

# Medical Terminology

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Introduction to Human Anatomy and Physiology

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Lecture (1)

# Objectives

- What is the Human anatomy and physiology?
- What are the medical terminologies?
- How to recognize them?
- Some examples of medical terminologies

# **What is the Human Anatomy?**

# Human Anatomy

- In its broadest sense, **anatomy** is the study of the structure of an object, in this case the human body.
- Human anatomy deals with the way the parts of humans, from molecules to bones, interact to form a functional unit.
- The study of anatomy is distinct from the study of physiology, although the two are often paired.

# Human Anatomy

- While anatomy deals with the structure of an organism, physiology deals with the way the parts function together.
- For example, an anatomist may study the types of cells in the cardiac conduction system and how those cells are connected, while a physiologist would look at why and how the heart beats.
- Thus, anatomy and physiology are separate, but complimentary, studies of how an organism works.

# **Medical Terminology**

# How to understand them?

- To understand the medical terminologies, you may need a dictionary of the Greek/ Latin roots.
- Breakdown the terms into the smaller parts.
- You may also need to make a list to order the words alphabetically as you memorise them.

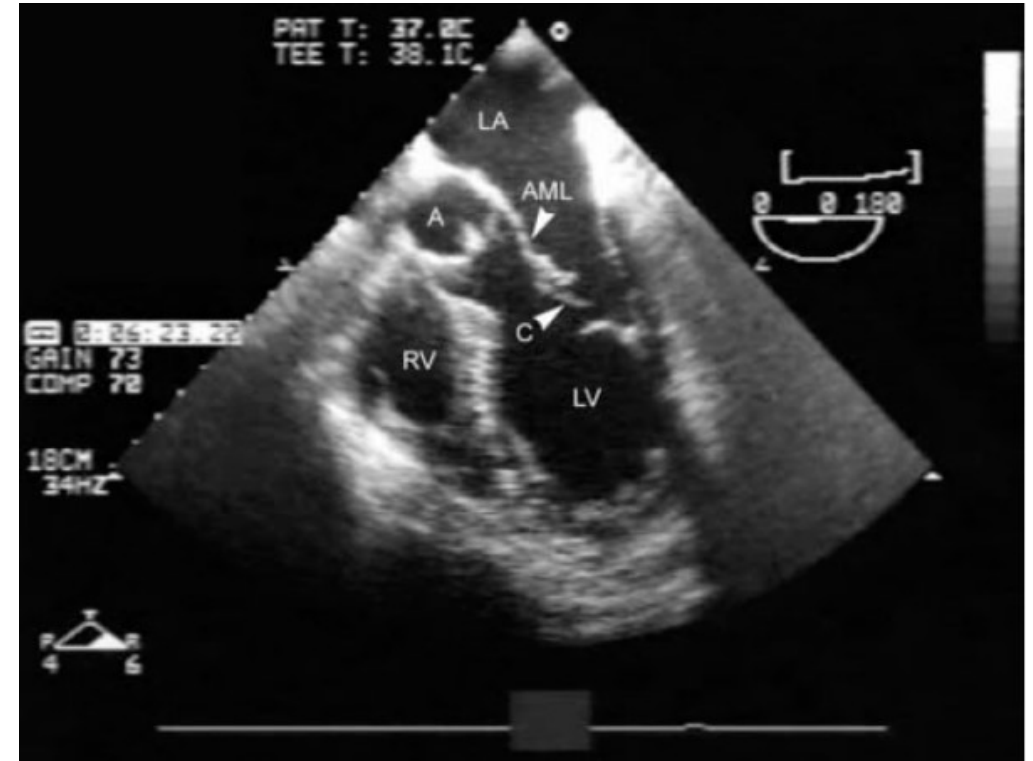
# Terminology – Parts of the words

- **Prefix (Beginning)**
  - Tells the size, shape, colour, direction, amount, etc.
- **Root (Middle)**
  - Often relates to the part of the body
- **Suffix (Ending)**
  - Can be about size, shape colour; or
  - About a problem

