



Monitorização

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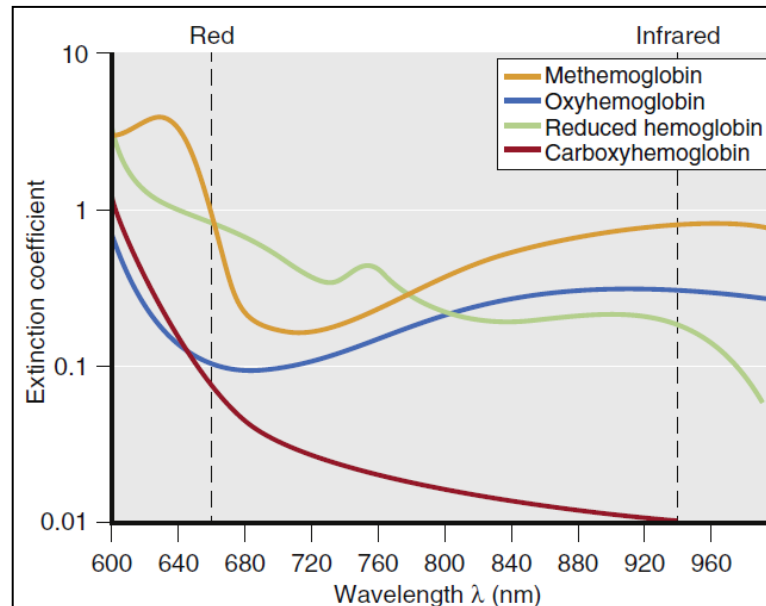
Monitorização Respiratória

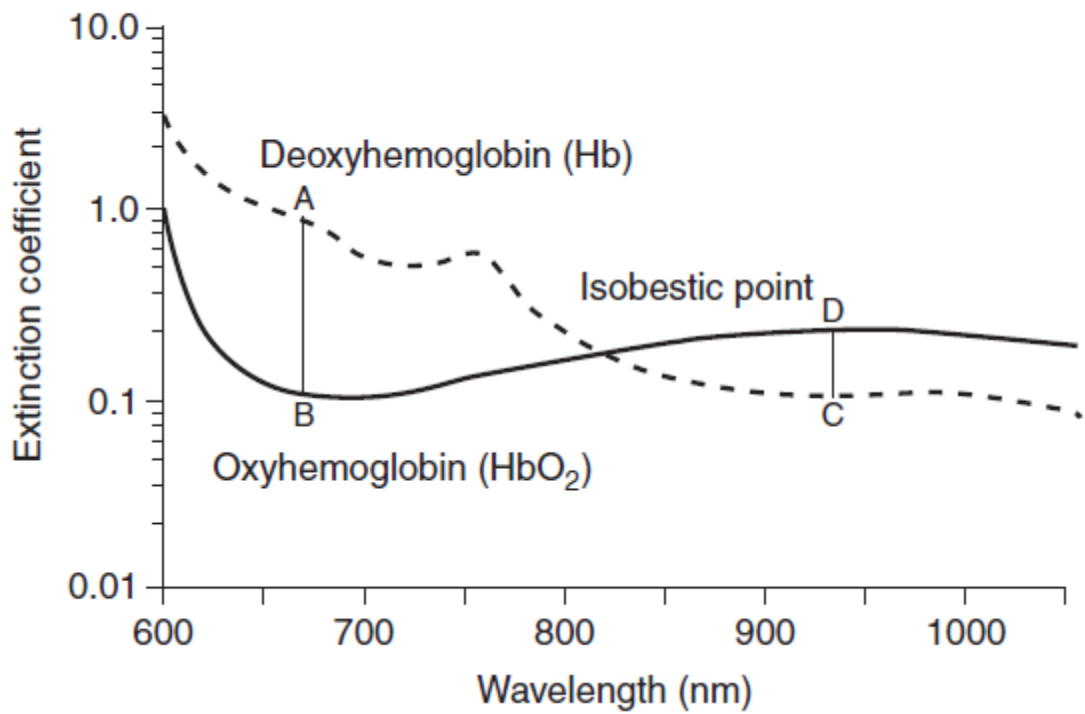
- Oxímetro de pulso
- Capnografia

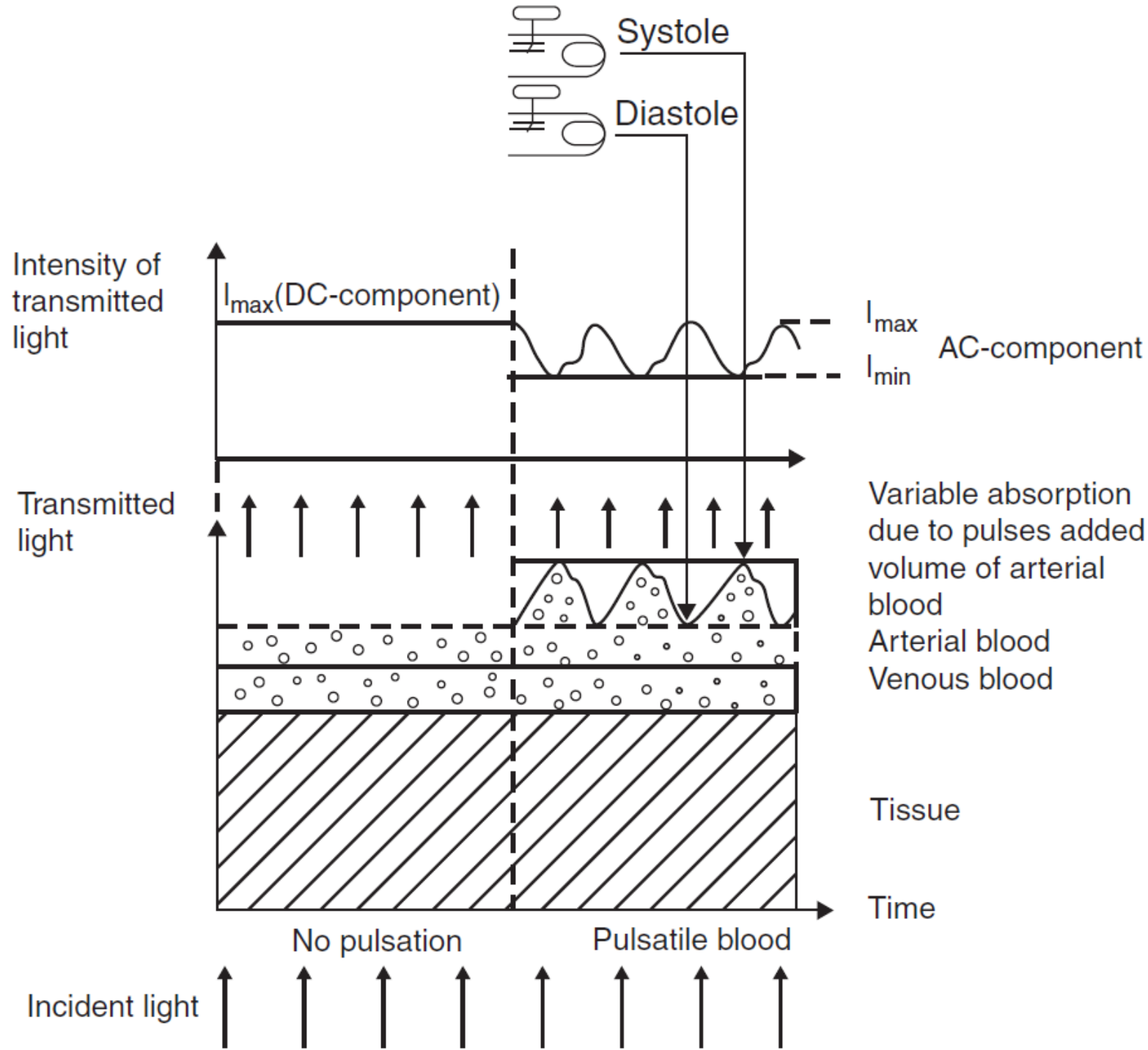
**Porcentagem de MÉDICOS que
detectaram cianose em homens brancos
*Comroe & Botelho, 1947***

