



NEWSLETTER MARCH 2024

MEDI UPDATES

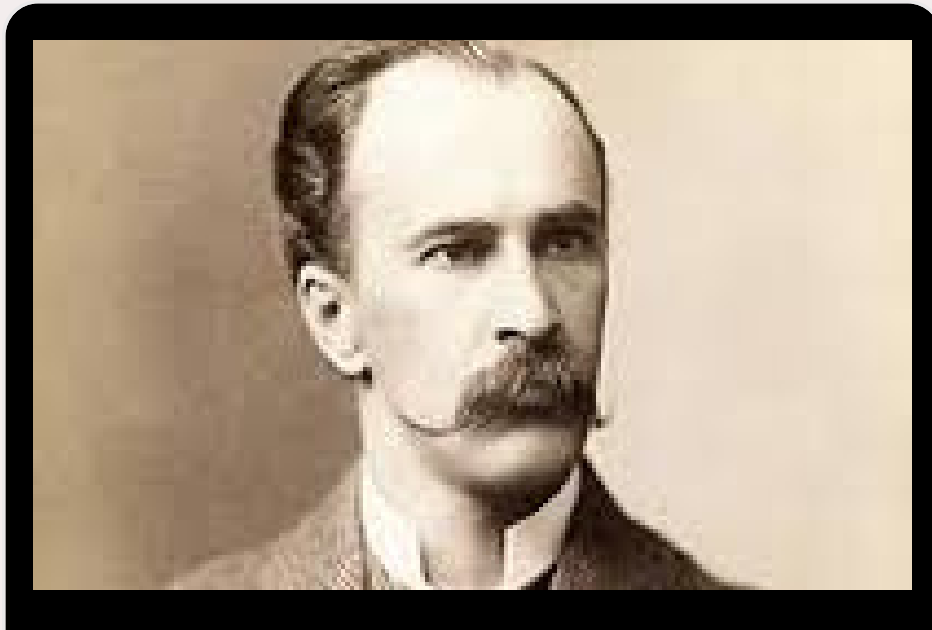


Health is the most precious gain and contentment the greatest wealth. A trustworthy person is the best kinsman, nibbāna the highest bliss
- Buddha



NEUROSURGERY & NEUROLOGY
CARDIOLOGY
NEPHROLOGY & UROLOGY
CRITICAL CARE & PULMONOLOGY
LAP SURGERY & PLASTIC SURGERY
MEDICINE & PAEDIATRIC (NEONATOLOGY)
ORTHOPEDIC & JOINT REPLACEMENT
ANESTHESIA & EMERGENCY MEDICINE
RADIOLOGY & INTERVENTIONAL RADIOLOGY
PATHOLOGY & DIAGNOSTICS
GASTROENTEROLOGY
ENT, PSYCHIATRY & ALLIED SPECIALITIES

THE PRACTICE OF MEDICINE IS AN ART, NOT A TRADE;
A CALLING, NOT A BUSINESS; A CALLING IN WHICH YOUR
HEART WILL BE EXERCISED EQUALLY WITH YOUR HEAD

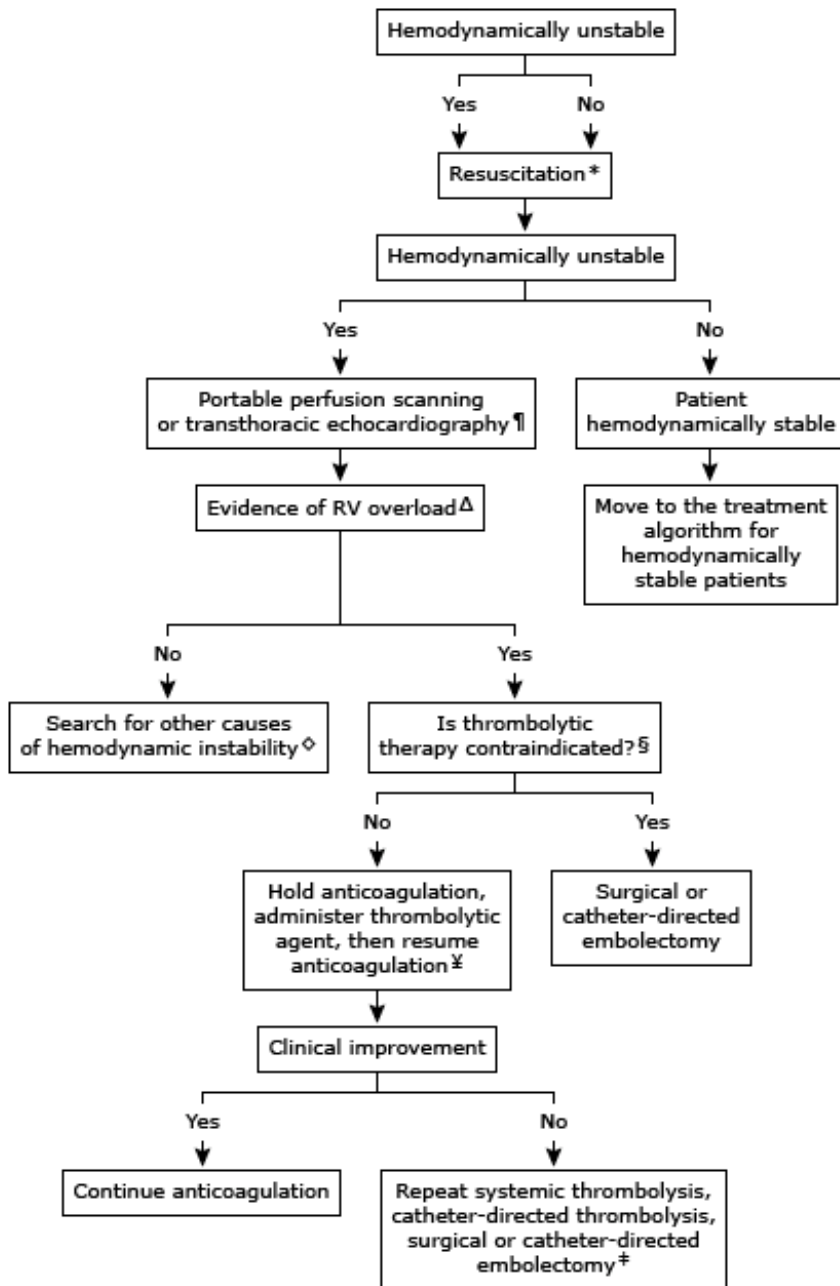


**WILLIAM
OSLER**

Sir William Osler, 1st Baronet, FRS FRCP (July 12, 1849 – December 29, 1919) was a Canadian physician and one of the "Big Four" founding professors of Johns Hopkins Hospital. Osler created the first residency program for specialty training of physicians, and he was the first to bring medical students out of the lecture hall for bedside clinical training.

