

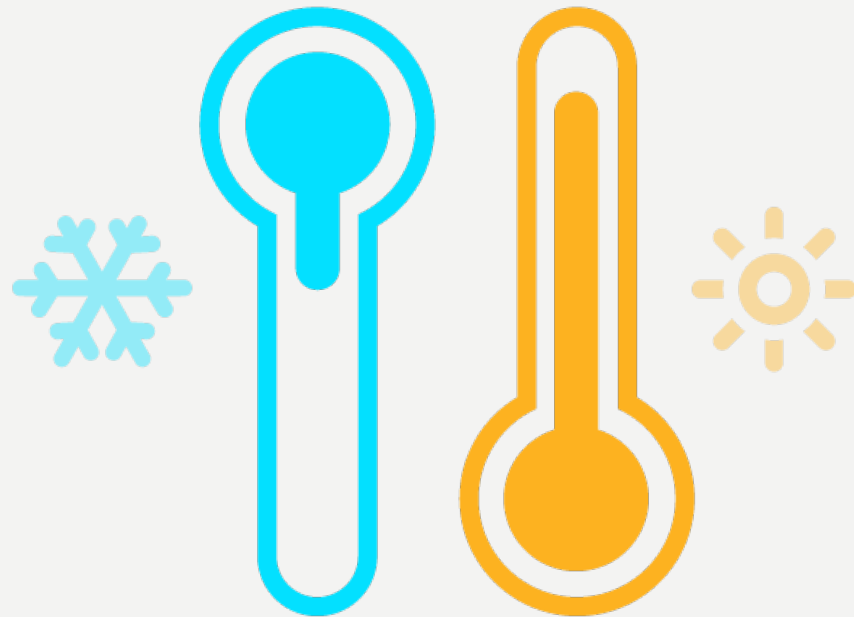
CASE 9

**POSTOPERATIVE
HYPOTENSION/
SHIVERING**

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**A - 78 YEARS OLD PATIENT HAD
TRANSURETHRAL PROSTATECTOMY
UNDER SPINAL ANESTHESIA. HE WAS A
KNOWN CASE OF DIABETES AND
HYPERTENSION ON TREATMENT.
POSTOPERATIVELY IN PACU PATIENT
WAS AGITATED AND STARTED
SHIVERING**

WHAT ARE THE ROUTINE MONITOR IN PACU:



Vital
signs

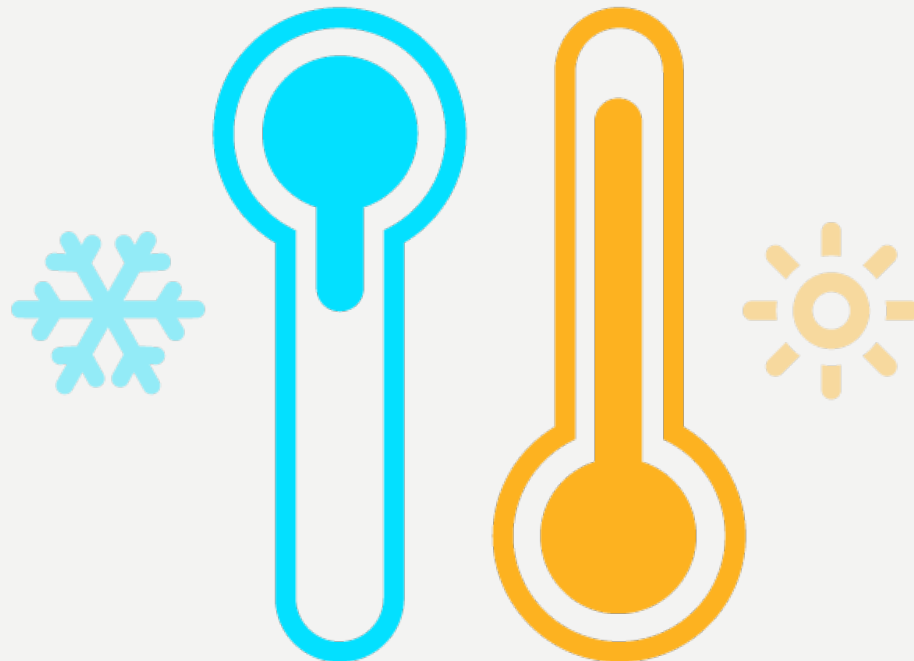
Respiration:
RR\min ,
Rhythm, pulse
oximetry

Circulation:
Pulse rate\min
BP
ECG

level of
consciousness
And Pain
score

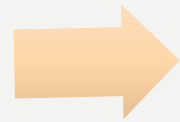
**The patient blood pressure was 89/40, HR: 85/MIN, RR: 23/ MIN
SPo2 difficult to read because of patient shivering**

WHAT MAY BE THE CAUSES OF POSTOPERATIVE HYPOTENSION?



