CHUC
HOSPITAL
PEDIÁTRICO

# HISTÓRIA CLÍNICA

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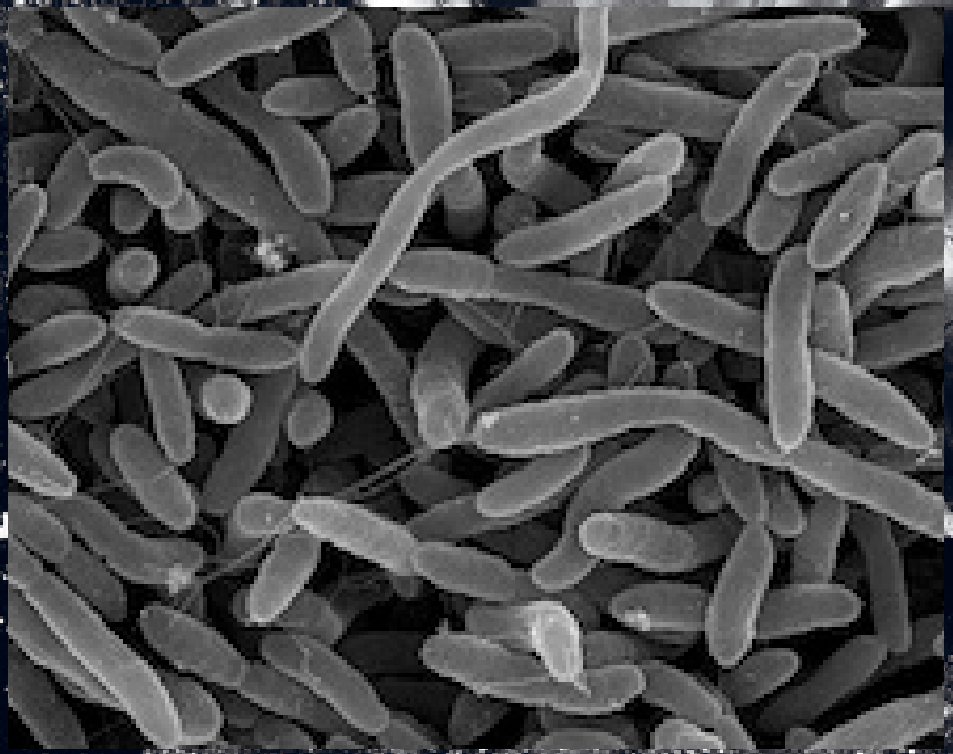
# FAMÍLIA

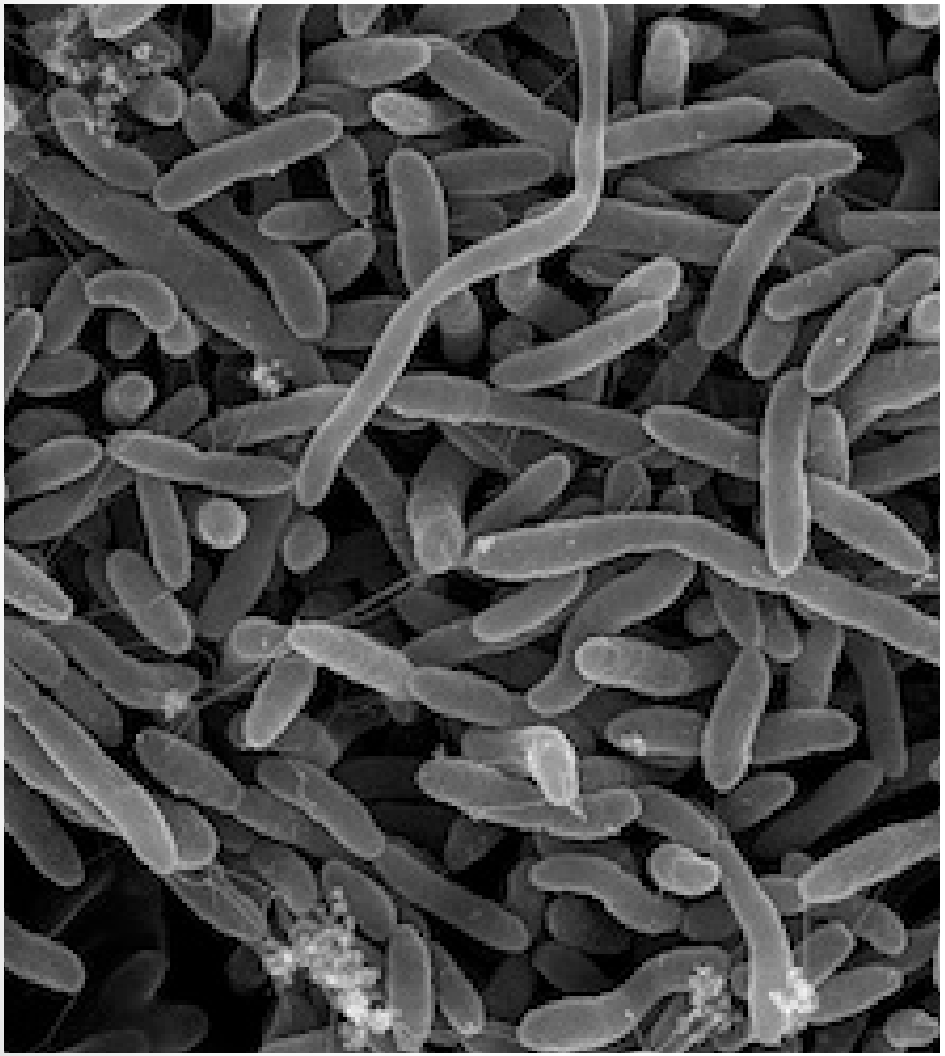
AF:
- Pais não consanguíneos
- Sem AF de morte súbita ou doença CV <55 anos ♂ / <65 anos ♀
- Sem AF de CCong