PaO₂	Não	Leve	Profunda
100 –96	68	26	6
95-91	43	40	17
90- 86	32	37	31
85-81	14	37	49
80 – 76	10	40	50
75-71	3	22	75

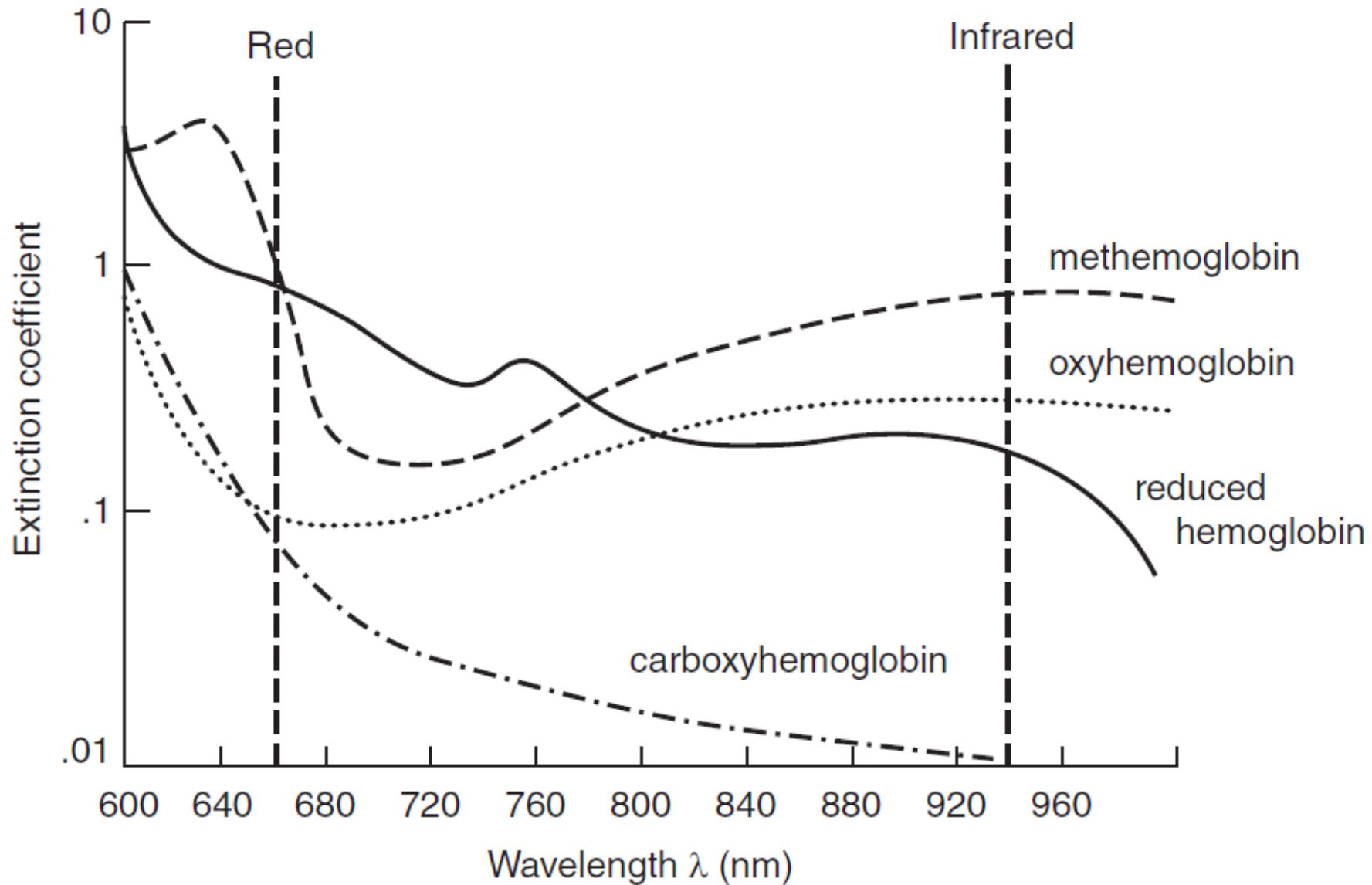
Oxímetro de Pulso





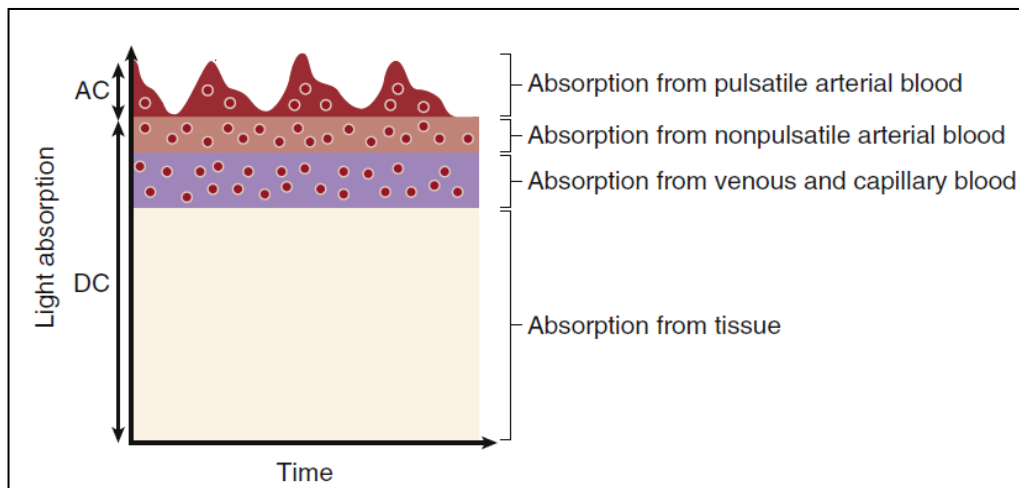


Hemoglobin extinction curves



Oxímetro de Pulso

- **Funcionamento**
 - Análise da absorbância
 - Espectrofotometria
 - Pletismografia
 - Cálculo da SaO_2