Decreased preload

- Hypo-volemia
- Vaso-dilation
- Patient position



Decreased Afterload

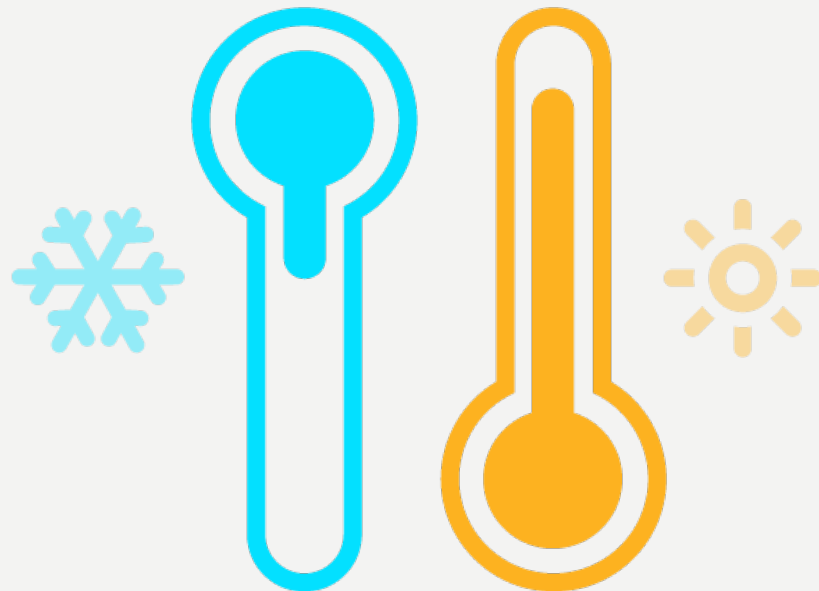
- Sepsis
- Anaphylaxis
- Endocrine abnormalities



Decreased Contractility

- Inotropic depressant drugs
- Cardiac diseases

DISCUSS THE MECHANISMS OF INTRAOPERATIVE HEAT LOSS?



THE BODY LOSES HEAT IN FOUR WAYS:

1\ **Radiation 40%** Transfer of electromagnetic energy between two bodies of different temperature.

2\ **Convection 30%** Energy transfer will be greater if the air immediately adjacent to a patient skin is repeatedly disturbed.