* doença CV - EAM, Cx / PCT coronárias, AVC

- Disritmias → QT longo / QT curto, Brugada, TVPC
- Cardiomiopatias → MCH, MCD, DAVD
- Outros → Diabetes, HTA, Dislipidémia (++familiar)



# PRÉ NATAL

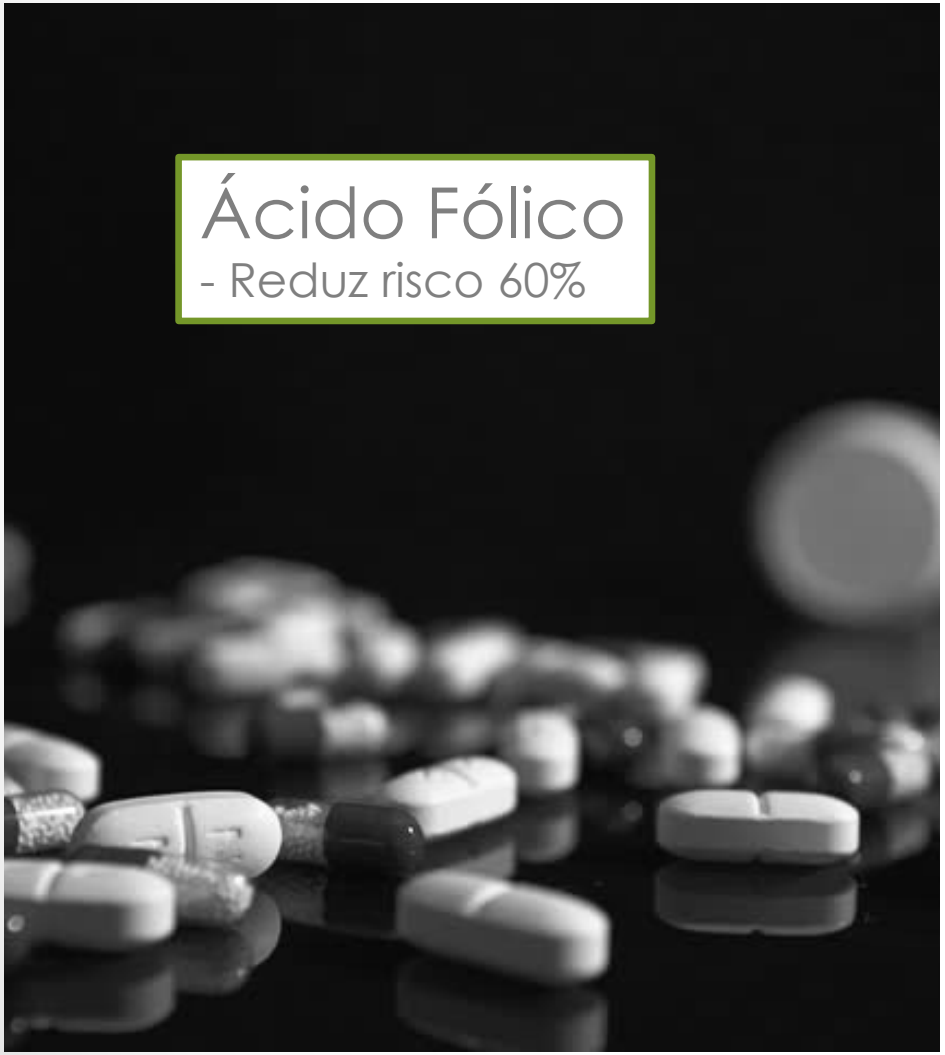


## INFEÇÕES

- ToRCH → CoRCHHI
  - Coxsackievirus B
  - Rubéola Virus
  - Citomegalovirus
  - Herpes Virus
  - HIV (cardiomiopatia infância)
  - Influenza