Expect the unexpected ; Interesting case

Pulmonary Embolism



The emergency room received a 49-year-old female patient weighing 135kg, who was morbidly obese. She presented with sudden breathlessness and a feeling of ghabraman. An ECG revealed atrial fibrillation with a high ventricular rate. Upon admission, her blood pressure was 132/80. She had a history of hypertension and diabetes mellitus, and clinically showed signs of obstructive sleep apnea. The patient was admitted to the ICU for further evaluation, suspecting heart failure with atrial fibrillation. A 2D echocardiogram showed dilated right atrium and right ventricle with severe tricuspid regurgitation, along with a dilated inferior vena cava. The patient experienced rapid hypotension, raising suspicion of pulmonary embolism. A bilateral lower limb ultrasound Doppler confirmed deep vein thrombosis in both legs. The D-dimer levels were elevated above 10,000, and a CT pulmonary angiography revealed a thrombus in the right main pulmonary artery. The patient was intubated, and her family was informed about thrombolysis. Thrombolysis was performed using injection reteplase. The patient's condition improved, her vital signs stabilized, and she was extubated within 24 hours. She was started on intravenous anticoagulants, followed by oral anticoagulants. After 7 days, the patient was discharged with stable vital signs and without the need for oxygen support.



Case Presented by
 Dr Naaz Hamdulay
 Physician & Intensivist
 Divine Life Hospital
 Adipur





CLINICAL TRIALS REGARD-VAP



INDIVIDUALIZED, SHORT-COURSE ANTIBIOTIC TREATMENT VERSUS USUAL LONG-COURSE TREATMENT FOR VENTILATOR-ASSOCIATED PNEUMONIA

THE LANCET
Respiratory Medicine
January 23, 2024

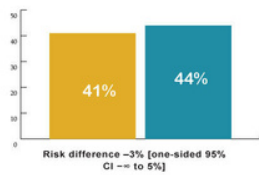
MULTICENTRE, INDIVIDUALLY RANDOMIZED, OPEN-LABEL, NON-INFERIORITY TRIAL

Does a pragmatic, individualized, short-course antibiotic treatment strategy for ventilator-associated pneumonia (VAP) result in non-inferior outcomes compared to usual care in terms of mortality and pneumonia recurrence?

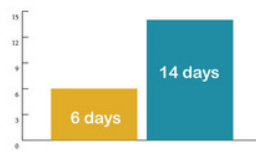


Critically ill adults undergoing invasive mechanical ventilation for at least 48 hours who developed VAP and treated with antibiotics until fever resolution for 48 h and haemodynamic stability.

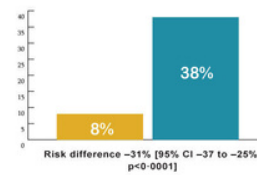
60-day Composite Endpoint of Death or Pneumonia Recurrence



Median Antibiotic Treatment Duration



Antibiotic Side Effects



Individualized shortened antibiotic duration guided by clinical response was non-inferior to longer treatment durations in terms of 60-day mortality and pneumonia recurrence, and associated with substantially reduced antibiotic use and side-effect.

The study was a phase 4, randomized, open-label trial conducted in 39 ICUs across Nepal, Singapore, and Thailand. It used a non-inferiority–superiority framework with patients assigned 1:1 to groups using stratified permuted blocks. Blinding was partial, with assessors and participants unaware of treatment allocation, but not clinicians. The non-inferiority margin was set at 12%, and analyses included both intention-to-treat and per-protocol populations.

Population:

Adults (age ≥18 years) with ventilator-associated pneumonia (VAP), mechanically ventilated for ≥48 hours, administered culture-directed antibiotics. 461 patients (232 in the short-course group, 229 in the usual care group). Median age 64 years; 39% female.

Intervention:

Individualized short-course antibiotic treatment for VAP.

Duration of antibiotics: ≤7 days, potentially as short as 3–5 days.

Comparison:

Usual care for VAP.

Duration of antibiotics ≥8 days, determined by primary clinicians.

Outcome:

Primary Outcome: 60-day composite of death or pneumonia recurrence.

Intention-to-Treat Analysis (460 patients): Short-course Group: 41% met the primary outcome; median antibiotic duration was 6 days (IQR 5–7 days). Usual Care Group: 44% met the primary outcome; median antibiotic duration was 14 days (IQR 10–21 days).

Per-Protocol Population (435 participants): Similar results as intention-to-treat, confirming non-inferiority.

Antibiotic Side-Effects: Significantly lower in the short-course group (8%) versus the usual care group (38%)



Preventive Health Checkup Plans Personalised Health Check Ups

Contact

arpita.barve@divinelifeadipur.com

Men are motivated when they feel needed
while women are motivated when they feel
cherished



Book Troverts

**Men Are from Mars,
Women Are From Venus**
Author: John Gray

Tom and Mary have a relationship in which they are tired of dealing with the same issues over and over again. There is nothing wrong with them. They simply fail to understand the differences between men and women. Like Tom and Mary, many couples fall into such patterns that turn a loving relationship into a failed one.

Men and women think differently. They have distinct emotional needs and communication preferences. If you're among the many who find it difficult to read the opposite gender, John Gray's *Men Are from Mars, Women Are from Venus: The Classic Guide to Understanding the Opposite Sex* will enlighten you.