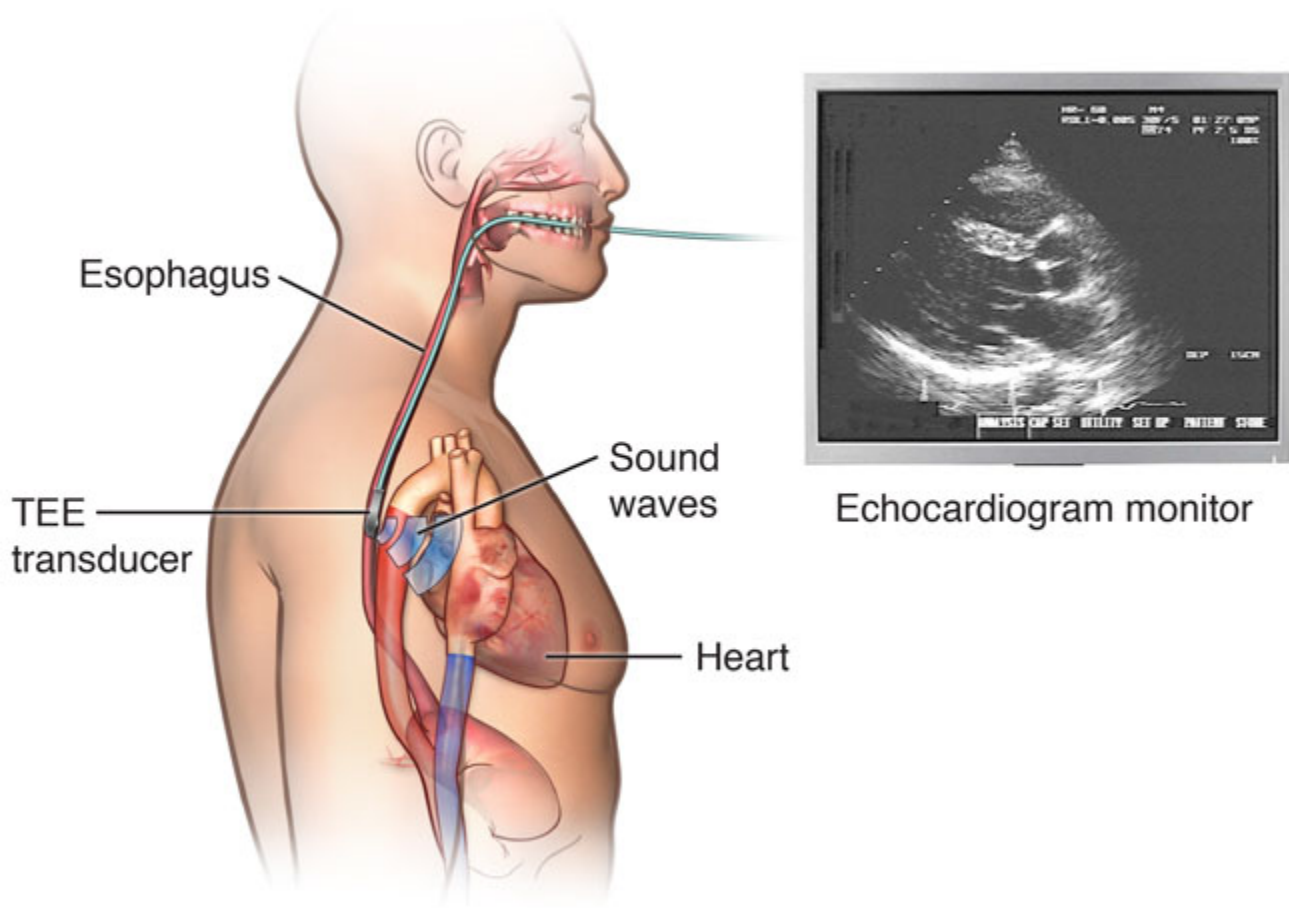


# An Example

- Transesophageal Echocardiogram
  - Transesophageal
    - Trans + esophag + eal (related)
  - Echocardiogram
    - Echo + cardio + gram



# Transesophageal echocardiogram (TEE)



# **Some Common Medical Terms**

# Medical terms

- Oste(o)
- Myo or Sarco
- Nuero
- Derm
- Angi(o)
- Ven(o) or phleb(o)
- Cardio
- Rhino
- Tympan
- Neph

