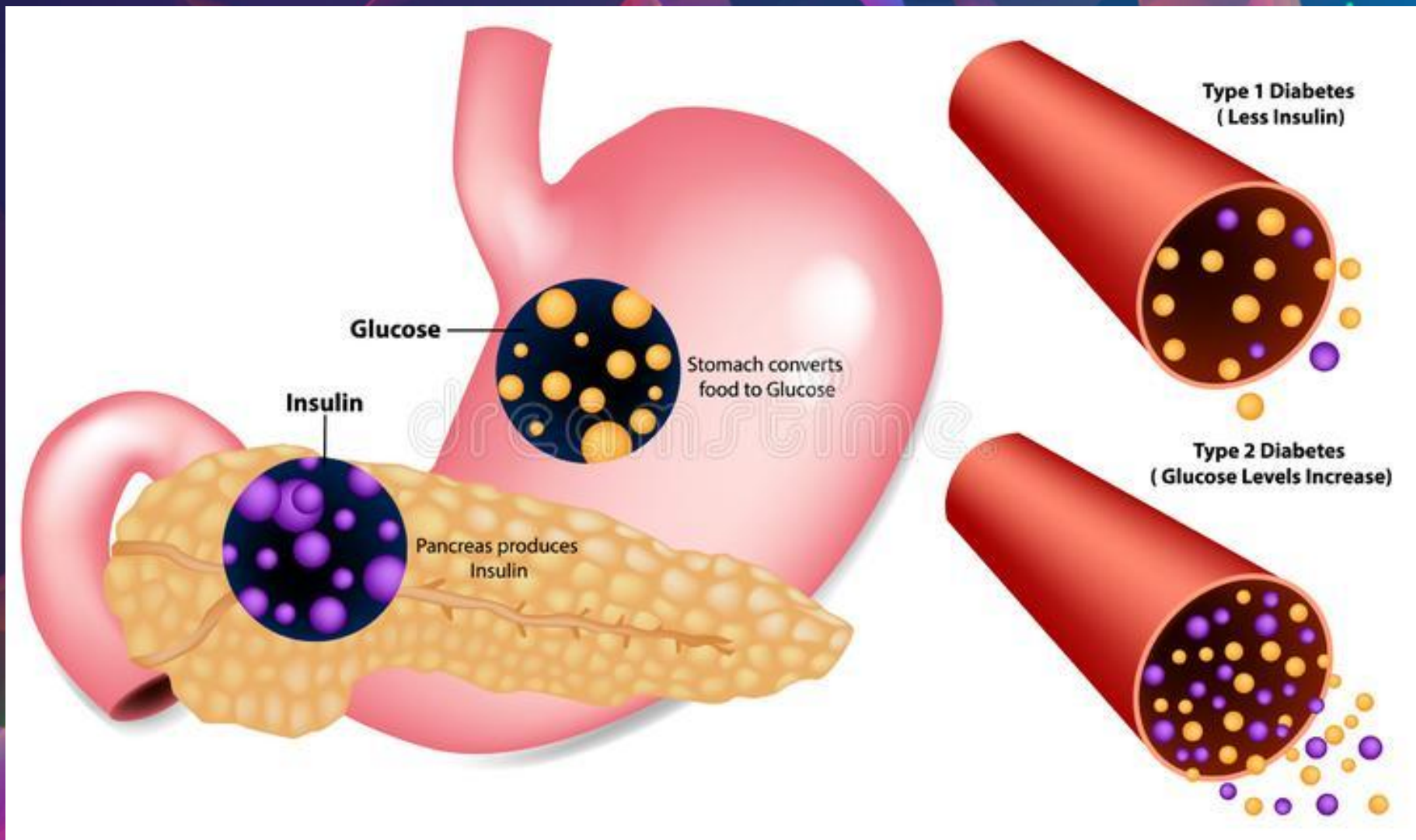
# Gallstones







# Diabetes – Type 1 and Type 2





# Diabetes in India

72.9 million people in 2017

estimated 134.3 million by 2045

Prevalence in urban India

2% in the 1970s

> 20% at present



# DM Type 2- Risk Factors

- being overweight
- family history
- low HDL cholesterol
- a history of high BP





# Lifestyle Changes- Reduce Risk of Diabetes



# Major Depressive Episode and Major Depressive Disorder

- A. Depressed mood and/or loss of interest or pleasure in life activities for at least 2 weeks
- B. At least five of the following
  1. Depressed mood most of the day (sadness, tearfulness, emptiness, hopelessness)
  2. Diminished interest or pleasure in all or most activities