Once you know how you and your partner differ, you'll see each other from a new perspective and understand each other better. This knowledge will improve your relationship and resolve many of the struggles that arise from misunderstandings.

1. Women want men to listen to them while men desire solutions to problems.
2. Men are motivated when they feel useful, women are inspired when they feel loved.
3. Women and men communicate differently and assign separate meanings to the same words.

Men are motivated when they feel needed while women are motivated when they feel
cherished

Variations of ST Segment in ECG

A Physiological ST-segment depressions

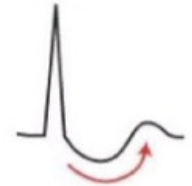


Upsloping ST-segment depression is a normal finding during physical exercise. It should be considered a normal finding, provided that T-waves are not inverted. Hyperventilation may cause similar ST-segment depressions.

B Non specific ST-segment depression



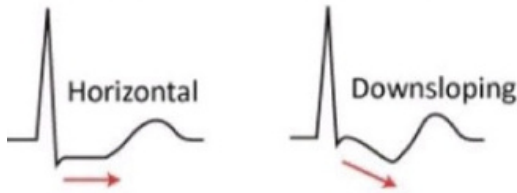
Hypokalemia and high sympathetic tone causes ST-segment depressions with flat T-waves and more marked U-waves. High sympathetic tone also causes tachycardia.



Digoxin (a drug used to treat atrial fibrillation and some cases of heart failure) causes a curved ST-segment depressions.

C ST-segment depressions caused by acute ischemia

Characteristics



Very typical of ischemia. Typical of ischemia.

Real life examples



Horizontal depression with distinct ST-segment. Downsloping with positive T-wave. Downsloping with inverted T-wave. Horizontal depression with short ST-segment.

Note

When considering myocardial ischemia, deviations in the ST-segment always indicates ongoing ischemia. ST-segment deviation may be accompanied by T-wave changes, but it is the ST-deviation that indicates acute ischemia.

de Winter's sign



de Winter's sign is an exception to the rule that upsloping ST-segment depressions are not ischemic. de Winter's sign implies the presence of upsloping ST-segment depressions with prominent T-waves in the majority of the precordial (chest) leads. This is a sign of acute ischemia, most often caused by a proximal occlusion of the left anterior descending (LAD) artery.

D Secondary repolarization abnormalities (secondary ST- and T-wave changes)



Left bundle branch block (lead V6)

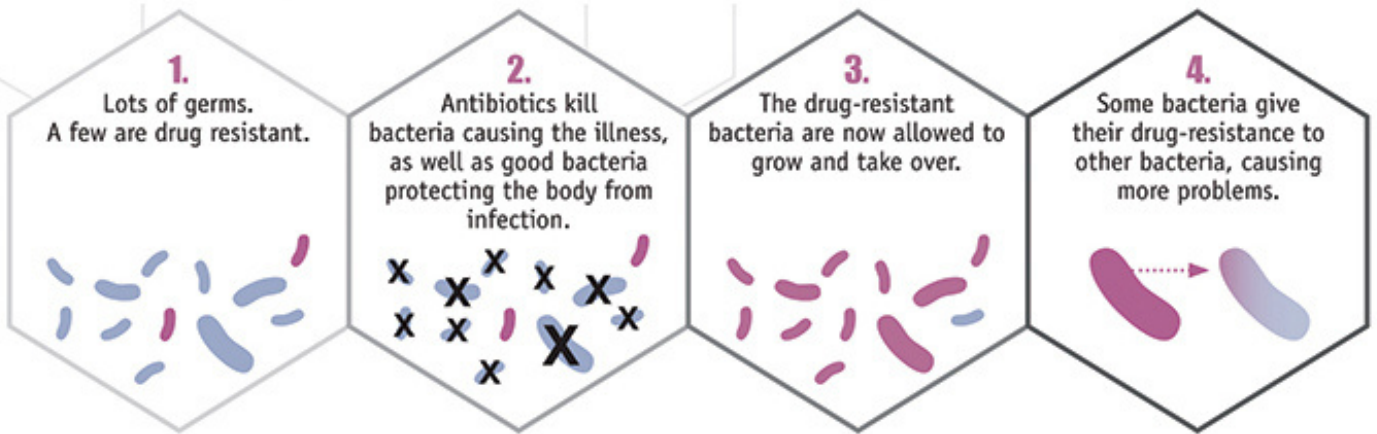
Left ventricular hypertrophy (lead V6)

Right bundle branch block (lead V1)