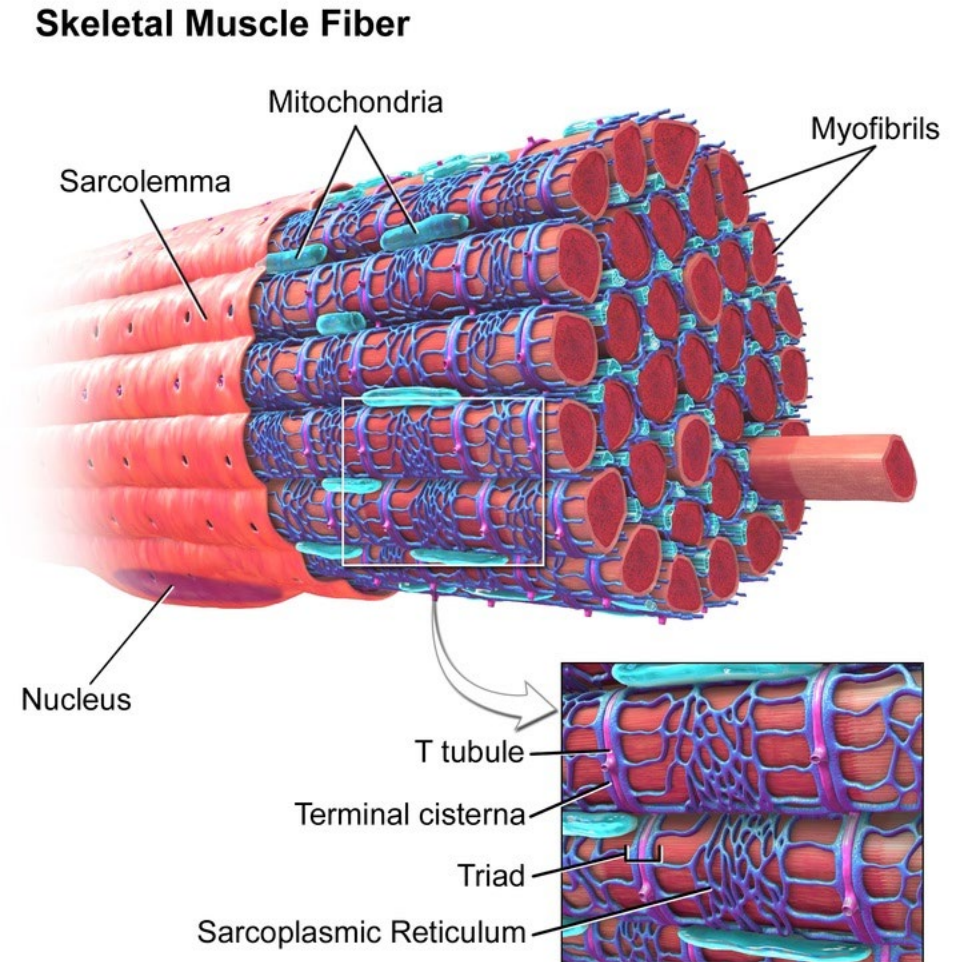
# Oste(o)

- Used for Bones and Bone cells
  - Osteocytes
  - Osteoblast
  - Osteoporosis



# Myo or Sarco

- Used for Muscle and muscle cells
  - Sarcomere
  - Sarcoplasmic reticulum
  - Myocardium
  - Myofiber
  - Myofibril