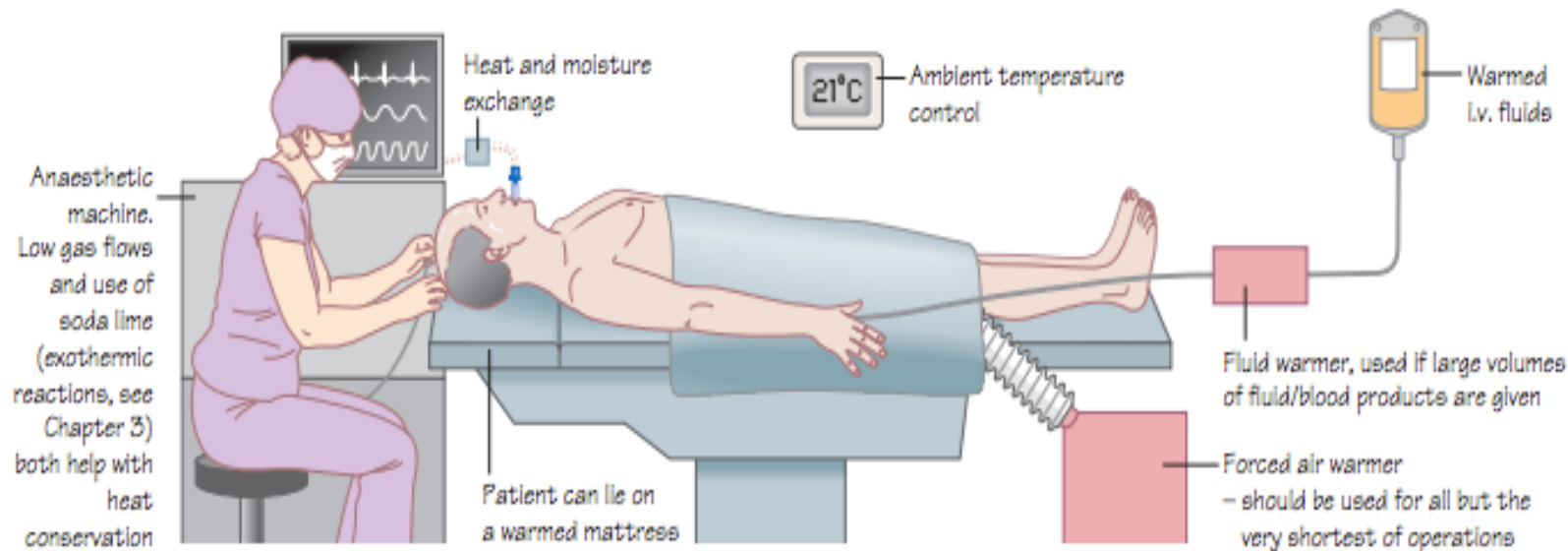
Evaporation 25% As water becomes vapour, heat energy is lost as latent heat of vaporization. This type of heat loss will be increased if a large surface is exposed to evaporation, e.g. loops of bowel during a laparotomy. Surgical skin prep increases heat loss in this way. 10% is lost via respiratory water vapour

Conduction 5% Transfer of heat energy by direct contact between two objects of differing temperatures, e.g. a patient being in direct contact with the operating table. A patient lying in a pool of fluid or wet sheets will lose an increased amount of heat via conduction .

METHODS FOR MAINTAINING BODY TEMPERATURE IN AN ANESTHETIZED PATIENT?



Figure 7.3 Methods to maintain temperature in an anaesthetized patient



ANESTHETIC MACHINE. LOW GAS FLOWS AND USE OF SODA LIME (EXOTHERMIC REACTIONS) BOTH HELP WITH HEAT CONSERVATION.

LIE ON A WARMED MATTRESS

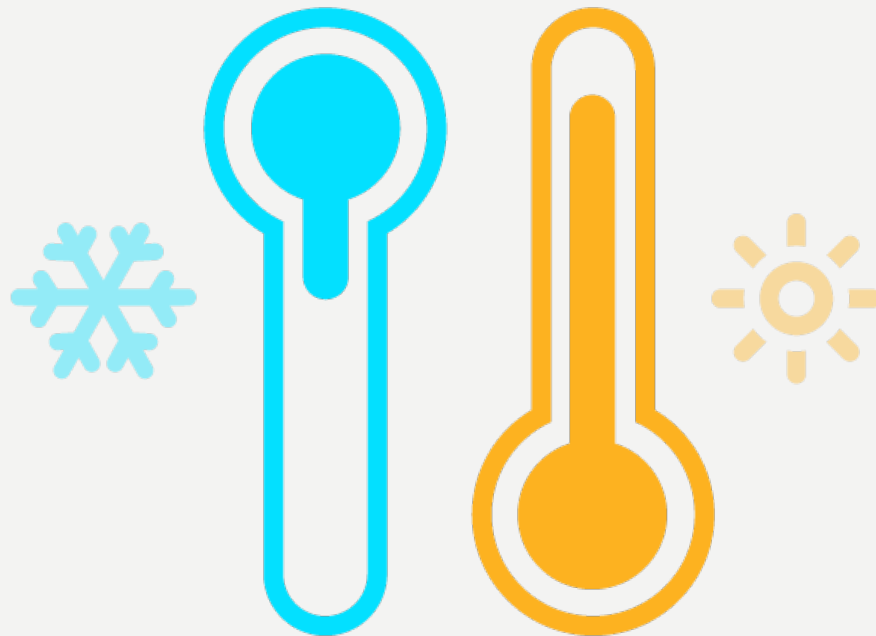
**WARMED BLANKETS.
SIMPLE AND EFFECTIVE FOR SHORT CASES.**