- **Variáveis**
 - Frequência de pulso
 - SaO_2

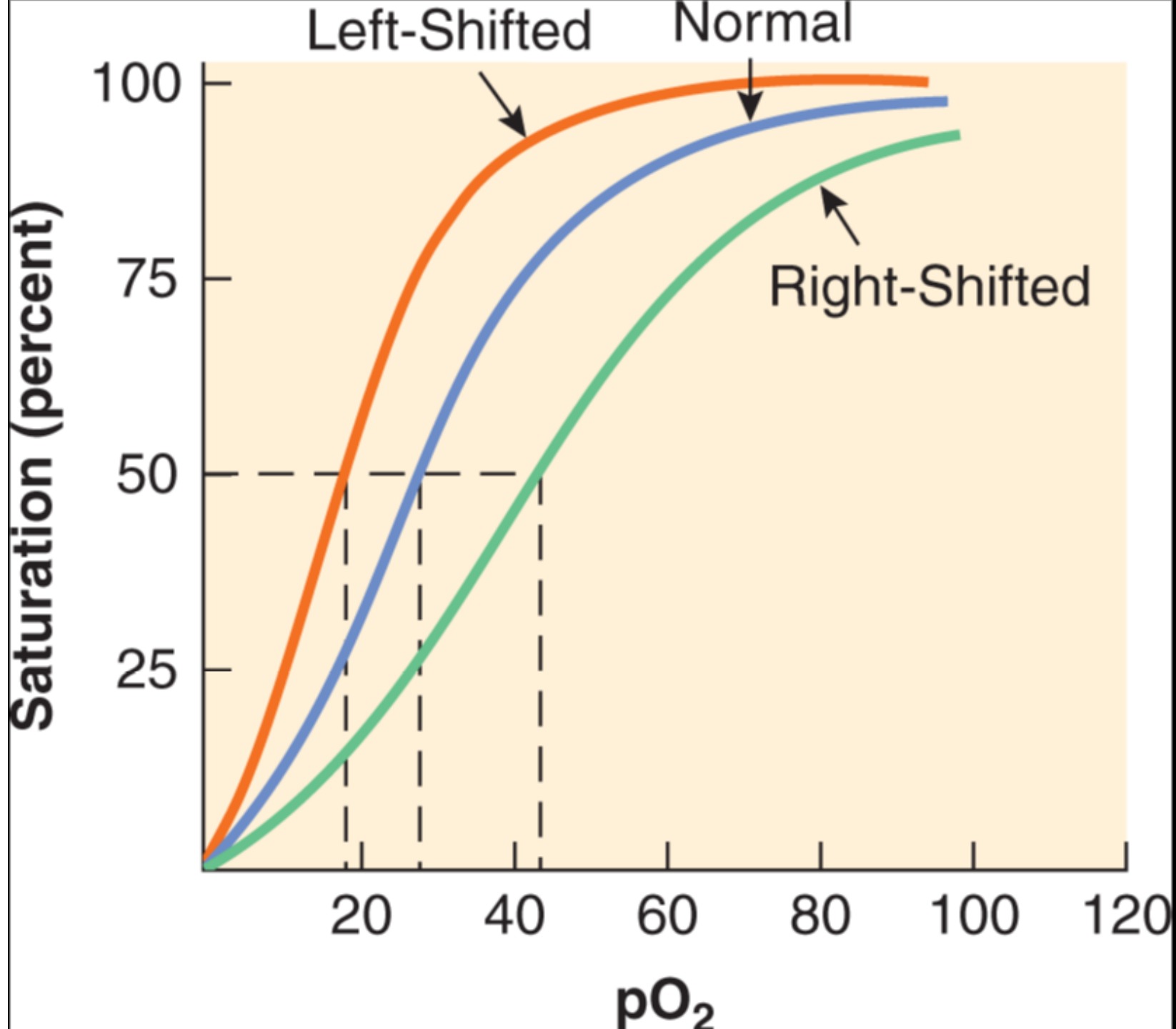


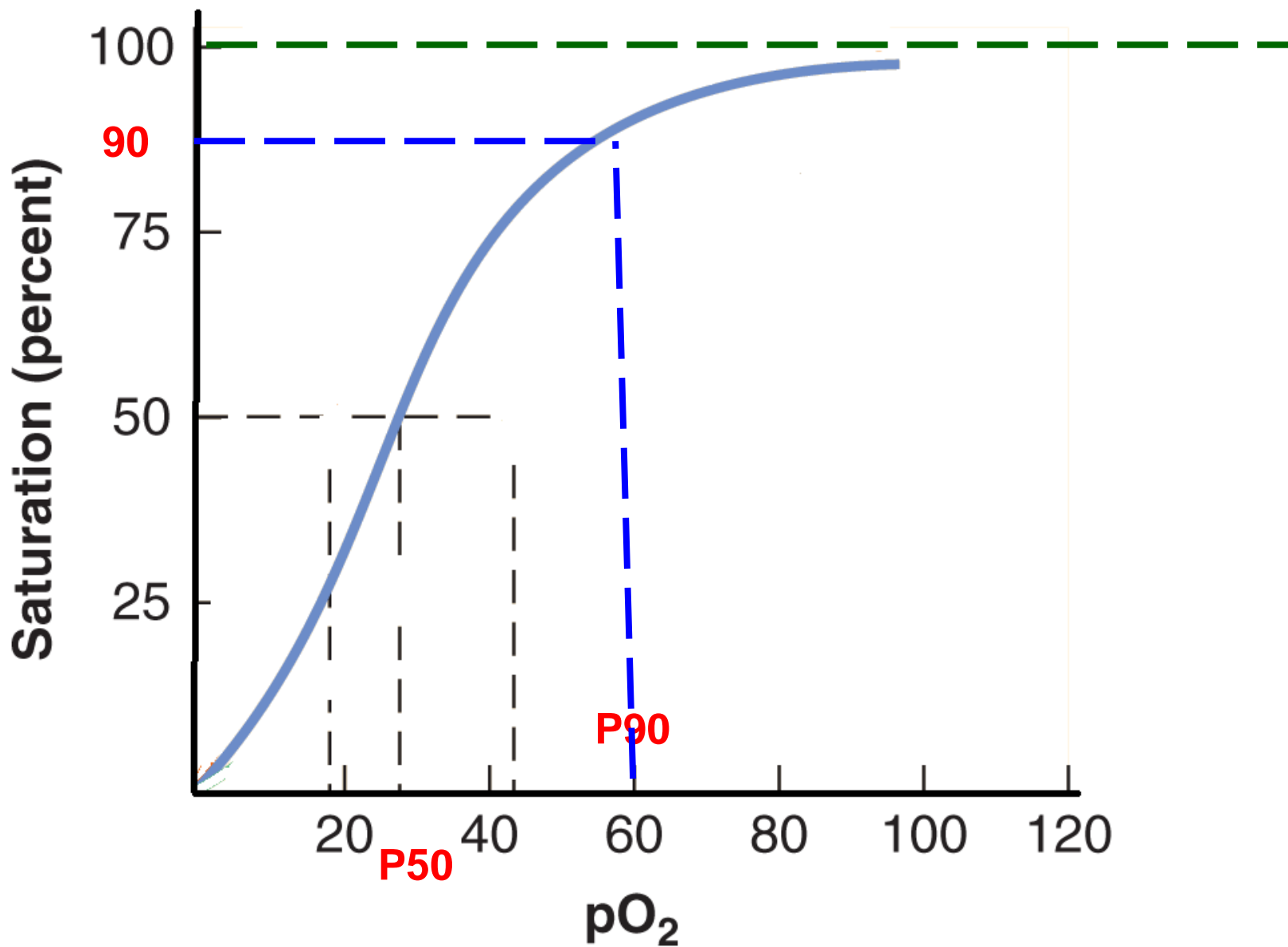
- **Limitações**

- **Baixa perfusão**
- **Movimentação**