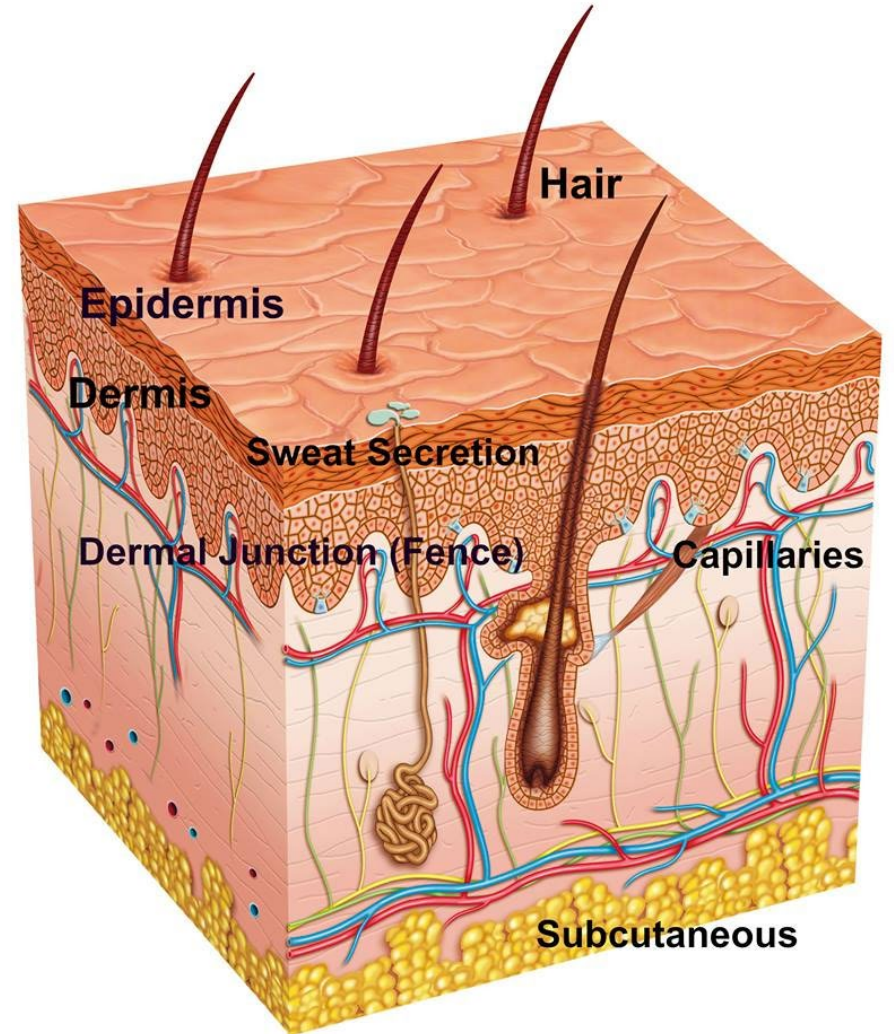
# Nuero

- Used for nerves or nerve cells
  - Neurology
  - Neuromuscular junction
  - Neurofibromatosis



# Derm

- Used for skin
  - Epidermis
  - Dermis
  - Dermatologist





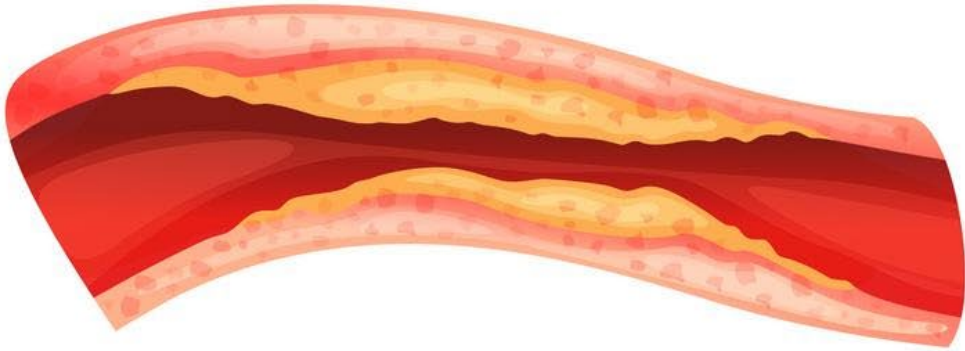
# Angi(o)

- Used for blood vessels
  - Angioplasty
  - Angiography



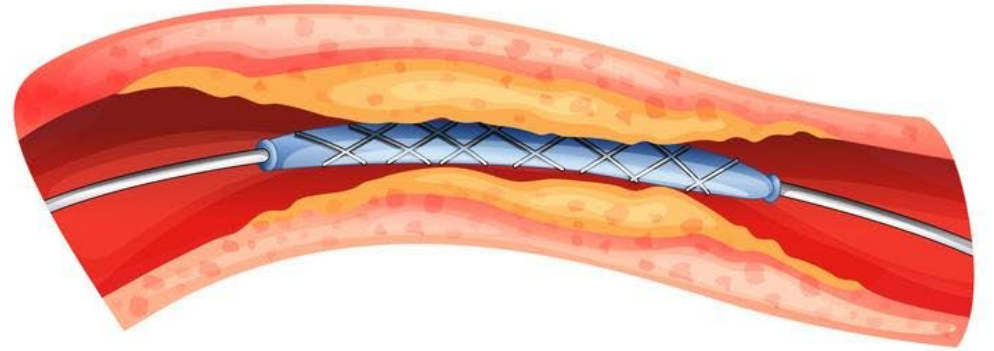
# Stent with Balloon Angioplasty

1



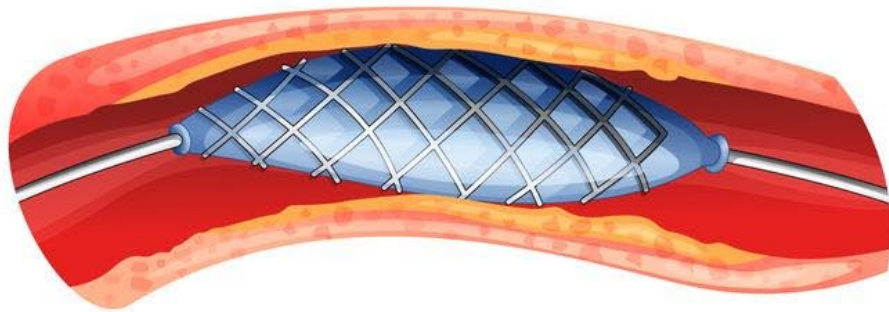
Build up of cholesterol partially blocking blood flow through the artery.