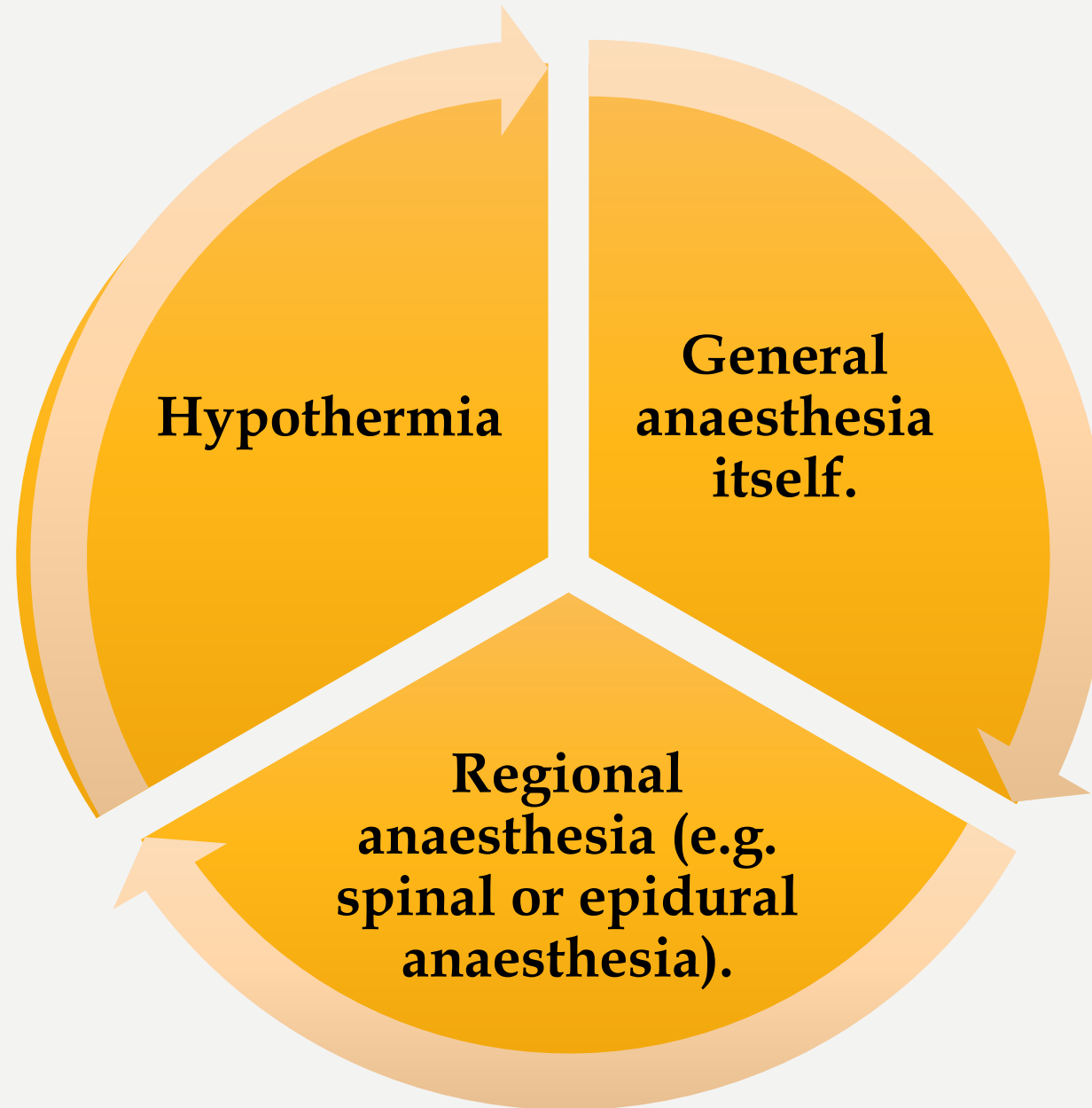
WARMED/HUMIDIFIED GASES: A HEAT AND MOISTURE EXCHANGE FILTER IS USUALLY INCORPORATED INTO THE BREATHING CIRCUIT. THIS ABSORBS HEAT AND WATER VAPOUR FROM EXHALED RESPIRATORY GASES AND HELPS WARM AND HUMIDIFY THE NEXT DELIVERY OF GASES TO THE PATIENT.