**1º TRIMESTRE !!!**

# PRÉ-NATAL




## FÁRMACOS

- Antiepilépticos / Ansiolíticos (CIA, CIV, PCA, **EP**, **AP**, **EAo**, **CoAo, SVEH**)
  - Fenitoina
  - Valproato
  - Trimetadiona
  - Barbitúricos
  - BZD
- Lítio (anomalia de **Ebstein**)
- IECA's / ARAII (CIA, CIV, PCA, **EP**)
- Anfetaminas (CIA, CIV, PCA, **TGA**)
- Ibuprofeno (CIV, **DSAV**, **TGA**)

## ÁLCOOL (CIA, CIV, PCA, **TOF**)

# PRÉ NATAL

## PATOLOGIA MATERNA

- Cardiopatia Congénita
  - 3,2% (1ºgrau) até **15% (mãe)**
  - 1,8% (2ºgrau)
  - 1,1% (3ºgrau)
- Diabetes não-gestacional
  - 5% risco CCong (Cardiomiop, TGA)
- Doenças do Colagénio
  - Autoimunes (BAV Cong)
  - Hereditárias *
- PKU
  - 6% risco CCong

# NASCIMENTO

- IGestacional
  - CCong * risco 2x maior de parto PT
- APGAR
- Ressuscitação ? / Inotrópicos ?
- Cianose ? / Necessidade de O2 sup ?
- Peso Nascimento
  - PIG – Infeções / Medicação / Álcool
  - GIG – Diabetes / TGA

* Após exclusão de cromossomopatia e outras malformações

# PÓS NATAL

**LACTENTE**

- Evol Estatoponderal
- Evol Psicomotora
- Cianose
- Padrão alimentação
- Taquipneia, Dispneia

**INFÂNCIA / ADOLESCÊNCIA**

- **Toracalgia / Precordialgia**
- **Síncope**
- **Palpitações**
- Intolerância ao Exercício
- Sintomas Articulares
- Sintomas Neurológicos
- Medicação

- Sintoma al
- 1-5% dos n

**Table 1** Major causes of chest pain in children with approximate percentage of all chest pain presentations from published literature[1 3 4 6]

| Group | Pathogenesis | Approx. percentage |
|---|---|---|
| Musculoskeletal | Costochondritis<br>Tietze's syndrome<br>Precordial catch | 24–56 |
| Respiratory | Cough<br>Bronchospasm<br>Pleuritic processes (pneumonia/ pneumothorax/pulmonary embolus) | 7–20 |
| Idiopathic | | 12–52 |
| Psychogenic | Anxiety<br>Hyperventilation/disordered breathing | 1–9 |
| Gastrointestinal | Acid reflux<br>Oesophagitis<br>Gastric ulceration | 3–6 |
| Miscellaneous | Herpes Zoster<br>Sickle cell crisis<br>Tumours (chest wall/mediastinal) | 4–11 |
| Cardiac | Pericarditis<br>Arrhythmia<br>Myocardial ischaemia (eg, aortic stenosis, hypertrophic obstructive cardiomyopathy, coronary artery disease)<br>Mitral valve prolapse<br>Myocarditis | 0.6–1 |

**Table 1**
**Frequency of causes**

| Cause | Cardiology Clinic (%)[4,10–12] |
|---|---|
| Idiopathic/cause unl | 37–54 |
| Musculoskeletal/cos | 1–89 |
| Respiratory/asthma | 1–12 |
| Gastrointestinal/gas reflux disease | 3–12 |
| Psychogenic | 4–19 |
| Cardiac | 3–7 |

**Box 1**
**Differential diagnosis of pediatric chest pain**

*Cardiovascular*

- Arrhythmia
- Coronary artery disease (anomalous coronary arteries, acute Kawasaki disease [coronary arteritis], premature atherosclerosis [eg, dyslipidemia])
- Coronary artery vasospasm (toxicologic ingestion [cocaine, marijuana])
- Structural (hypertrophic cardiomyopathy, valvular stenosis [pulmonary, aortic], mitral valve prolapse)
- Myocarditis
- Pericarditis
- Endocarditis
- Congenital absence of pericardium
- Aortic aneurysm or dissection (Marfan, Turner, and Noonan syndromes)

*Respiratory*

- Asthma
- Pneumonia
- Pneumothorax/pneumomediastinum
- Pulmonary embolism
- Pleuritis/pleural effusion (eg, systemic lupus erythematosus)
- Pleurodynia (coxsackievirus)
- Chronic cough
- Airway foreign body

*Abdominal and gastrointestinal*

- Esophagitis (gastroesophageal reflux disease, eosinophilic esophagitis, bulimia, pill esophagitis)
- Esophageal foreign body
- Esophageal spasm/dysmotility
- Gastritis
- Hiatal hernia
- Referred pain from abdominal trauma (Kehr sign)
- Cholecystitis