2



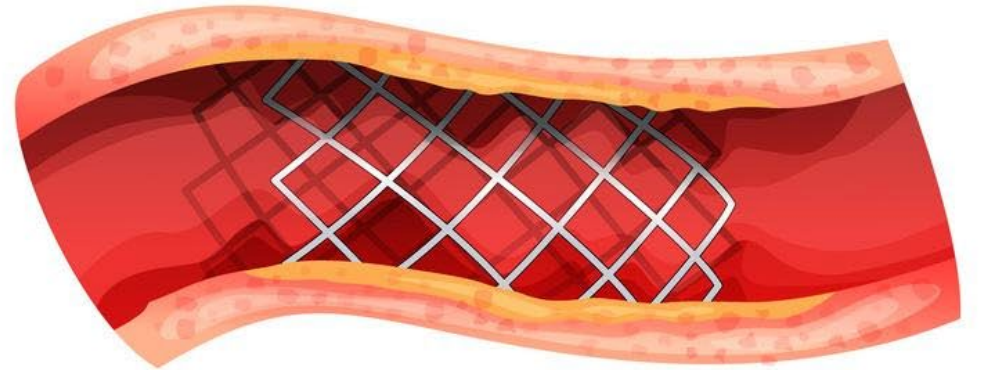
Stent with balloon inserted into partially blocked artery.

3

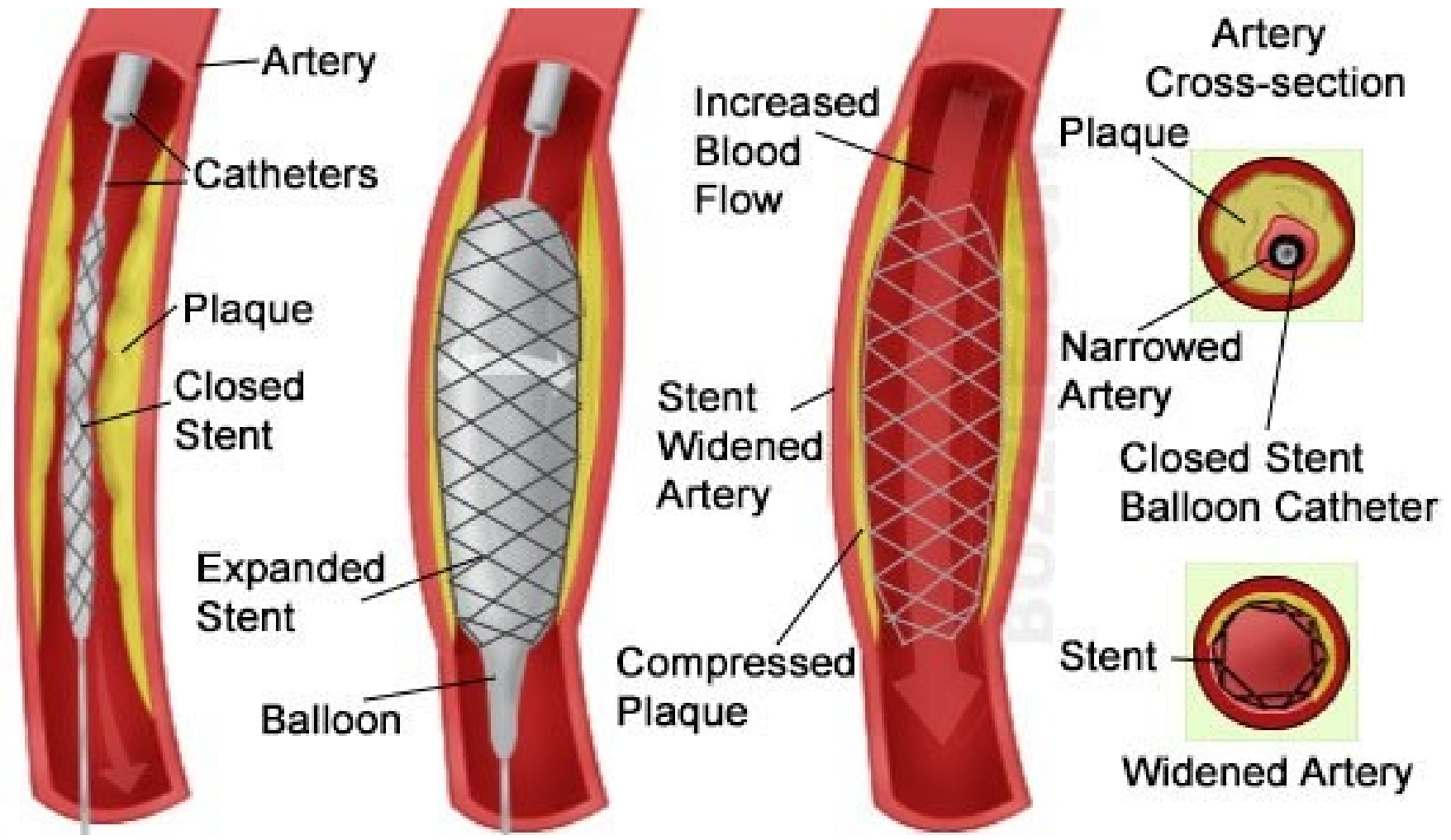


Balloon inflated to expand stent.