3. Significant unintentional weight loss/ gain
4. Insomnia or sleeping too much
5. Agitation or psychomotor retardation
6. Fatigue or loss of energy
7. Feelings of worthlessness or excessive guilt
8. Diminished ability to think or concentrate,  
or indecisiveness
9. Recurrent thoughts of death

# Depression Symptoms in Older Adults

- Memory difficulties
- Personality changes
- Physical aches or pain
- Fatigue, loss of appetite
- Sleep problems
- Wanting to stay at home more, rather than going out...
- Suicidal feelings, esp. in older men





## Risk Factors for Depression

- Certain personality traits
- Traumatic or stressful events
- Family history of depression
- LGBTQ
- History of other mental health disorders
- Alcohol/ Drug Abuse
- Serious or chronic illness
- Certain medications

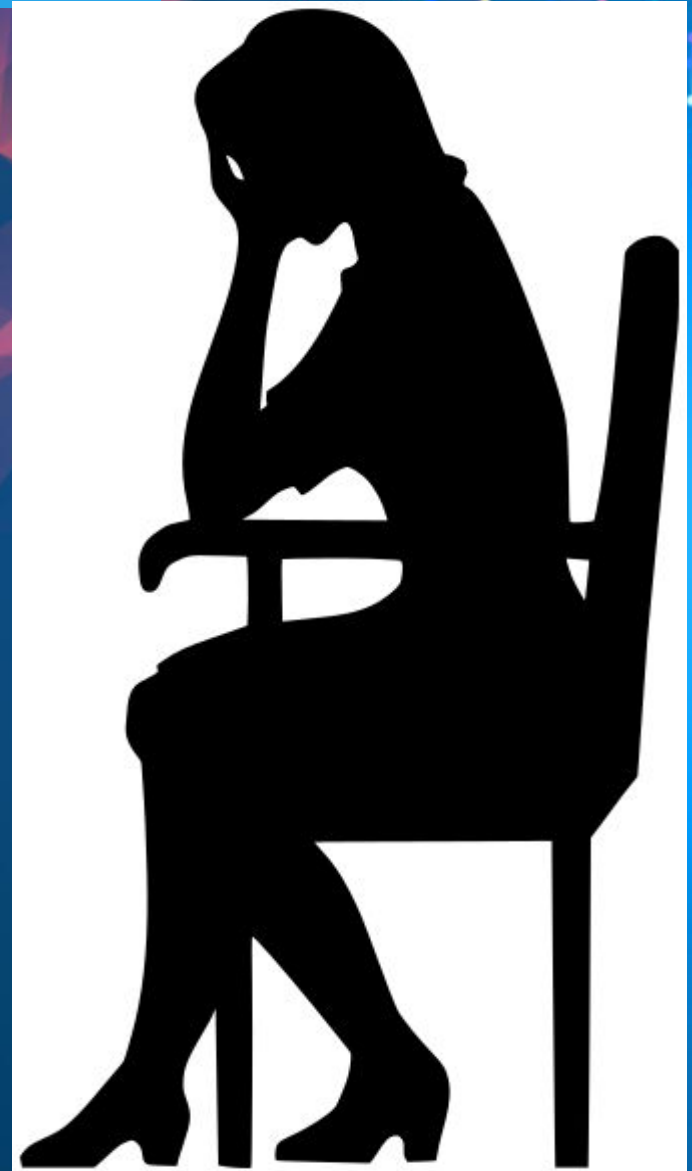
# Depression in The Workplace

## Behaviours

nervousness, restlessness,  
irritability, passive, withdrawn,  
aimless, absenteeism at work , loss  
of productivity