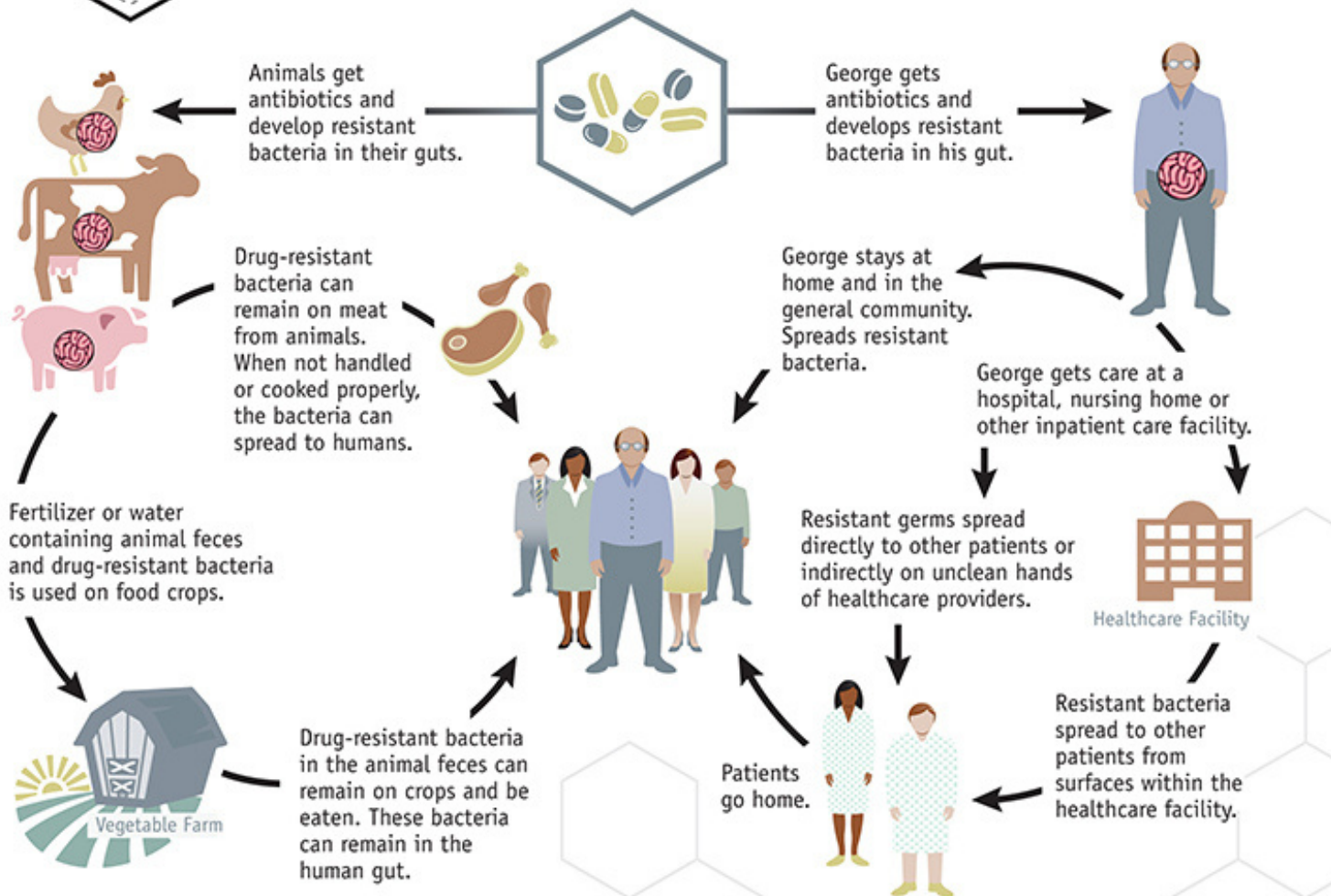
Pre-excitation (delta wave)

Right ventricular hypertrophy. Large R-waves and ST-segment depressions in V1-V3. In case of chest discomfort, one must consider possibility of posterolateral transmural ischemia as a differential diagnosis.

How Antibiotic Resistance Happens




Examples of How Antibiotic Resistance Spreads



Simply using antibiotics creates resistance. These drugs should only be used to treat infections.

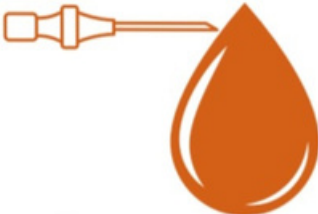



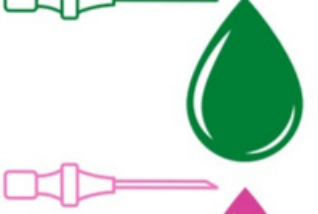
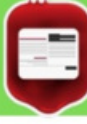
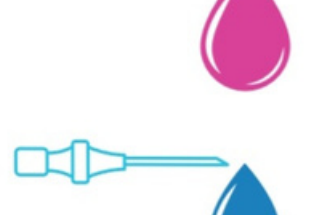

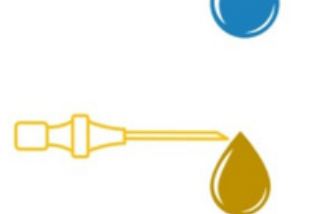

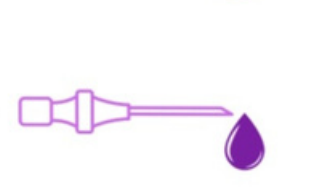

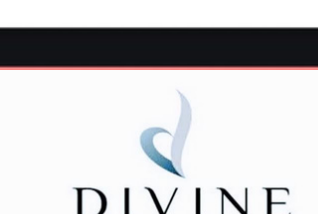

NUTRITION CORNER

NUTRITION DURING PREGNANCY

ITEM	RECOMMENDATION
CALORIES	300-500 additional calories 
WEIGHT GAIN	Total weight gain: 25-35lbs 
FOLIC ACID	Recommendation: 600 micrograms (mcg) of folic acid daily. 
CALCIUM	Calcium supplements Diary foods Dark, leafy green vegetables Important for fetus: Bone and teeth formation 
FLUID INTAKE	Recommendation: 2-3L/day No alcohol, Limit caffeine 
PROTEIN	Increase protein in diet. Vitamin B12 is found in animal protein. ↓ PROTEIN = VIT B12 DEFICIENCY 
IRON	Build hemoglobin for fetus 
VITAMINS	Vitamin D: for calcium absorption Increase fruits and vegetables 
FIBER	To prevent/reduce constipation 

NURSING EDUCATION

IV CATHETER GAUGE

14G ORANGE		Trauma, Rapid infusion 
16G GRAY		Trauma, Surgery 
18G GREEN		Blood transfusions 
20G PINK		IV fluids and medications 
22G BLUE		Slower infusions, IV fluids, small veins 
24G YELLOW		Fragile veins, elderly, pediatrics 
26G VIOLET		Neonates 