- **Luz ambiente**
- **Hemoglobinas disfuncionais**
- **Azul de metileno**
- **Esmalte azul**

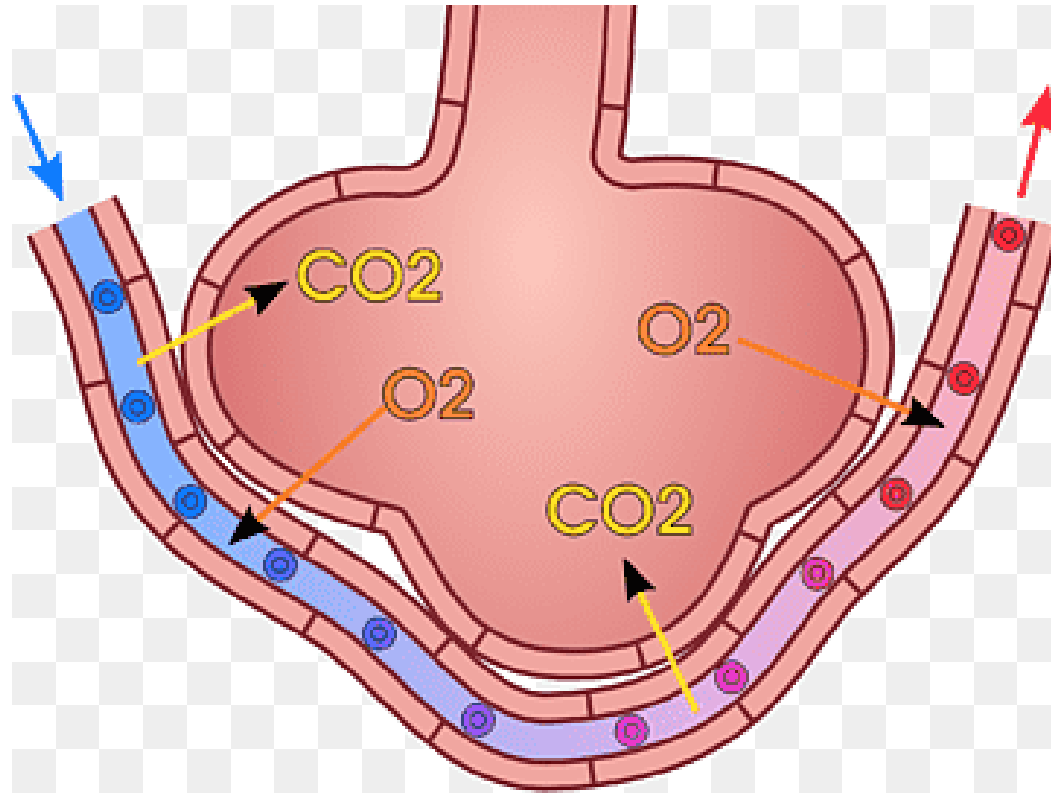
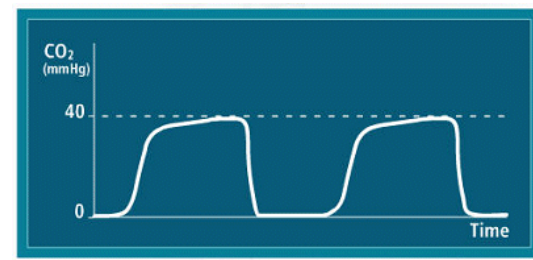


