

MULTIPLE CHOICE QUESTIONS. UNIT 9 DIATHERMY.

THE ACTIVE ELECTRODE IS:

Select one:

- a. Held by the patient
- b. Used by the surgeon to cut or coagulate tissue
- c. Used to detect a heartbeat
- d. Where the RF (radio frequency) current returns to the machine

RETURN PLATES SHOULD BE PUT:

Select one:

- a. On a knee or elbow
- b. On the patient's forehead where it can easily be seen
- c. On a fleshy part of the patient like the thigh or buttock
- d. Secured firmly to the surgeon

THE INTERNATIONAL STANDARD COLOUR FOR COAGULATION IS:

Select one:

- a. Red
- b. Blue
- c. Yellow
- d. Green

MOST PATIENT INJURIES THAT HAPPEN IN THE OPERATING THEATRE ARE CAUSED BY:

Select one:

- a. The operating table
- b. The anaesthetic machine
- c. The surgical diathermy
- d. The pulse oximeter when measuring SpO₂

THERE ARE AUDIBLE ALARMS FOR CUT AND COAGULATE. WHICH ALARM FREQUENCY (PITCH) IS HIGHER?

Select one:

- a. Cut
- b. Coagulate
- c. They are the same, as RF output is produced for both cut and coagulation
- d. Actually, there are NO audible alarms for cut or coagulate. The only alarm is for a problem with the return plate circuit.

BLEND MODE IS:

Select one:

- a. When the surgeon wants to use the surgical diathermy at the same time as a patient monitor to monitor the heart
- b. When the anaesthetic given to the patient is a mixture of different gases
- c. When the active electrode will cut tissue and stop bleeding by coagulating at the same time
- d. When the return (plate) electrode is manufactured by a different company than the diathermy machine

IF THE POWER LIGHT DID NOT ILLUMINATE WHEN THE POWER SWITCH IS OPERATED, WHAT COULD BE THE PROBLEM?

Select one:

- a. The power light is faulty, but the machine will produce RF output
- b. The electrical power to the theatre (room) has failed
- c. The power cable (cord) is not firmly connected to the connector at the rear of the machine
- d. There is a blown fuse inside the machine
- e. Any of the above

USING A SURGICAL DIATHERMY MACHINE IN BIPOLAR MODE WILL ONLY WORK IF A PLATE ELECTRODE IS CONNECTED:

Select one:

- a. True
- b. False (not true)
- c. It depends on the power setting selected
- d. It depends on the size of the patient

THE SURGICAL DIATHERMY EQUIPMENT CAN CUT AND COAGULATE TISSUE BECAUSE:

Select one:

- a. The current is used to provide power to a surgical saw that moves a cutting blade backwards and forwards
- b. It freezes the tissues and makes them break apart
- c. The current from the diathermy machine is concentrated at the active electrode, and this high current density heats up the tissue that is close so that it vaporises
- d. The current flows into the patient, making a mark on the skin that shows the surgeon where to use his or her scalpel blade

THE FOOT SWITCHES (FOOT PEDALS) ARE OPERATED BY THE ANAESTHETIST:

Select one:

- a. Yes, because the surgeon is busy
- b. Only when the surgeon is not in the operating theatre (operating room, O.R.)
- c. No. They are normally operated by the surgeon or sometimes a surgical assistant
- d. Only if high power is needed

THE RISK OF RF BURNS WHEN USING A SURGICAL DIATHERMY CAN BE REDUCED BY:

Select one:

- a. Applying sunblock (cream) to the patient before surgery
- b. Making sure that the return circuit is firmly connected to the patient, and that no metal parts are accidentally touching them
- c. Always using a high power setting
- d. Pouring water onto the active electrode

WHAT WOULD YOU EXPECT TO SEE WHEN THE CUT OUTPUT SETTING IS INCREASED?

Select one:

- a. No change
- b. The sparking and smoke will increase
- c. The 'active output' alarm sound from the diathermy machine will get much louder
- d. The return plate monitoring alarm will sound

THE 'MAN IN A BOX WITH TWO PADDLES EITHER SIDE OF HIM' SYMBOL MEANS:

Select one:

- a. This machine must only be used inside a room
- b. The equipment is Type BF, Defibrillator Protected
- c. The equipment is Type CF
- d. The equipment must be a defibrillator

BIPOLAR FORCEPS ARE ALWAYS USED FOR CUTTING

Select one:

- a. True (yes)
- b. False (no)
- c. Only if the patient is very small
- d. Only if the patient is very ill

FIRE OR EXPLOSION CAN BE CAUSED BY THE RF OUTPUT FROM A SURGICAL DIATHERMY WHEN:

Select one:

- a. Oxygen is being given to the patient
- b. Cut or coagulation is being used when the patient has breathed ether
- c. Surgical drapes covering the patient have flammable cleaning fluid soaked into them
- d. A faulty diathermy machine is producing its maximum power output when it is set to a low output level
- e. All of the above

THE INTERNATIONAL STANDARD COLOUR FOR CUT IS:

Select one:

- a. Green
- b. Blue
- c. Yellow
- d. Whatever the hospital has decided to use

THE CURRENT DENSITY AT THE RETURN PLATE SHOULD BE LOW BECAUSE:

Select one:

- a. The diathermy machine must use as little power as possible or it will make the lights go out (stop working)
- b. This will reduce the risk of burns to the patient
- c. The adhesive (glue, sticky part) of the plate will only work if the current is low
- d. The plate will change from the international colour of yellow if the current is very high

SURGICAL DIATHERMY IS USED FOR:

Select one:

- a. Cutting body tissue
- b. Warming a cold patient
- c. Heating Intra-Venous (I/V) bags of fluid
- d. Treating muscle injuries

ANOTHER NAME FOR A SURGICAL DIATHERMY MACHINE IS A:

Select one:

- a. Patient monitor
- b. Electro-surgical generator
- c. Electro-surgical unit (ESU)
- d. Active electrode
- e. Active electrode OR Patient monitor
- f. Electro-surgical generator OR Electro-surgical unit (ESU)

CAN USING SURGICAL DIATHERMY CAN CAUSE INTERFERENCE TO AN ECG MONITOR OR MACHINE?

Select one:

- a. No. They are different types of machines, so it is not possible.
- b. Only if the diathermy machine and the ECG monitor are touching each other.
- c. Yes. Often it can be reduced by relocating the ECG electrodes (dots).
- d. No, because the two machines have separate power cables (cords).

WHAT CAN BE USED TO SIMULATE HUMAN TISSUE WHEN TESTING A SURGICAL DIATHERMY FOR RF OUTPUT?

Select one:

- a. A block of soap (it contains fat, like the human body does)
- b. A piece of animal meat
- c. A piece of plastic
- d. 1 Litre of water at exactly 38 degrees Centigrade (Celsius)
- e. A block of soap OR animal meat

THE SURGICAL DIATHERMY KNOWS THAT A SPLIT PLATE RETURN ELECTRODE IS IN USE BY:

Select one:

- a. A switch on the front panel must be set to the 'split plate' position
- b. It is not possible for the machine to know
- c. The plug that connects to the diathermy has a centre pin
- d. Only split plates must be used with surgical diathermy machines

A MAJOR PROBLEM WITH THE RETURN PLATE CIRCUIT IS USUALLY INDICATED BY:

Select one:

- a. The diathermy machine totally switching itself off
- b. An audible and visual alarm
- c. A buzzing sound from the active electrode
- d. No RF output from the machine