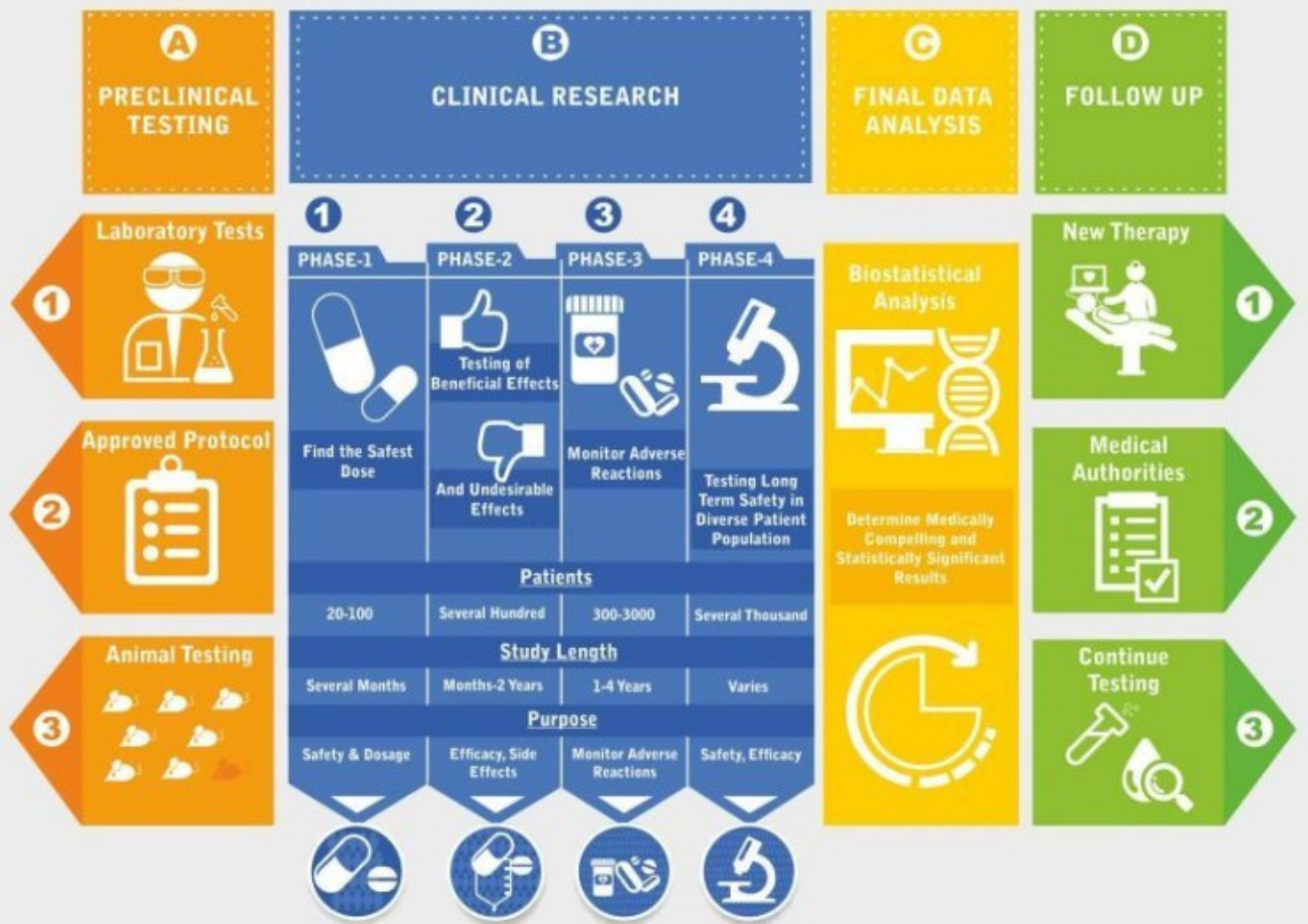
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CLINICAL TRIALS ARE SCIENTIFIC STUDIES CONDUCTED TO EVALUATE THE SAFETY AND EFFECTIVENESS OF MEDICAL TREATMENTS, DRUGS, THERAPIES, OR DEVICES IN HUMAN SUBJECTS. CLINICAL TRIALS PROGRESS THROUGH PHASES (PHASE I TO PHASE IV), INVOLVING LARGER PARTICIPANT GROUPS AS TREATMENTS ADVANCE. THE GOAL IS TO PROVIDE EVIDENCE-BASED MEDICAL INTERVENTIONS THAT ENHANCE PATIENT CARE, WHILE RIGOROUS CONTROLS AND ETHICAL CONSIDERATIONS ENSURE PARTICIPANT WELL-BEING