*Musculoskeletal and chest wall*

- Chest wall strain (exercise, overuse injury, forceful coughing)
- Skeletal (chest wall or thoracic spine) anomaly
- Trauma (contusion/rib fracture)
- Costochondritis/Tietze syndrome
- Slipping rib
- Precordial catch (Texidor twinge)
- Breast tenderness
- Cutaneous (eg, herpes zoster)

*Psychiatric*

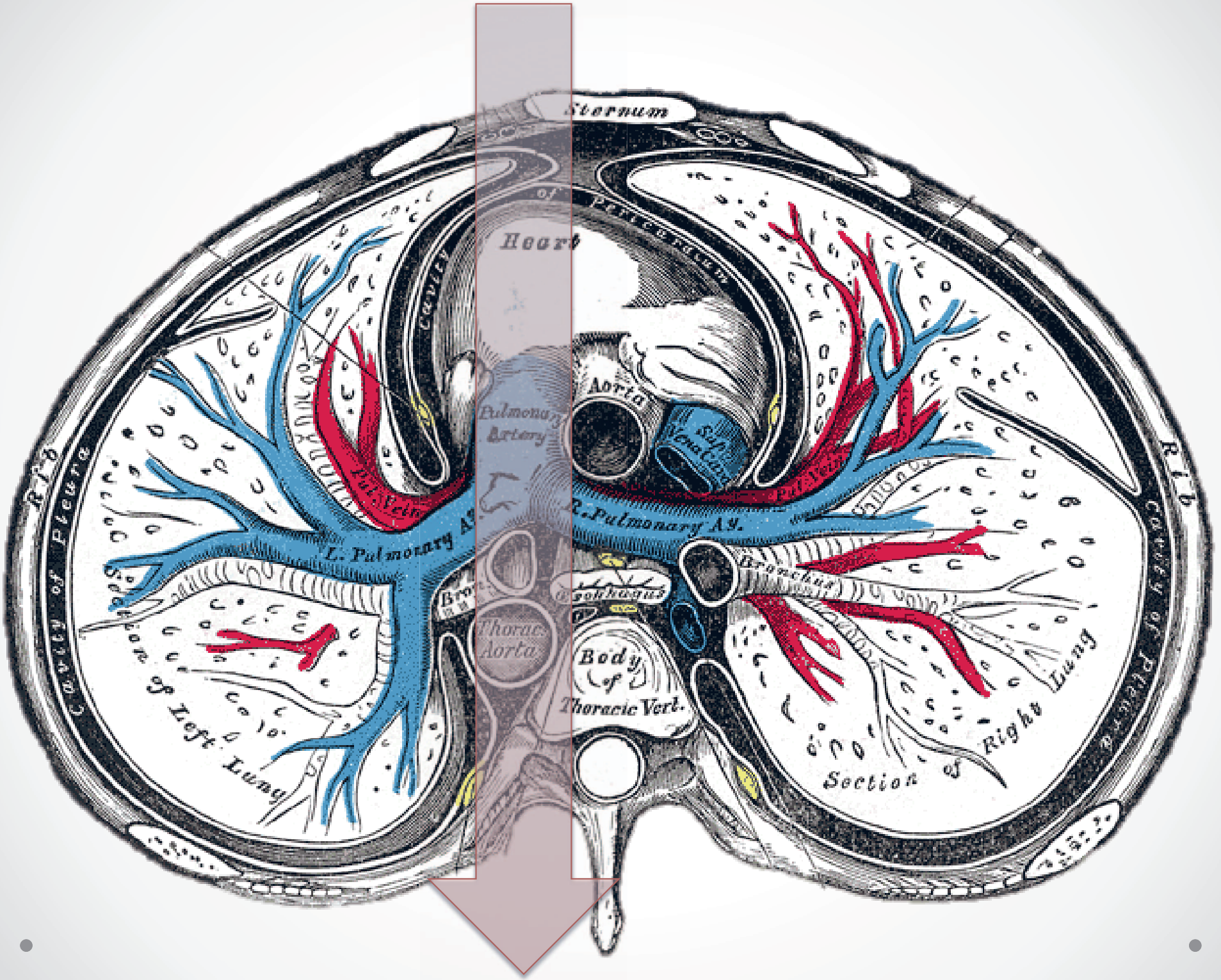
- Anxiety
- Panic
- Somatoform disorder (eg, conversion)
- Depression
- Emotional distress

*Hematologic and oncologic*

- Sickle cell disease
- Chest wall, thoracic, or mediastinal tumor

*Neurologic*

- Migraine
- Spinal nerve root compression


Sternum
Heart
Aorta
Pulmonary Artery
R. Pulmonary Ay.
L. Pulmonary Ay.
Thorac. Aorta
Body of Thoracic Vert.
Section of Right Lung
Section of Left Lung
Rib
Cavity of Pleura

# CARACTERÍSTICAS

## MUSCULOESQ

- Bem localizada
- Picada / Facada
- Pode irradiar
- Unilateral *
- Agrava insp / mov / tosse
- Reprodutível palpação

## RESPIRATÓRIO

- **Pleura** – Picada / Facada
- **Asma** – Opressiva
- Localização variada
- Agrava inspiração
- Sensib muscular *
- AP !! / EO !!

