

# Stressresponse shock and SIRS



**II and III semester Udine  
Acute nursing and assesment**

**Waltraut Lissau 2017**

# Purpose & aim



- Gain knowledge of shock
- Recognising and observing symptoms of shock
- Knowledge of septicaemia/SIRS and the implication for the organism.
- Understanding the changes in the clinical presentation of the patient
- Ability to act adequately to these changes

# Stressresponse of the organism



Protection and survival

- FEAR, FIGHT, FLIGHT
- ALERT, AWARE, AWAKE

Only appropriate for at short time



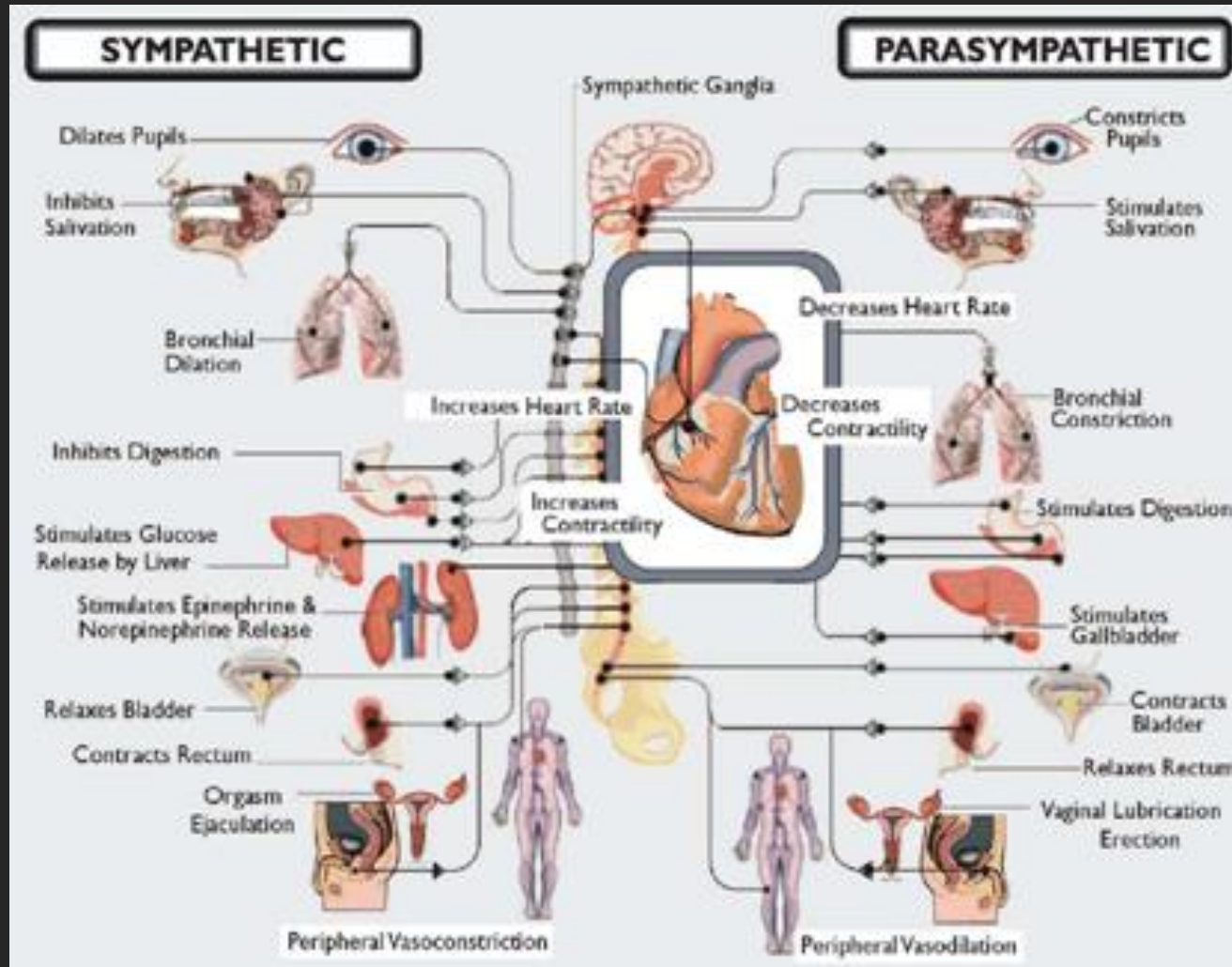
# Triggers



- Injuries as trauma and surgery
- Increased demands on the organism; infections, fever, pain, dehydration, hypoglycaemia, fasting, ischaemia, low perfusion, multiple transfusions, metabolic and homeostatic stress.
- Emotional trauma as anxiety, anger and duress/force

# Sympathetic nervous system - compensating mechanisms –

Adrenale response- neurohormonal- Renine-angiotensine-  
ADH- ACTH



# Shock

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A condition of insufficient supply of oxygen and nutrients to organs and tissue, to maintain an aerobic metabolism

Left untreated, shock is always fatal

# ABCDE



**ABCDE** is a systematic approach for **observation** and **treatment** of critically ill patients

**ABCDE** the aim of the ABCDE principle is to stabilize vital functions in order to commit further investigations and diagnostics

**ABCDE** is a tool to assist you in prioritizing the treatment of a severely ill patient, to ensure that you treat the most life-threatening first.