How Do Clinical Trials Work

From Trial to Treatment

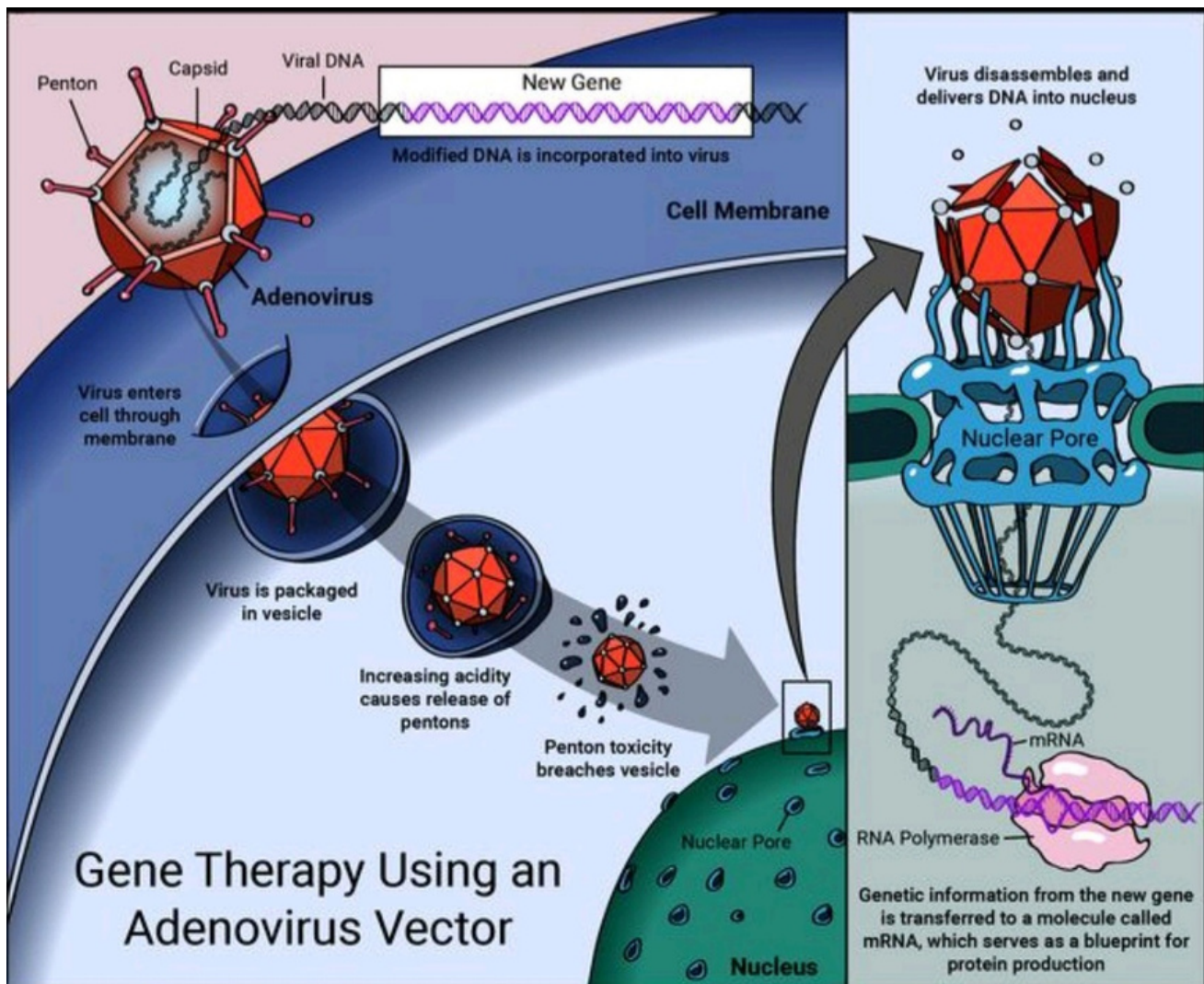


GENE THERAPY

Using Adenovirus Vector

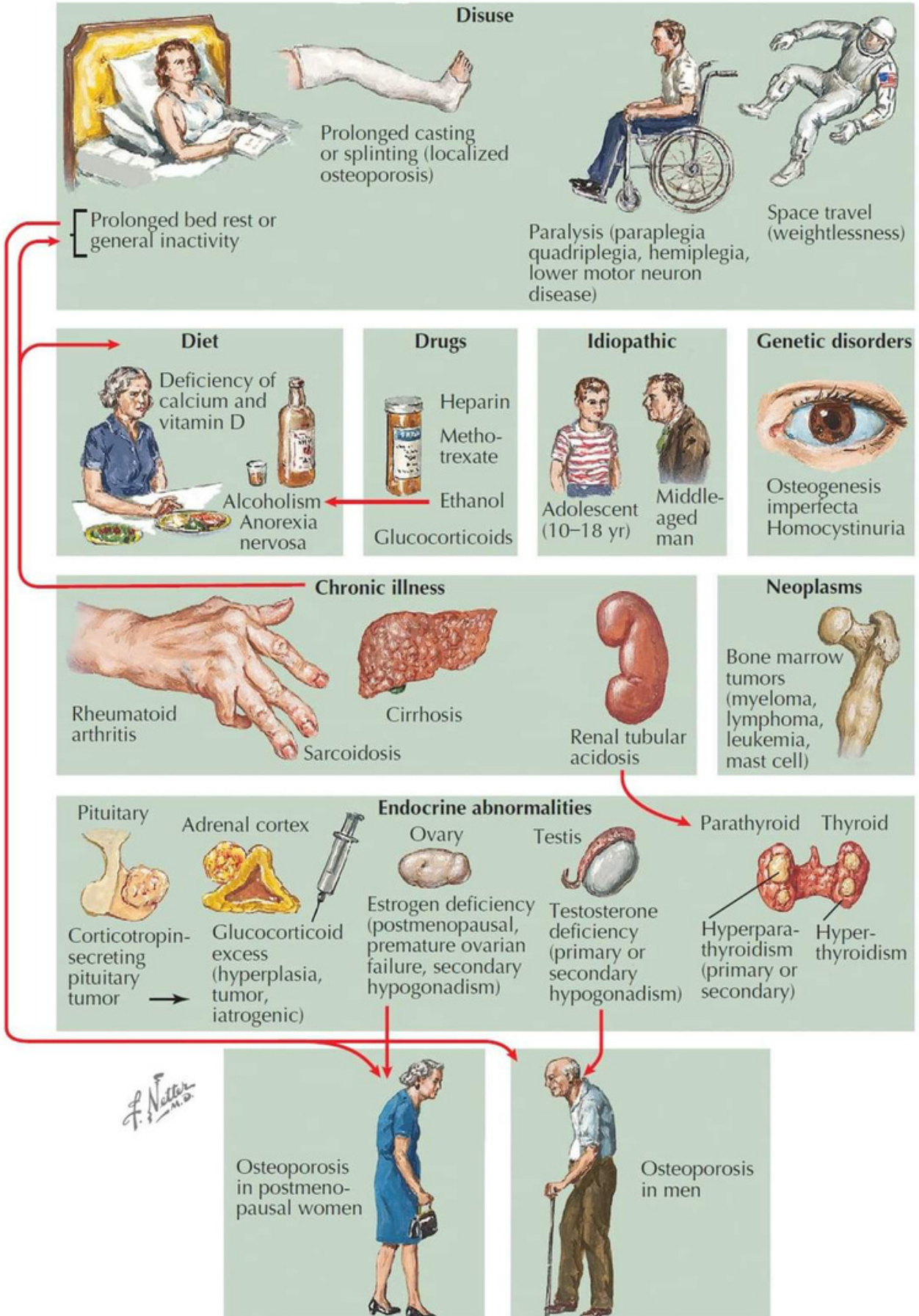
Genetic material or gene-editing tools that are inserted directly into a cell usually do not function. Instead, a carrier called a vector is genetically engineered to carry and deliver the material. Certain viruses are used as vectors because they can deliver the material by infecting the cell. The viruses are modified so they can't cause disease when used in people. Some types of virus, such as retroviruses, integrate their genetic material (including the new gene) into a chromosome in the human cell. Other viruses, such as adenoviruses, introduce their DNA into the nucleus of the cell, but the DNA is not integrated into a chromosome. Viruses can also deliver the gene-editing tools to the nucleus of the cell.