# CARACTERÍSTICAS

## GASTROINTEST

- Opressiva / Pirose
- Retroest / Epig / Central
- Relação alimentação / Posturas
- AP !!

## PSICOGÉNICA

- Triggers emocionais
- Aperto torácico
- Hiperventilação
- AP !!

# CARACTERÍSTICAS

## CARDIACA

- Localização central
- Opressiva *
  - * Pericardite – dor tipo pleurítica – alivia sentado + inclinado
- Pode irradiar → ombro, braço esq, mandibula
- Sintomas autonómicos → palidez, sudorese, náuseas
- Pré síncope, Síncope, Palpitações

# NÃO ESQUECER...

- Desde quando?
- Localização?
- Características?
- Duração?
- Desencadeantes?
- Alivia / Agrava?
- Sintomas associados?
- AP relevantes
- AF relevantes

# RED FLAGS

- Personal past or current history of acquired or congenital cardiac disease*
- Exertional syncope
- Exertional cardiac-type chest pain
- Hypercoagulable or hypercholesterolaemic state
- Family history of:
  sudden death under 35 years of age
  young onset ischaemic heart disease
  inherited arrhythmias such as long QT syndrome or Brugada
- Implantable cardioverter defibrillators in situ
- Connective tissue disorders
- History of cocaine/amphetamine use

*Although a history of congenital heart disease is not necessarily a risk factor for chest pain, in the absence of other obvious diagnoses, referral back to the paediatric cardiologist for reassurance may be appropriate.

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# SÍNCOPE

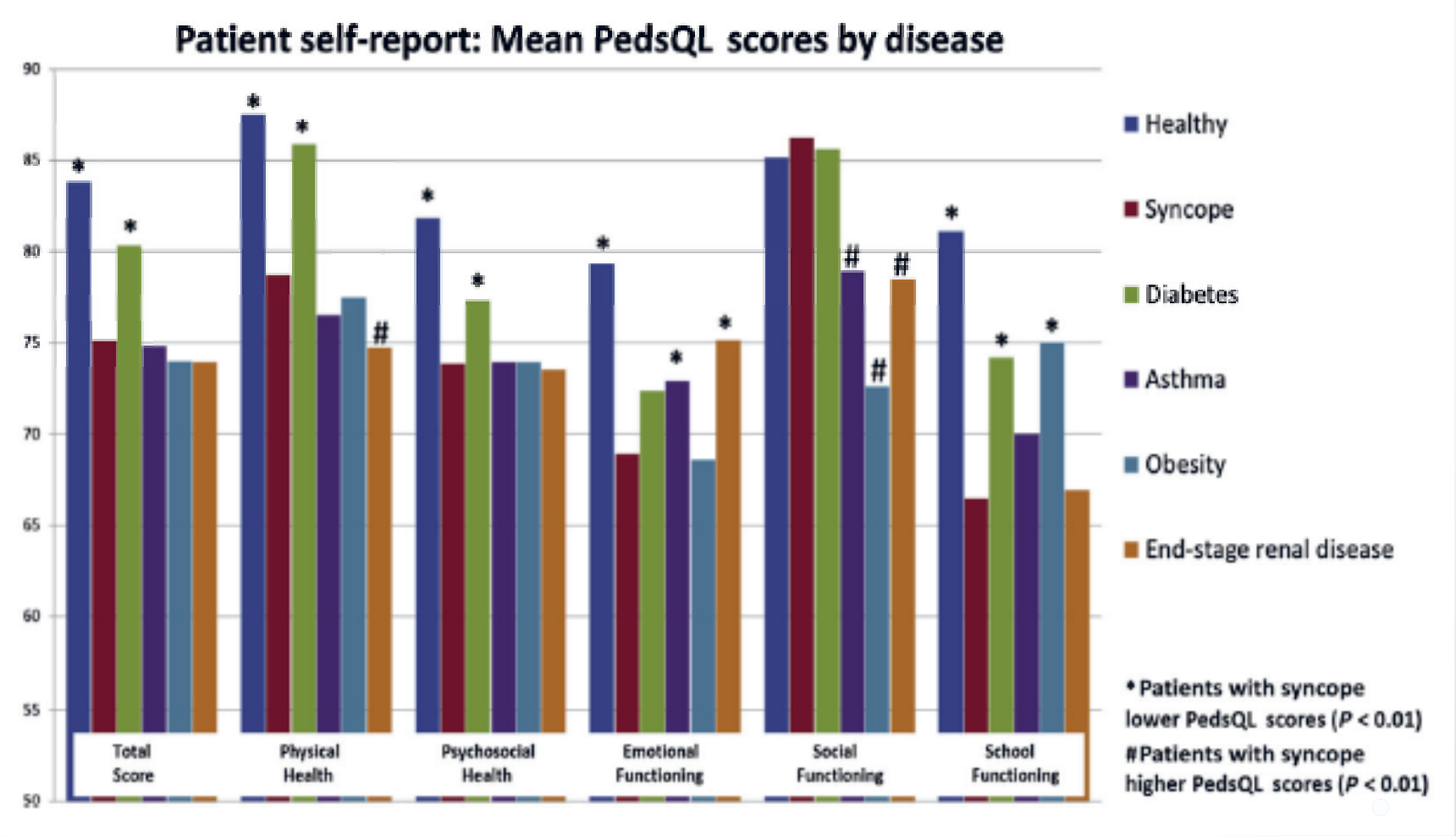
*Syncope* is a T-LOC due to transient global cerebral hypoperfusion characterized by rapid onset, short duration, and spontaneous complete recovery.