4



Balloon removed from expanded stent.



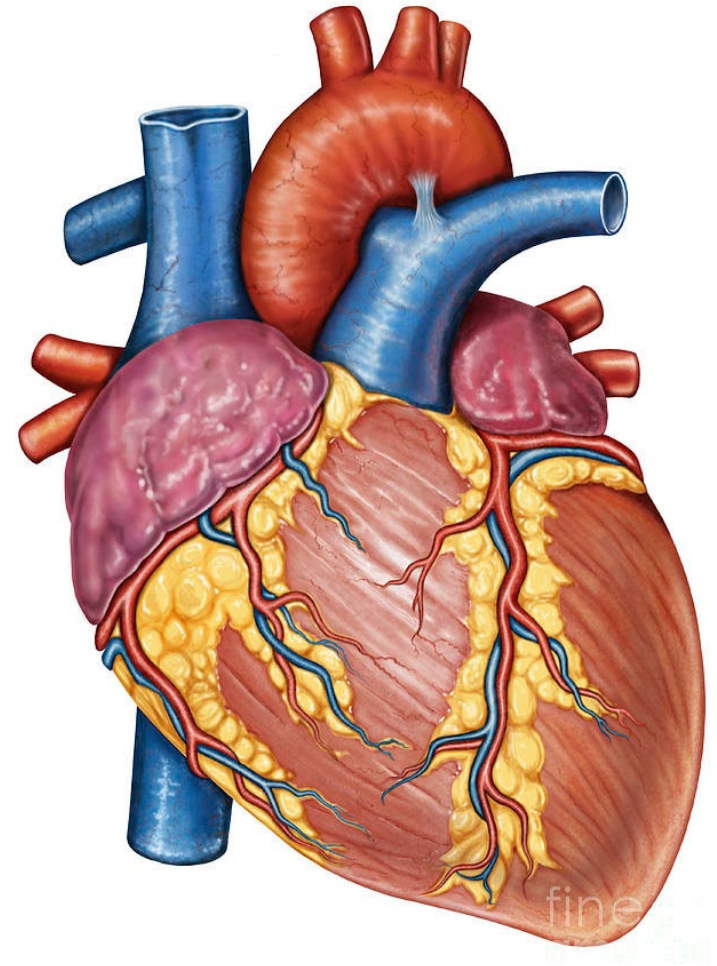
# Ven(o) or phleb(o)

- Used for veins
  - Phlebotomist
  - Phlebotomy
  - Phlebotomus ( A kind of fly)