The vector can be injected or given intravenously (by IV) directly into a specific tissue in the body, where it is taken up by individual cells. Alternately, a sample of the patient's cells can be removed and exposed to the vector in a laboratory setting. The cells containing the vector are then returned to the patient. If the treatment is successful, the new gene delivered by the vector will make a functioning protein or the editing molecules will correct a DNA error and restore protein function.



OSTEOPOROSIS

CAUSES OF OSTEOPOROSIS





Health Seminar
Dr Abhimanyu Singh
Dr Bhavin Mandowara
Bagyashree township

18th Feb 2024



DIVINE
डिवाइन साईंट होस्पिटल
हृदय रोग
यिवाग
(भारतवर्षी वने सेठजीवाचारी की तारावा)
PM-JAY / मनुष्याने सई मा (पुनःसृज)

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पदु मनुष्य
 84440 9224



**Nursing Training
Abhilasha
Module 1 by
Dr Reddys**





CPR & Cardiac Awareness Talk

@

**Nursing Oath Taking
Arya School of Nursing**





ANESTHESIA DEPARTMENT

DR SWAPNIL MODI



DR SWAPNIL MODI
ANESTHETIC & INTENSIVIST

DIVINE KUTCH LIFE
CARE HOSPITAL,
BHUJ

Consultant Profile - Dr Swapnil Modi Anesthetic & Intensivist

Education

MD Anesthesiologist
(Mahatma Gandhi Medical College, Sitapur, Jaipur)

Professional Membership

- Member of Indian Society of Anaesthesia (ISA)
- Member of Indian Society of Critical Care Medicine
- Member of Research Society of Anaesthesiology

Expertise

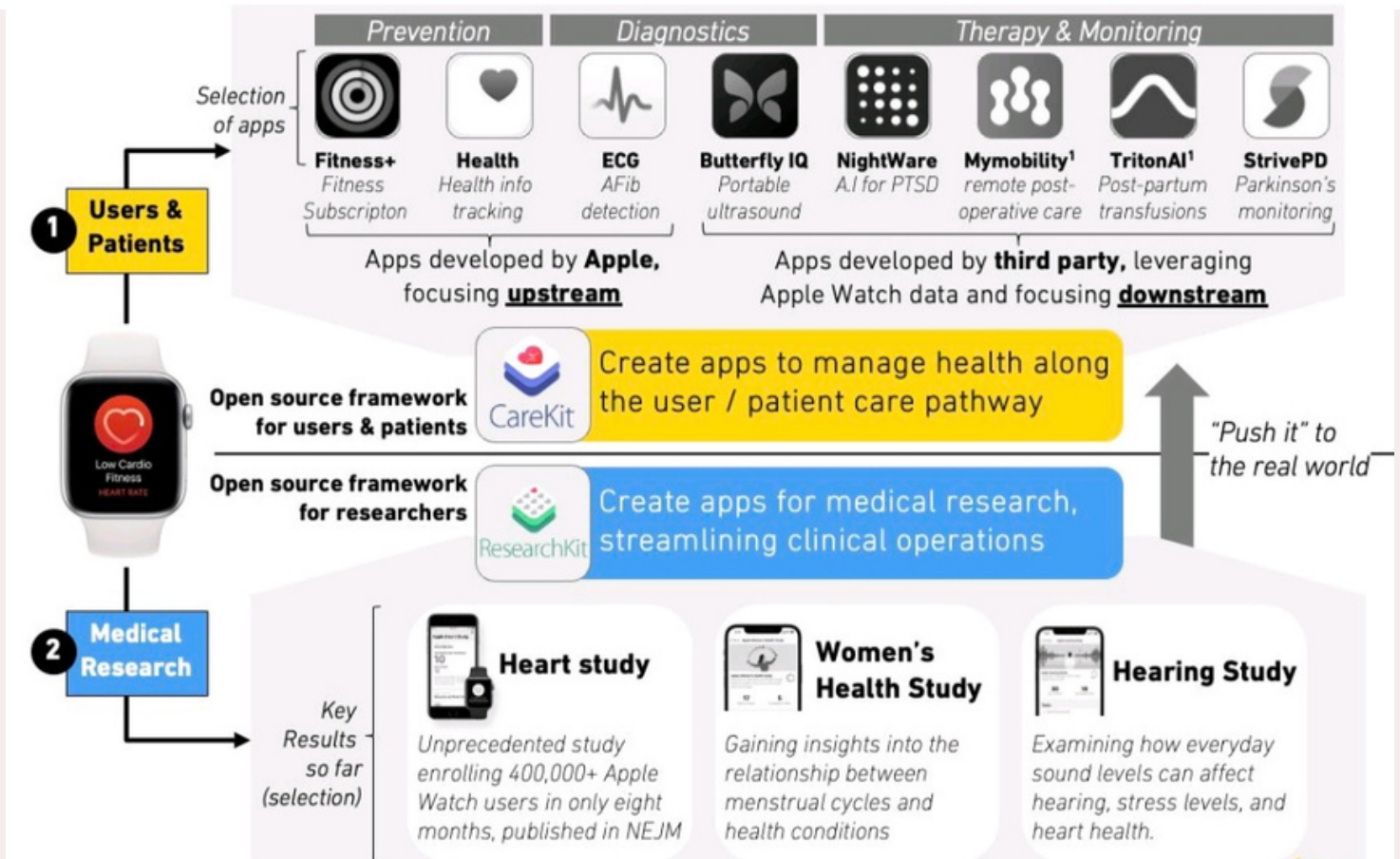
Percutaneous Tracheostomy, Intercostal drainage,
Difficult Airway Management
Point Of Care Ultrasound,
Regional Anaesthesia
Critical Care Medicine

Available Full Time

Divine Kutch Life Care Hospital, Bhuj

DIGITAL HEALTH ECOSYSTEM : APPLE WATCH

Apple is building a **digital health ecosystem** around its **Apple Watch** for both **1** users / patients and **2** researchers