- **Eventos Adversos Avaliados**
 - Desconexão do ventilador
 - Hipoventilação alveolar
 - Intubação esofágica
 - Intubação seletiva
 - Hipóxia relacionada ao circuito
 - Pneumotórax
 - Embolia pulmonar

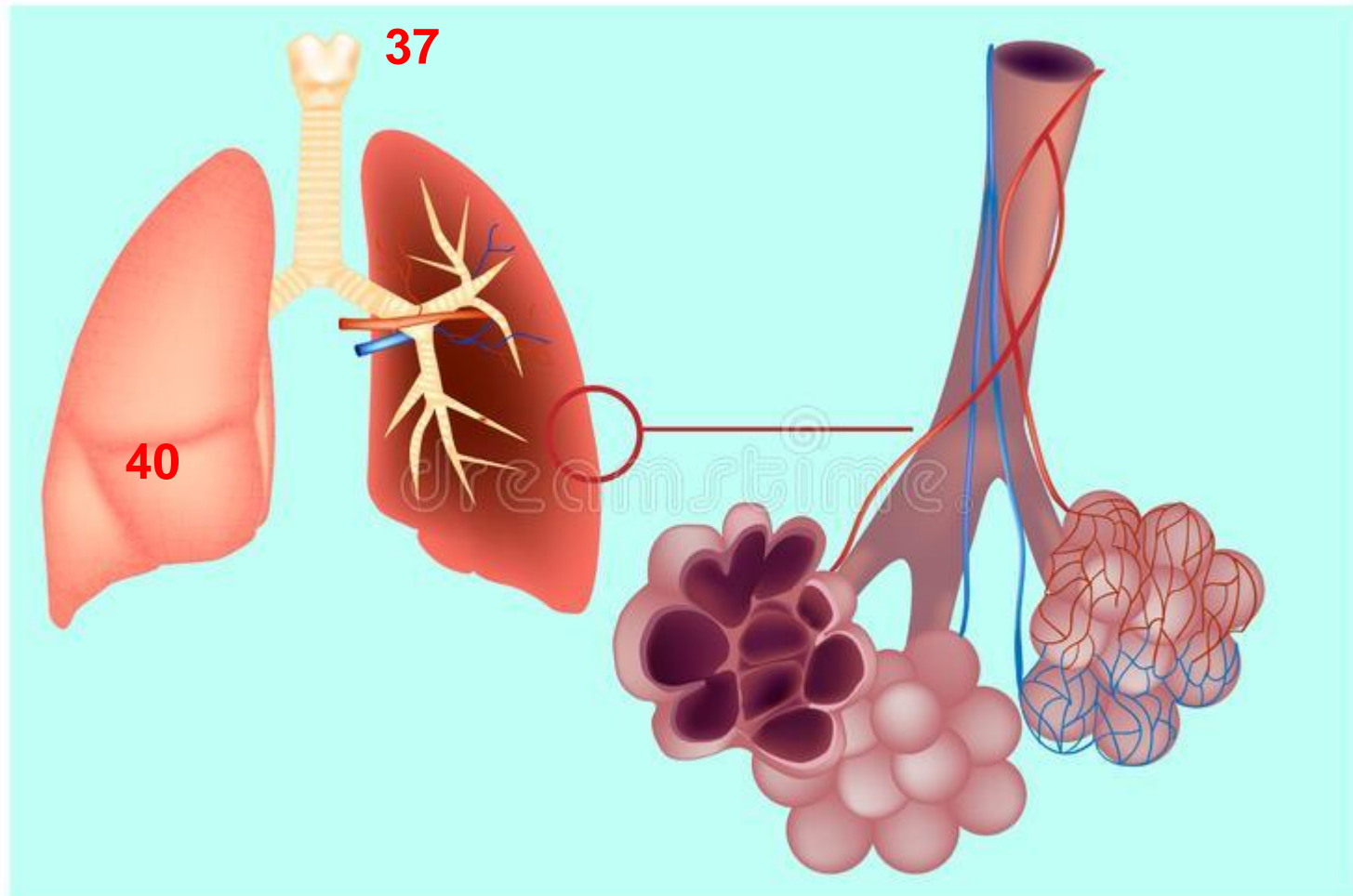
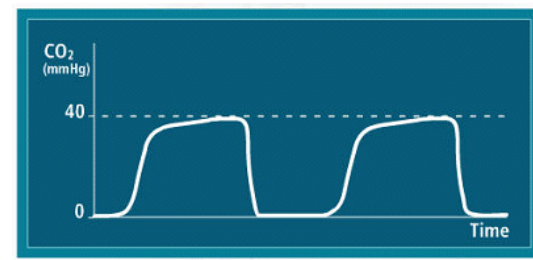