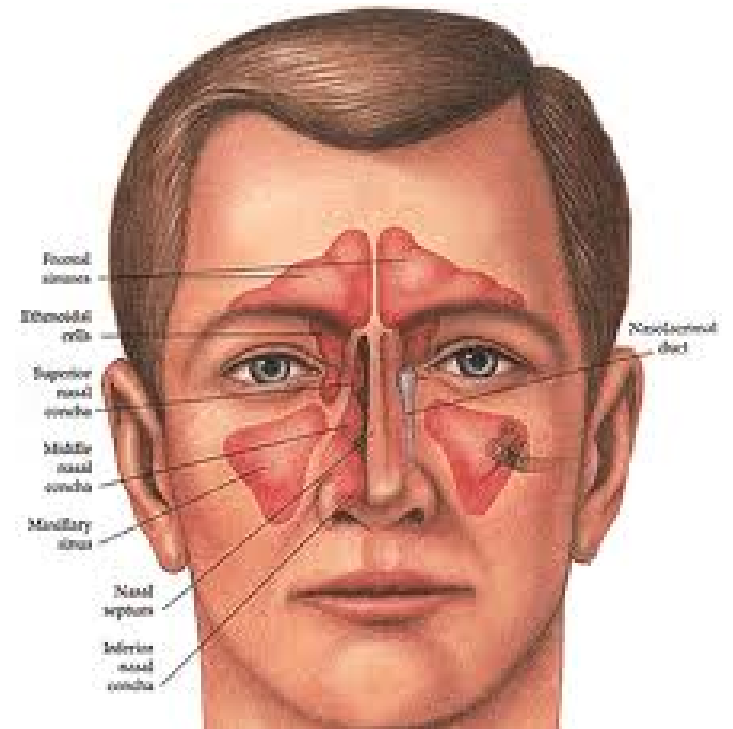
# Cardio

- Used for the heart
  - Cardiology
  - Cardiologist
  - Cardiac output



# Rhino

- Used for the nose
  - Rhinoplasty
  - Rhinology
  - Rhinovirus



# Tympan

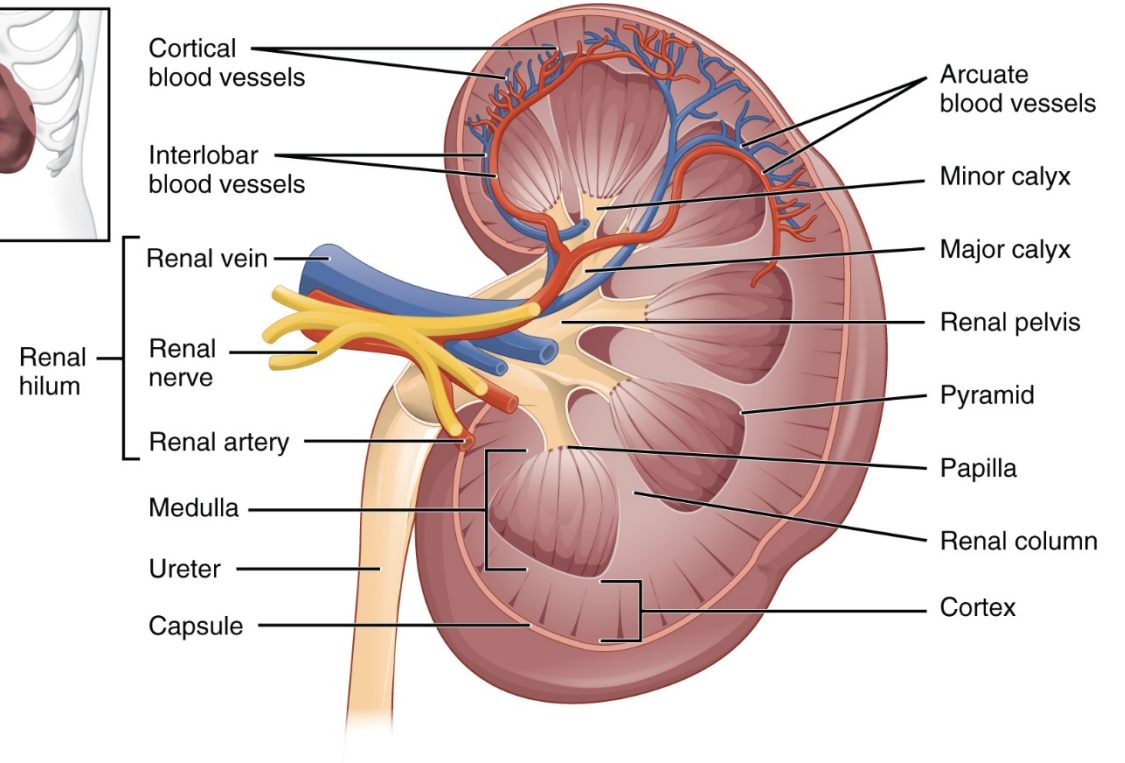
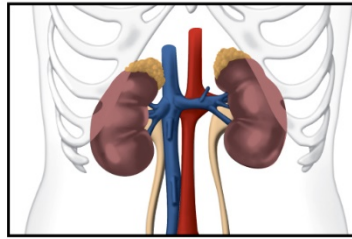
- Used for the ear or eardrum
  - Tympanic membrane
  - Tympanoplasty
  - Tympanogram



# Neph

- Used for the kidney

- Nephron
- Nephrolithiasis (kidney stone)
- Nephroptosis





**More terms...**

Skull	Crani	Cranium
Eye	Ocul or Ophthalm	Oculography
Ear	Oto	Otoplasty
Blood clot	Thromb(o)	Thrombosis
Liver	Hapato	Hepatitis
Breast	Mammo	Mammography
Large intestine	Colo	Colostomy
Stomach	Gastro	Gastrostomy
Small intestine	ileo	Ileostomy
Chest	Thorac(o)	Thoracic
Lung	Pnuemo or Pluro	Pulmonary artery