IT IS NOT AS EFFECTIVE AS ACTIVE WARMING METHODS.

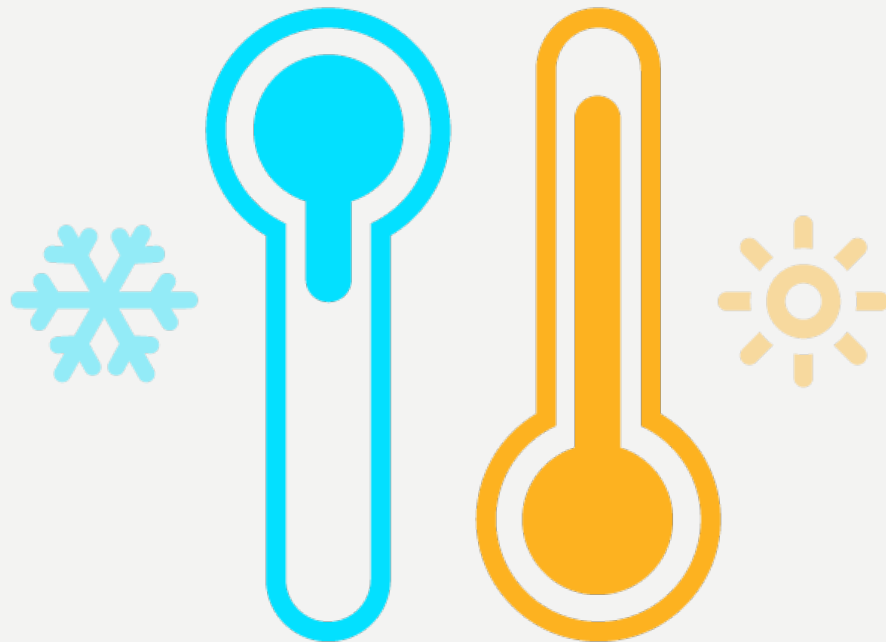
AMBIENT TEMPERATURE. IN MODERN OPERATING THEATRES TEMPERATURE CAN BE ACCURATELY CONTROLLED AND SHOULD BE AT LEAST 21°C.

WHAT ARE THE CAUSES FOR POST-OPERATIVE SHIVERING ?





HOW WILL YOU MANAGE THIS CASE?



1- Increase the blood pressure:

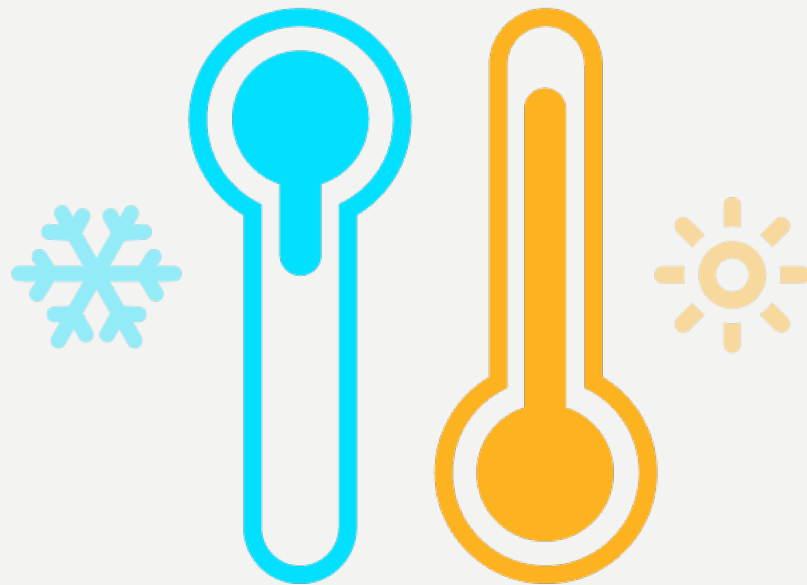
A \fluid replacement is the immediate step to correct the Hypotension.