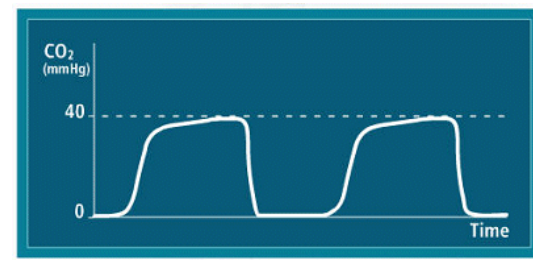
Capnografia



Capnografia

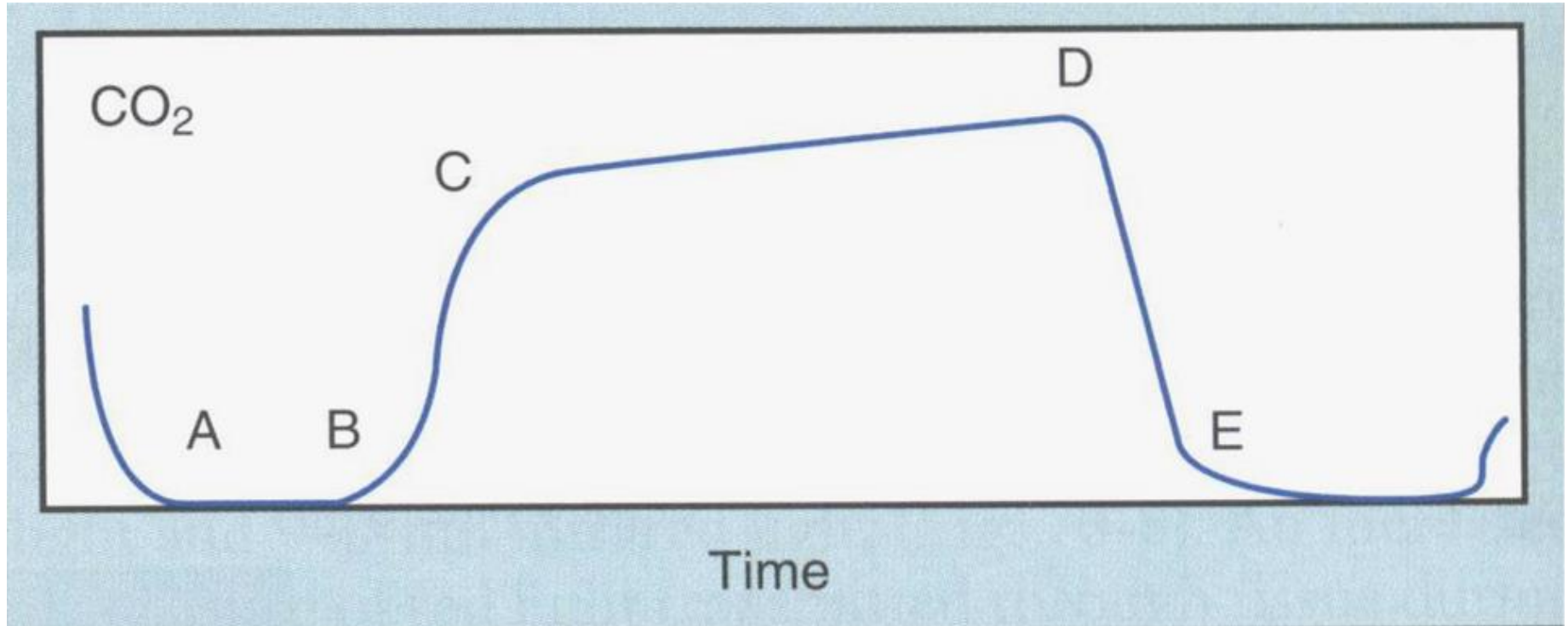


Capnografia



- **Funcionamento**
 - Espectrofotometria
 - Análise da absorbância
 - Cálculo da pressão parcial do gás
 - Plotagem gráfica do EtCO₂ pelo tempo