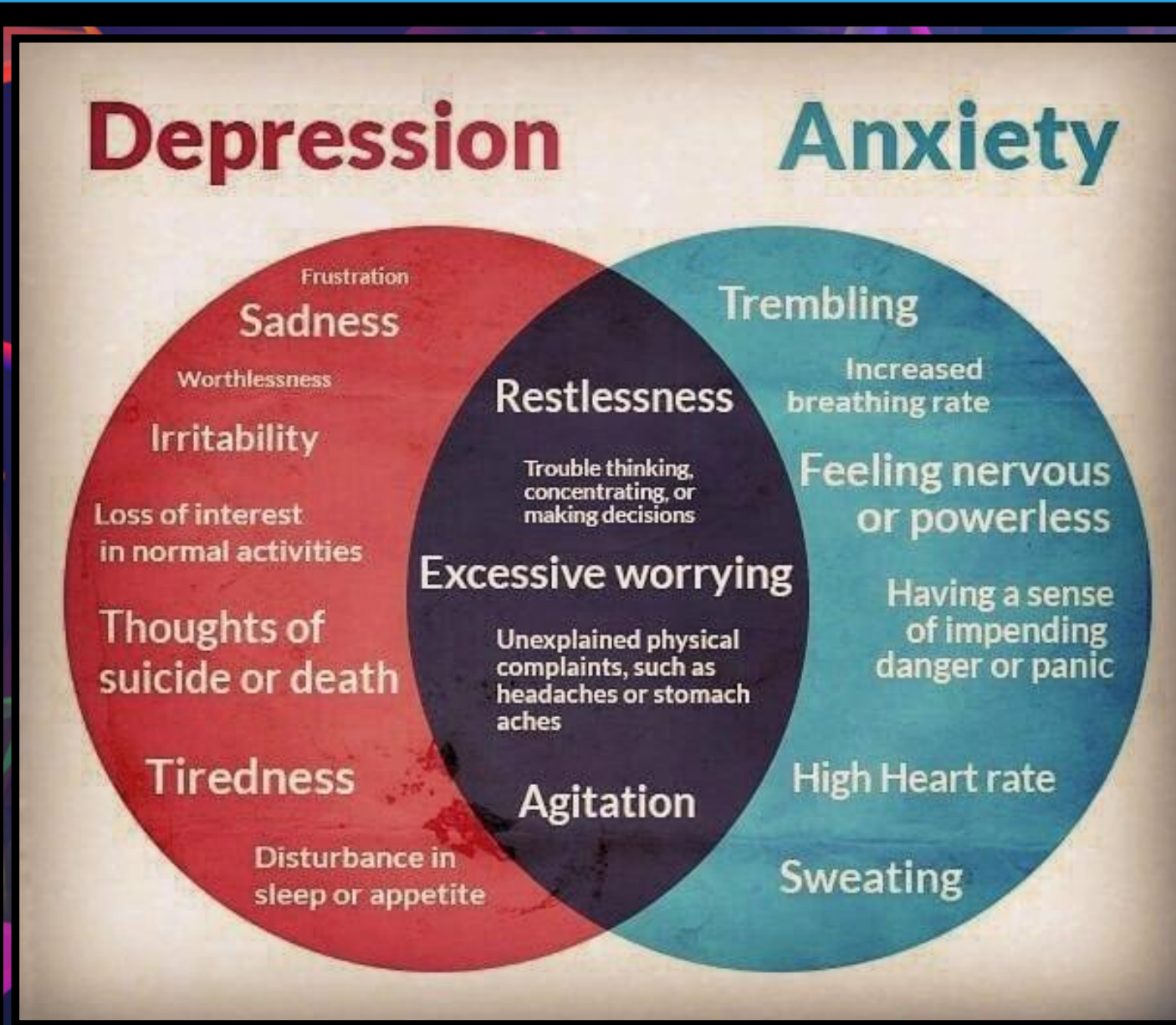
## Physical Complaints

preoccupation with aches and pains,  
fatigue





# ANXIETY AND DEPRESSION OFTEN CO-EXIST



# ANXIETY DISORDERS

Panic Disorder

Agoraphobia

Specific Phobias

Social Anxiety Disorder

Generalized Anxiety Disorder

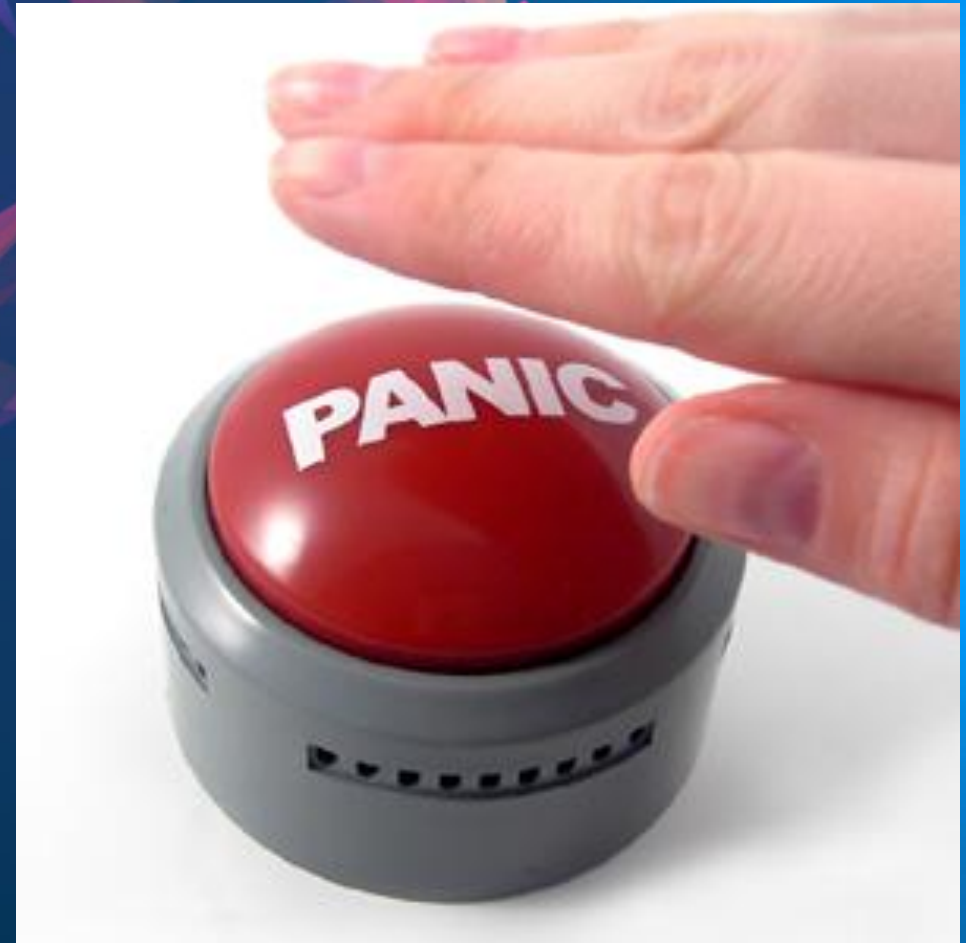






## ANXIETY DISORDERS, THOUGH COMMON, ARE TREATABLE

- Anxiety disorders are the most common of mental disorders
- They affect nearly 30 percent of adults at some point in their lives.
- They are treatable by a number of effective methods
- Treatment helps most people lead normal productive lives



# SYMPTOMS OF PANIC DISORDERS

- Palpitations
- Rapid heart rate
- Sweating
- Trembling or shaking
- Shortness of breath
- smothering sensations
- Chest pain
- Dizziness, faint

- Feeling of choking
- Numbness or tingling
- Chills or hot flashes
- Nausea or abd. pain
- Feeling detached
- Fear of losing control
- Fear of dying



## RECOMMENDATIONS FOR PARENTS OF ADOLESCENTS

Some common changes you should pay attention to:

- Excessive worrying or sadness
- Unhealthy eating or sleeping habits
- Irritability and inappropriate behaviours
- Avoiding school-related obligations
- Attention and concentration difficulties
- Avoiding activities he/she used to enjoy
- Unexplained headaches or body aches
- Alcohol, tobacco or substance abuse



## There are many things you can do to support them

- Talk to your child about the COVID-19 pandemic
- Convince your child that they are safe. Let them know that it's okay if they feel upset.
- Limit your family's exposure to news, including social media.
- Try to maintain regular routines for work & fun
- Be a role model
- Seek help if necessary



## SELF-CARE WHILE DEALING WITH UNCERTAINTY

1. Maintain a routine
2. Make time for leisure
3. Do some activity as a family
4. Stay connected
5. Adopt a family
6. Take care of your physical and mental health



The image features a vibrant, abstract background composed of numerous overlapping, semi-transparent triangles in various colors including red, orange, yellow, green, blue, and purple. The overall effect is a complex, crystalline pattern. Centered over this background is the text "Thank You" written in a white, elegant, cursive script. The word "Thank" is on the top line, and "You" is on the bottom line, with the letters of "You" being significantly larger and more decorative, featuring large loops and flourishes. The text is positioned in the middle-right area of the frame.

Thank  
You