# ABCDE primary assessment



- **Airway** – Airway obstruction?
  - **Breathing** – Respiratory status?
  - **Circulation** –Circulatory status –BP & P?
  - **Disability** –Neurological status/drugs/glucose levels?
  - **Exposure/Environment** –External influences/fever
- <https://www.resus.org.uk/resuscitation-guidelines/abcde-approach/>
- <http://www.trauma.org/> moulages- for playing while studying 😊

# Hypovolemic shock



## **Aetiology:**

- Loss of bloodvolume and/or extracellular volume

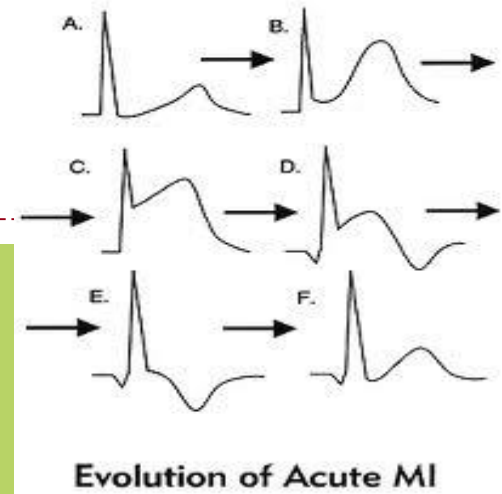
## **Symptoms :**

- Low bloodpressure, tachycardia, low saturation, oliguria- anuria
- Confusion, blurred sensorium, anxiety
- Vasoconstriction
- Bradycardia

## **Treatment:**

- causal
- Fluids i.v., blod/plasma-transfusion
- Trendelenburg position .

# Cardiogenic shock



## Aetioloogy:

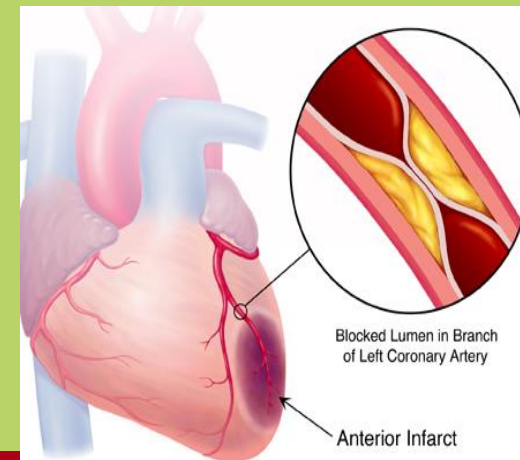
- AMI, Cardiomyopathy, toxic, large pulmonary embolism
- Diseases of the pericardium- infection, exudate ex. post surgery

## Symptoms:

- Moist, sweaty, dyspnoea, paleness, hypoxia, frequently awake patient. Oliguria
- Low bloodpressure, weak tachycardic pulse, (by arrhythmia and toxicity the frequency may be low)
- Rightsided insuff.: jugular vein stasis and liver-stasis
- Leftsided insuff.: Lungestase -> lungeødem

## Treatment:

- Airways -> Oxygen, pain management
- Kausal, Trendelenburg with precaution!!!



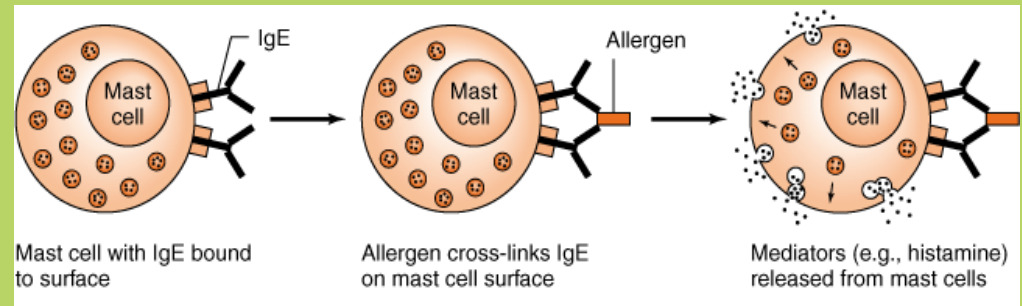
# Anaphylactic shock- Often hyperacute onset!



[Be Safe from Anaphylaxis-Mayo Clinic - YouTube#t=103](#)

## Aetiology:

- Allergies, often known – antigen -> reaction with release of histamine by stimulation of IgE on mastcells



## Symptoms :

- Low -> unmeasurable bloodpressure, swelling increased secretion in the throat
- exanthema- waxing and waning within minutes
- Low saturation, oliguria or anuria, headache, nausea vomiting
- Loss of consciousness – respiratory arrest – cardiac arrest

# Anaphylactic shock



## **Treatment:**

- Oxygen by mask with reservoir (10-15l O<sub>2</sub>)
- Trendelenburg OBS **A**irway og **B**reathing
- Adrenalin i.m. (0,5 mg)

The above are hyperacute lifesaving actions!

- Antihistamine i.v.
- Glucocorticoid i.v.
- i.v. fluid therapy (NaCl- isotonic)
- Observation until when????

# Less frequent forms of shock



## Endocrine shock

### Definition:

- Lack of stressresponse
- Hypoglycemic shock
- Adrenal insufficiency.  
(Addisons crisis)
- Thyroid storm

**Diagnosis:** Patient anamnesis,  
bloodanalysis

**Treatment:** Glucose i.v.  
Dexamethason, L-thyroxin,  $\beta$ -  
blockers

## Neurogen shock

### Aetiology:

- Traumatic spinal lesion
- > sympatic innervation lost
  - -Venous pump
  - Low bloodpressure no  
compensatoric tachycardia

When medulla lesions are high –  
as in thoracic- bradycardia.

### Treatment:

- Leg elevation  
-trauma team