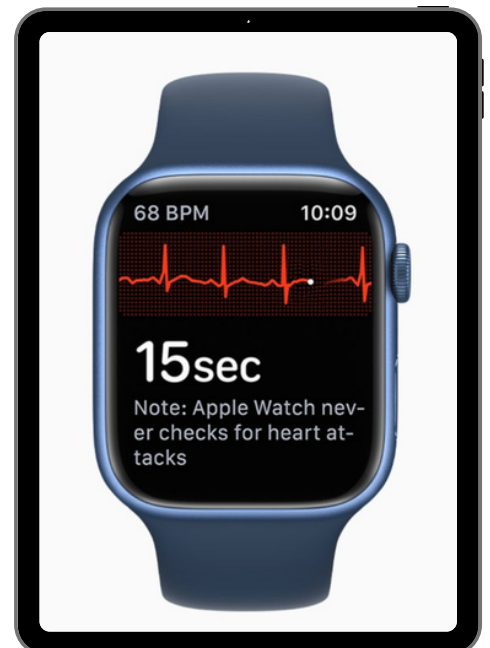


APPLE WATCH

Apple Watch has powerful apps that make it the ultimate device for a healthy life. And it can support you and your patients across multiple aspects of health, including heart health, mobility, activity, medications and more. Mobility and cardiovascular fitness can be strong indicators of overall physical health and a predictor of long-term well-being. Apple Watch and iPhone can provide estimates of mobility metrics to give you and your patients a better understanding of how they impact mobility today, and provide tools to monitor these factors over time. Mobility metrics include Cardio Fitness (VO2 max), 6-Minute Walk Distance and other metrics used to measure walking quality (Walking Speed, Step Length, Double Support Time and Walking Asymmetry).

FUTURE TECH

DIVINE
LIFE HOSPITAL
MANAGED BY MEDIAID HEALTHCARE LLP



Cuffed: Anytime pt. is going to require mech. ventilation positive pressure therapy. This will create a seal in the airway so that positive pressure goes down to the lungs and not up and around the uninflated cuff. Provides some protection against aspiration

Unfuffed: Pt. is going home with a trach tube with no need for mech. ventilation.

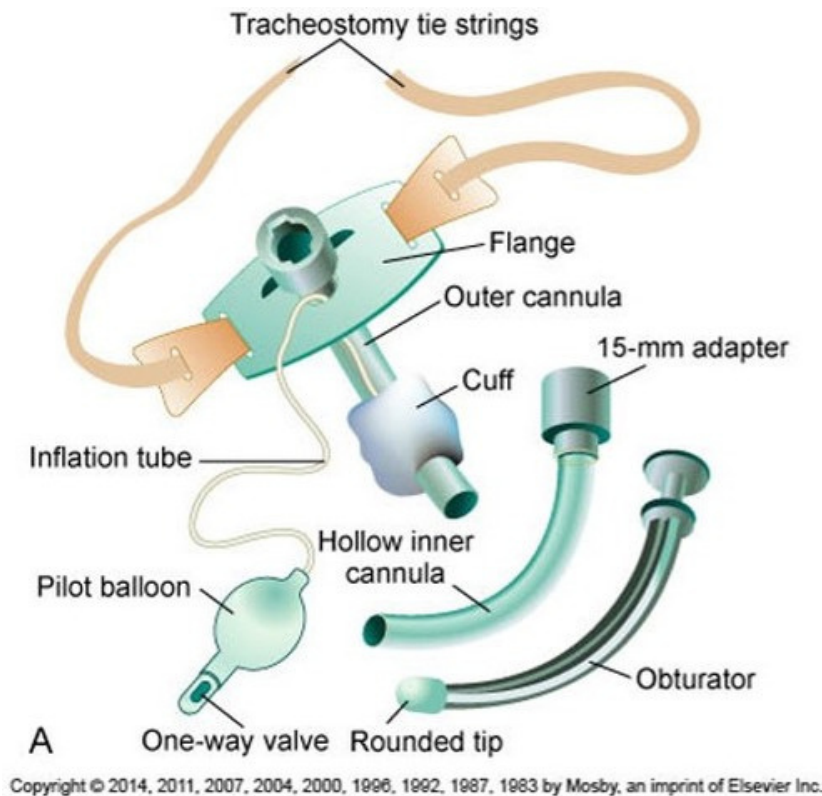
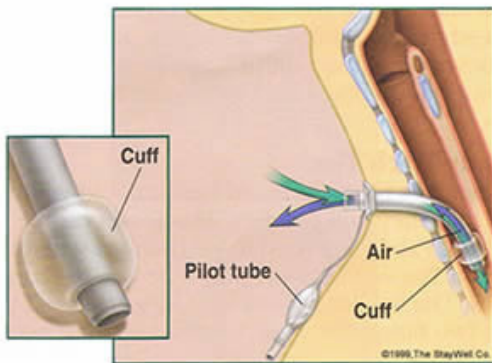
- Aids airflow to the larynx and facilitates speech

Cuff pressures are monitored once each shift to assure proper pressure Cuff pressures that are above 30 cm H₂O are reported to provider.

Recommended cuff pressure: 20 - 30 cm H₂O.

Suctioning Assessment is performed and documented every 4 hrs

Adults Vaccum pressure: -80 - -120



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Divine Hospital, Anjar

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admin@divinelifeadipur.com

MEDICOLEGAL CORNER



The Patient must not be neglected

Clause 2.4 of the I.M.C. (Professional Conduct, Etiquette and Ethics) Regulations, 2002 which reads as under:-

2.4 The Patient must not be neglected: A physician is free to choose whom he will serve. He should, however, respond to any request for his assistance in an emergency. Once having undertaken a case, the physician should not neglect the patient, nor should he withdraw from the case without giving adequate notice to the patient and his family.

> Provisionally or fully registered medical practitioner shall not willfully commit an act of negligence that may deprive his patient or patients from necessary medical care

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- ✓ Affordable
- ✓ Quality Care
- ✓ Best team of Doctors
- ✓ State of Art Equipments
- ✓ Trustworthy

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Divine Hospital - Anjar
Dialysis Center - Rapar