≠ CRISE

A seizure is a clinical event (loss of consciousness, abnormal involuntary movements, etc.) associated with an abnormal, excessive, and hypersynchronous electrical discharge in a group of cortical neurons.[15,16] Several types of

# SÍNCOPE

- Constitui 1-5% dos motivos consulta em SU
- Co
- Pic
- + f
- + c
  de



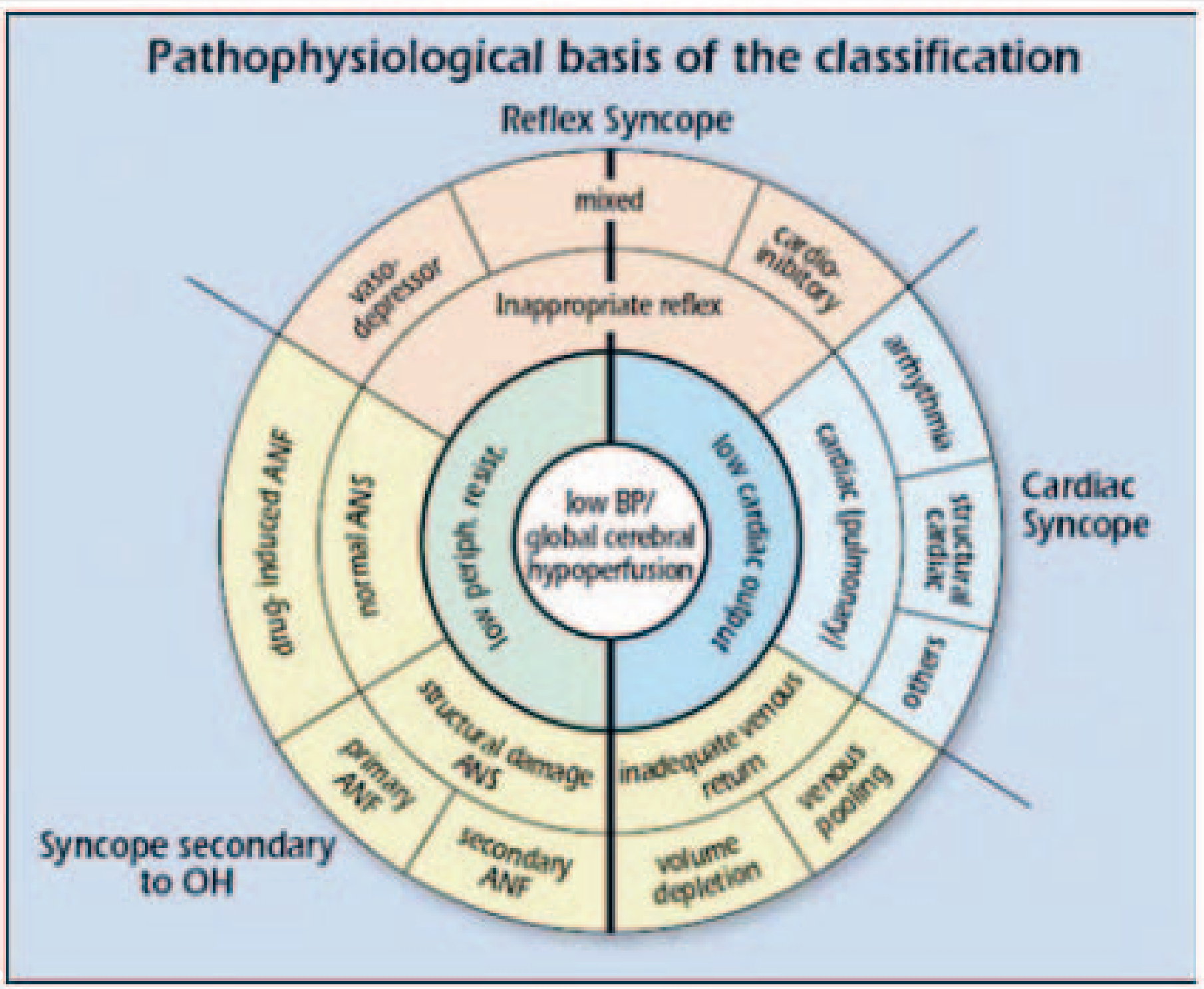

Pathophysiological basis of the classification
Reflex Syncope
mixed
vaso-depressor
cardio-inhibitory
Inappropriate reflex
arrhythmia
structural cardiac
others
Cardiac Syncope
cardiac (pulmonary) output
low cardiac output
low BP/ global cerebral hypoperfusion
low periph. resist.
drug-induced ANF
normal ANS
structural damage ANS
primary ANF
secondary ANF
inadequate venous return
venous pooling
volume depletion
Syncope secondary to OH

**Table 1**
**Causes of pediatric syncope**

| Noncardiac | Cardiac |
|---|---|
| Vasodepressor syncope | Arrhythmias |
| Orthostatic hypotension | Ventricular tachycardia |
| Postural orthostatic tachycardia syndrome | No congenital heart disease |
| Exercise-related syncope | Postoperative congenital heart disease |
| Breath-holding syncope | Supraventricular tachycardia (ie, Wolff-Parkinson-White syndrome) |
| Tussive syncope | Ion channel abnormalities |
| Situational syncope | Long-QT syndrome |
| Dysautonomia | Congenital |