Capnografia

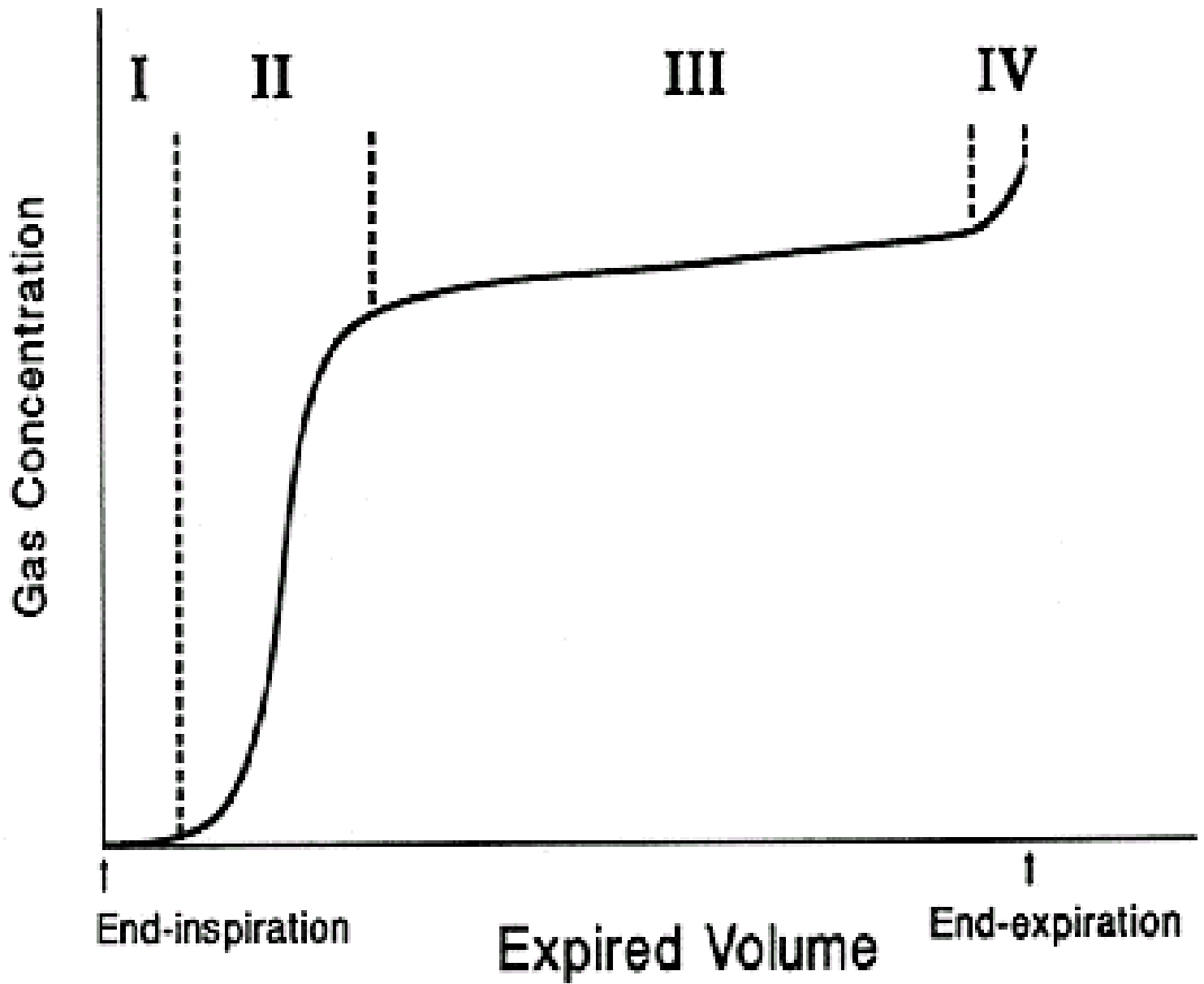


A-B -> espaço morto

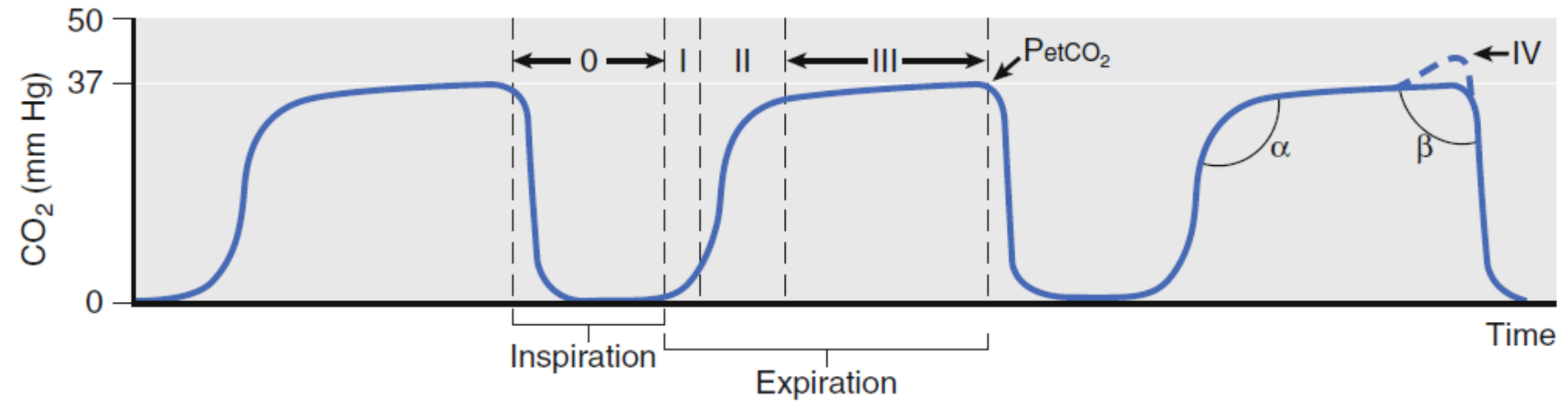
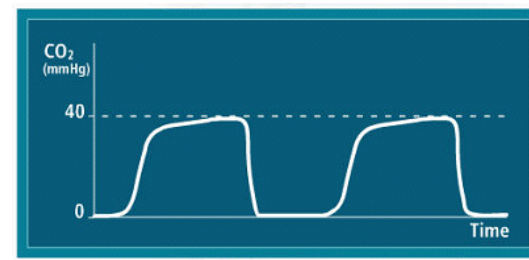
B-C -> regularidade da ventilação e esvaziamento alveolar (DPOC, aguda, broncoespasmo)

C-D -> exalação do gás alveolar (D= ETCO₂)

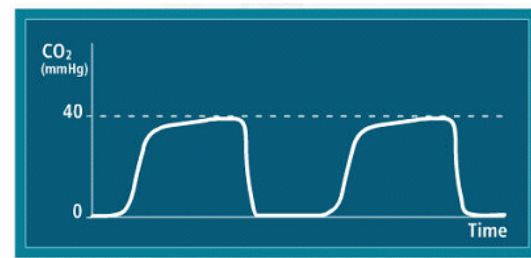
D-E -> início da inspiração e entrada de gases sem CO₂



Capnografia



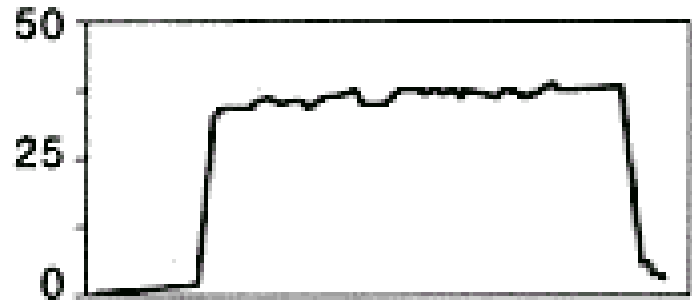
Capnografia



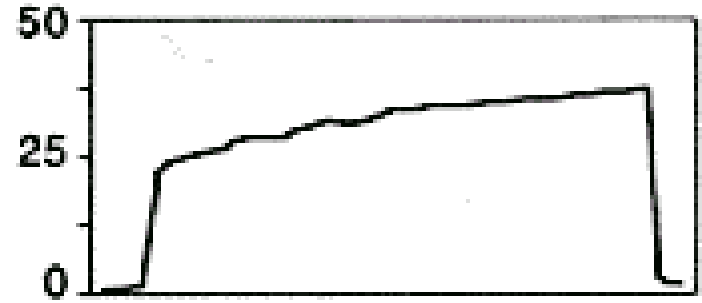
- **Eventos Adversos Avaliados**
 - Desconexão do circuito ventilatório
 - Hipoventilação
 - Intubação esofágica
 - Embolia pulmonar
 - Hipertermia maligna
 - Desequilíbrio ácido-básico
 - Padrão ventilatório obstrutivo

PCO₂ (mmHg)

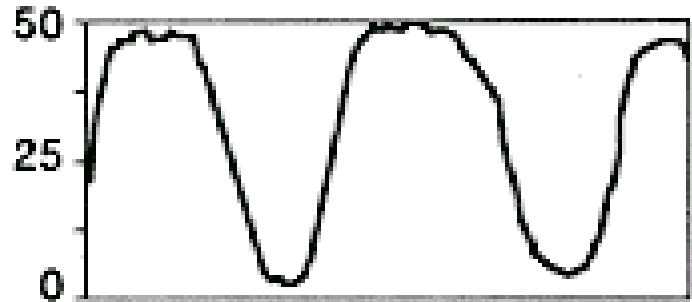
A1: Normal Tracing



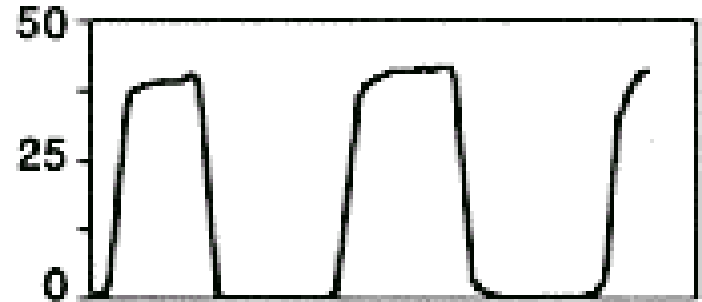
A2: Increased Slope of Phase III



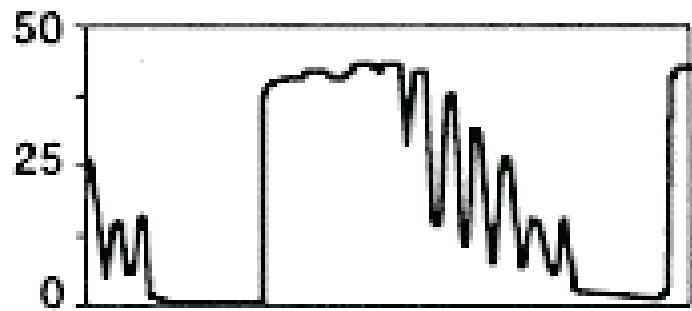
B1: Spontaneous Ventilation with Dead Space