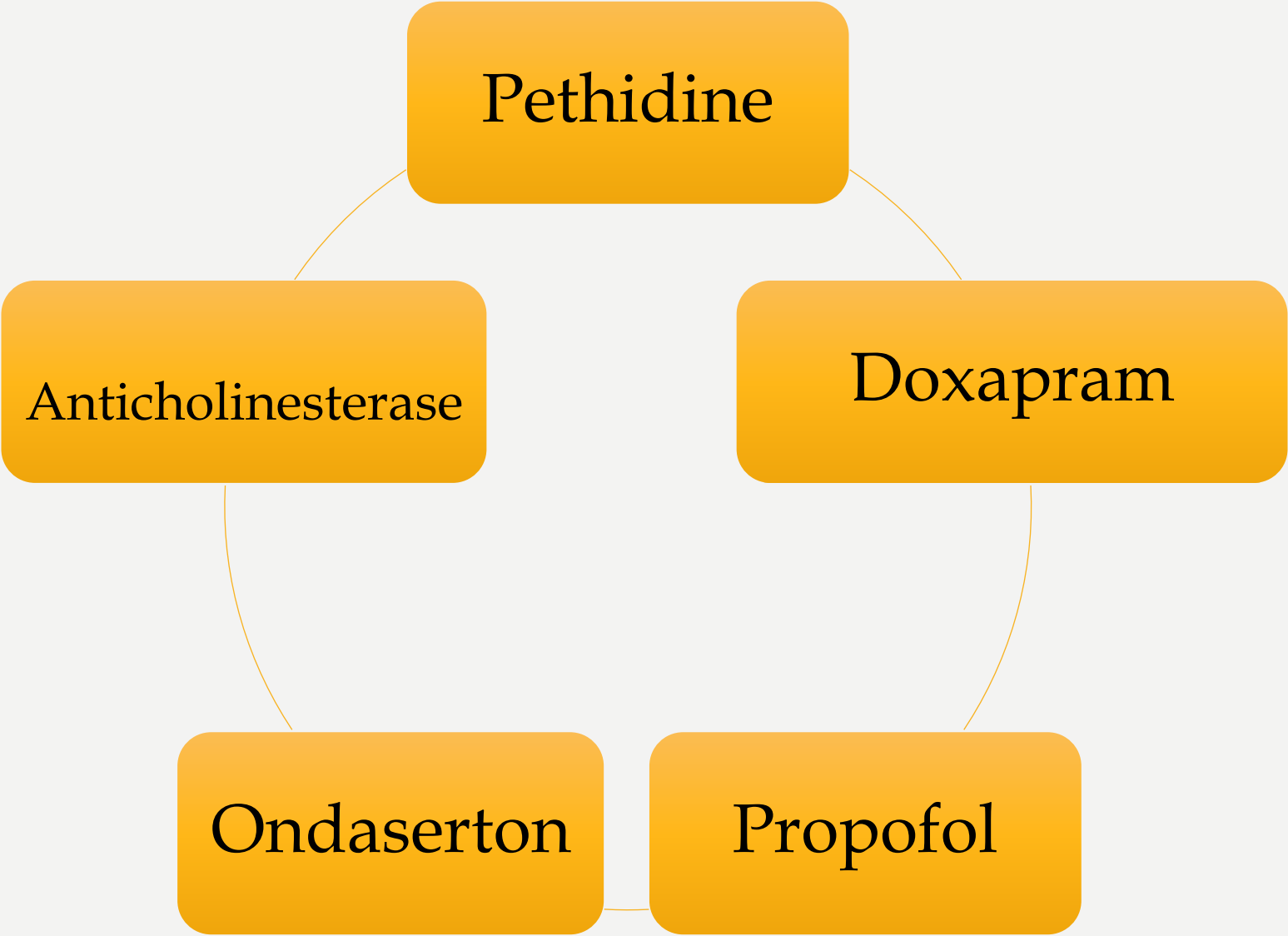
B \Medication
Vasopressors

2- Treat the underlying causes of hypotension :

identify the causes of postoperative hypotension is essential , causes include : OR deficit, haemorrhage , cardiac cause or it could be related to regional anesthesia and treat accordingly.

WHAT DRUGS CAN BE USED FOR THE PREVENTION OF POSTOPERATIVE SHIVERING?





THANK YOU!