| Carotid sinus hypersensitivity | Drug induced |
| Neuropsychiatric | Brugada syndrome |
| Seizure | Atrioventricular block |
| Migraine | Congenital |
| Hyperventilation | Acquired (ie, Lyme disease) |
| Conversion syncope | Arrhythmogenic right ventricular disease |
| Intracranial tumors | Pacemaker malfunction |
| Metabolic | Sick sinus syndrome |
| Hypoglycemia | Commotio cordis |
| Electrolyte disorder | Obstructive Lesions |
| Malnutrition | Hypertrophic cardiomyopathy |
| Endocrine disease | Valvular aortic stenosis |
| Drugs and toxins | Primary pulmonary hypertension |
| Carbon monoxide poisoning | Eisenmenger syndrome |
| Pregnancy | Myocardial dysfunction |
| Normal pregnancy | Primary ventricular dysfunction |
| Ectopic pregnancy | Dilated cardiomyopathy |
| Pulmonary embolism | Neuromuscular disorders |
| Pregnancy-related cardiac disease | Secondary ventricular dysfunction |
| | Inflammatory disease |
| | Acute myocarditis |
| | Kawasaki disease |
| | Ischemia |
| | Anomalous coronary artery |
| | Kawasaki disease |
| | Cardiac tumors |

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CARDIACO
ARRITMICO
VASOVAGAL

# CARACTERÍSTICAS

**SITUAÇÃO**

- Acordar / duche / biped prolongada – vasovagal
- Jejum - hipoglicémia
- Exercício – arritmia
- Após exercício – estase venosa / desidratação