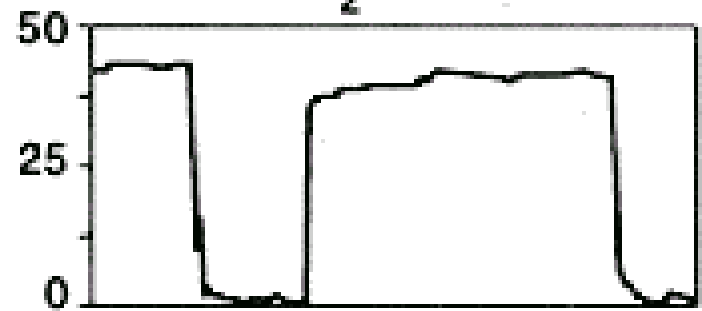
B2: Dead Space Removed



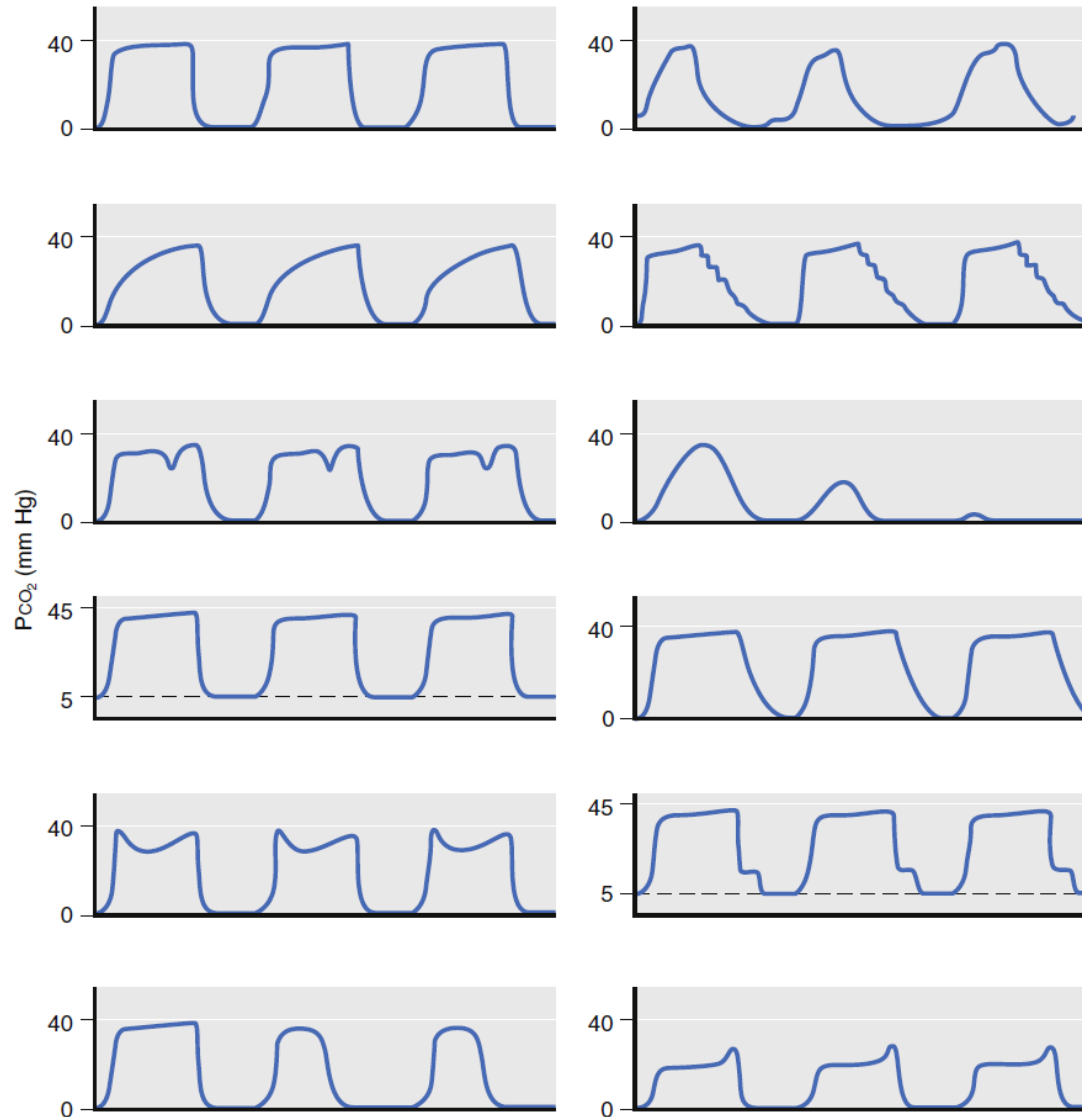
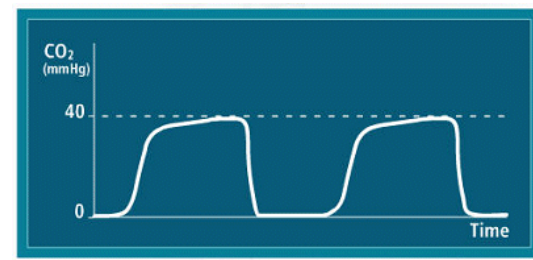
C1: Cardiogenic Oscillations



C2: Same Individual with 5 cm H₂O PEEP



Capnografia



$$\text{ETCO}_2 = \frac{\text{produção}}{\text{eliminação}}$$

eliminação = ventilação