# Size

- **Macro**

- Large

- **Micro**

- Small

- **Megaly or megalo**

- Large/ enlarged

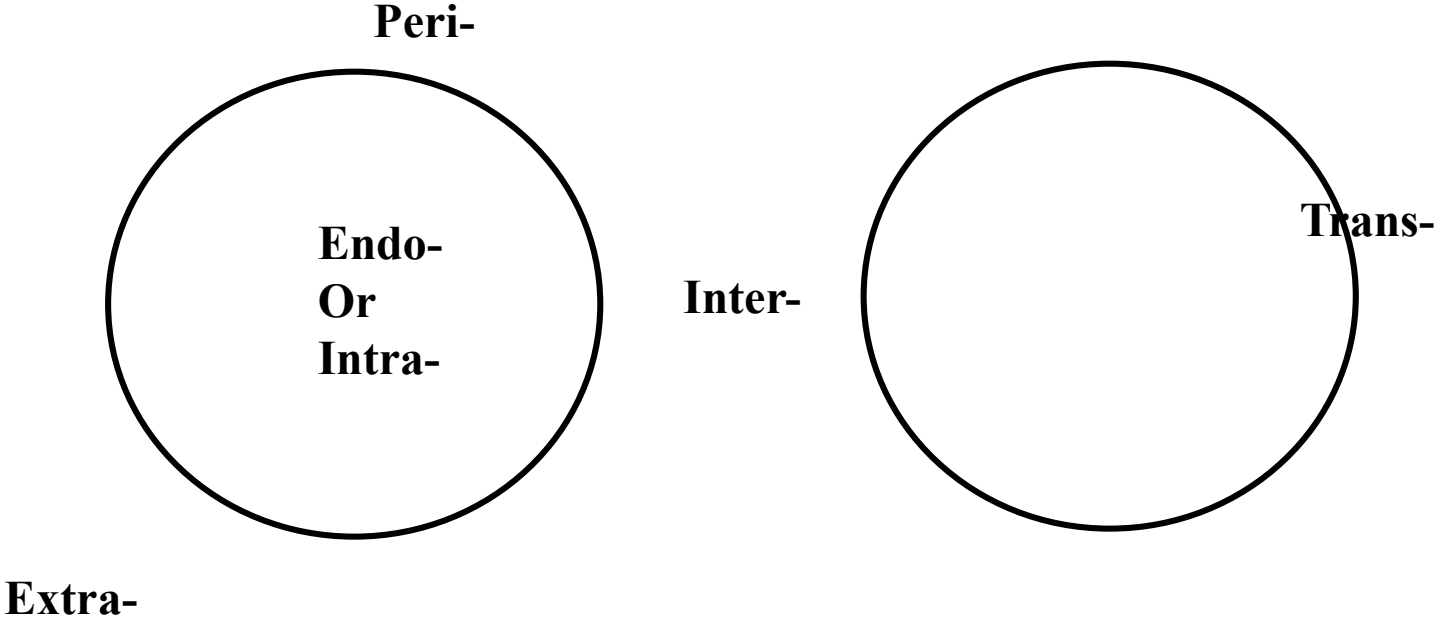
# Rates

- **Hyper** ↑
  - High/ Elevated/ above
- **Hypo** ↓
  - Low/ reduced/ below
- **Tachy**
  - Fast/ Rapid
- **Brady**
  - Slow/ reduced

# Colours

Chloro	Green	Chlorophyll
Leuk	White	Leukocytes
Eryth	Red	Erythrocytes
Cyan	Blue	Cyanosis

# Directional Terms – Where?



# Tests and Procedures

Echo-	Using Ultrasound	Echocardiogram
Electro-	Using Electricity	Electrocardiogram
-ectomy	Removing	Thyroidectomy
-gram	Picture	Mammogram
-graphy	The process of making image	Radiography
-otomy	Cutting	Craniotomy
-scopy	Instrument for Viewing	Endoscopy
-stomy	Create an opening	Gastrostomy
-plasty	Surgical repair	Rhinoplasty
-therapy	Treatment	Chemotherapy

# Problems

Dys	Not working properly	Dysplasia
Mal	Bad	Malformation
-emia	Blood condition	Thalassemia
-itis	inflammation	Arthritis
-osis	Condition or disease	Osteoporosis
-pathy	Disease	Psychopathy
Auto-	Self	autoimmune
Anti-	Against	Antibiotics
De-	Reverse	Dehydrate



**Some examples ...**

# Examples

- **Hypercholesterolemia**
  - Elevated blood cholesterol
- **Dermatitis**
  - Inflammation of skin
- **Colostomy**
  - Creating an opening in the colon
- **Myocarditis**
  - Inflammation of the heart muscles

# Try these at home

- Carditis
- Cardiomyopathy
- Echocardiography
- Hepatitis
- Nephrectomy

# Further reading

- <https://medlineplus.gov/medicalwordstranscript.html>
- <https://www.aimseducation.edu/blog/all-essential-medical-terms/>

**THANKS**

**ANY QUESTIONS?**

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