**SINTOMAS ASSOCIADOS**

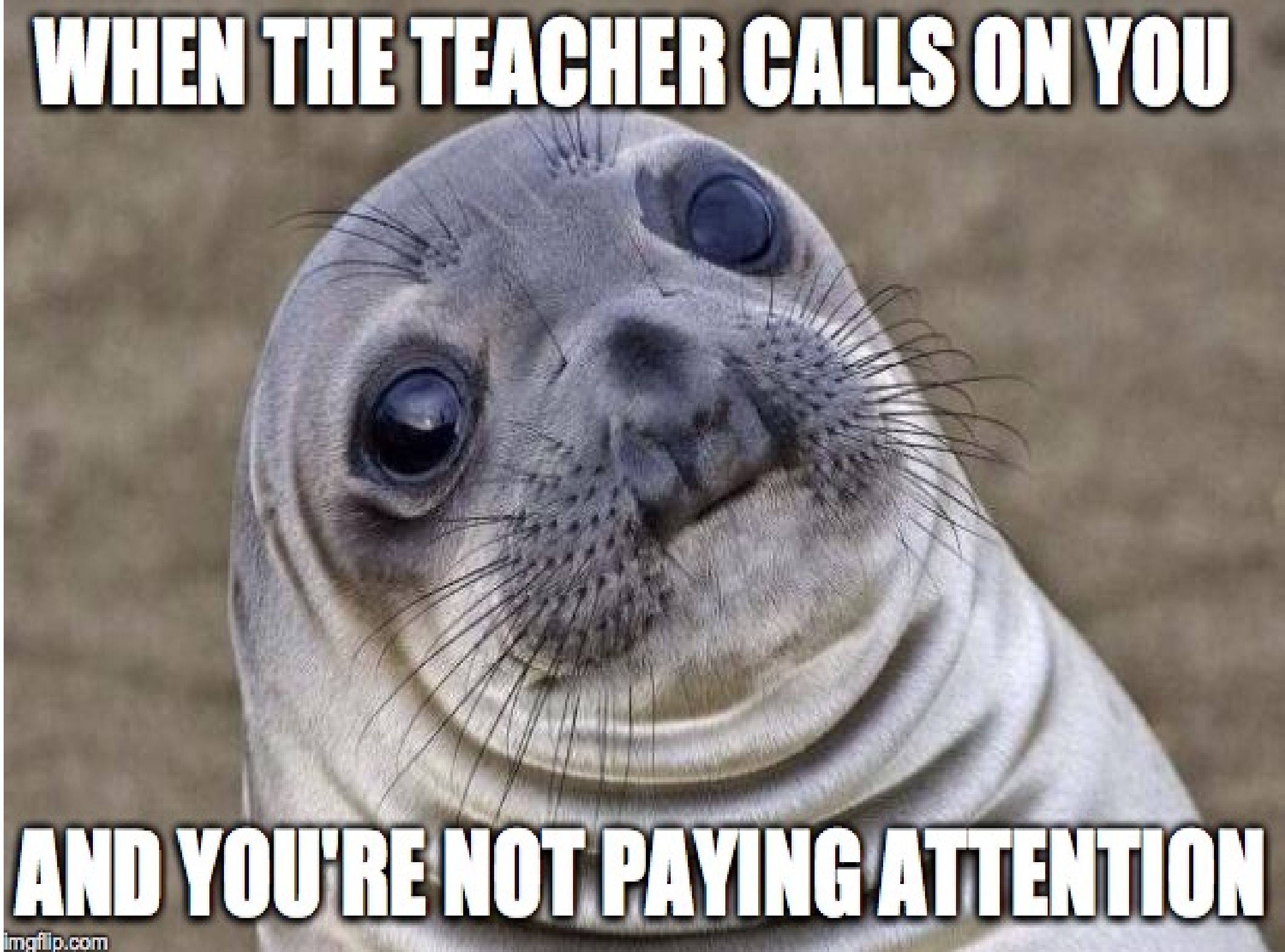
- Palpitações / taquicardia – arritmia
- Precordialgia – cardiopatia obstrutiva (+ esforço)
- Náusea / sudorese – vasovagal
- Dispneia / parestesias – ansiedade (hipervent)

# NÃO ESQUECER...

- Houve perda de conhecimento completa?
- Houve recuperação rápida e completa da consciência? Duração?
- Factores precipitantes? / O que estava a fazer?
- Recorrente?
- Sintomas associados? Pródromos?
- Memória do sucedido?
- **Testemunhas**: tempo, movimentos anómalos, incontinência, palidez/cianose, confusão após o episódio

# RED FLAGS

- Síncope recorrente
- Síncope sem pródromos / lesão corp
- Síncope no pico do esforço
- Associada a:
  - Palpitações
  - Dor torácica
- Convulsão / Sequelas neurológicas
- Necessidade de reanimação
- AP CCong / Adquirida
- AF morte súbita


WHEN THE TEACHER CALLS ON YOU
AND YOU'RE NOT PAYING ATTENTION
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# PALPITAÇÕES

Palpitations are a symptom defined as awareness of the heartbeat and are described by patients as a *disagreeable sensation of pulsation or movement in the chest and/or adjacent areas.*[7]

- Sintoma frequentemente encontrado
- Pouca relação com anomalias CV
- Elevada % não tem causa identificável

# CARACTERÍSTICAS

**DESCRIÇÃO**

- "Salto" "Batimento fora do tempo" – ESSV, ESV
- Taquicardia gradual – Taqui Sinusal / Ansiedade
- Taquicardia súbita – TSV
- "Bater no peito" – TSV

**ATIVIDADE**

- Esforço – habitualmente normal, taquicardia induzida pelo esforço
- Repouso – febre, hipertiroidismo, hipoglicemia, ansiedade, FLA / FA
- Levantar – intolerância ortostática

# CARACTERÍSTICAS

**SINTOMAS ASSOCIADOS**

- Síncope / Pré-Síncope – arritmia (+ TV)
- Precordialgia, ativação SNS, dispneia – aumenta probabilidade de cardiopatia estrutural / arrítmica

**HÁBITOS**

- Alimentos taquicardizantes – café, chocolate, refrigerantes 'cola', chá, bebidas energéticas
- Medicação / Suplementos sem prescrição

# RED FLAGS

- Palpitações no esforço
- Associadas a:
  - Dor torácica
  - Síncope
- AP CCong / Adquirida
- AF morte súbita

# OBRIGADO!!