

Modurile uzuale de ventilație mecanică

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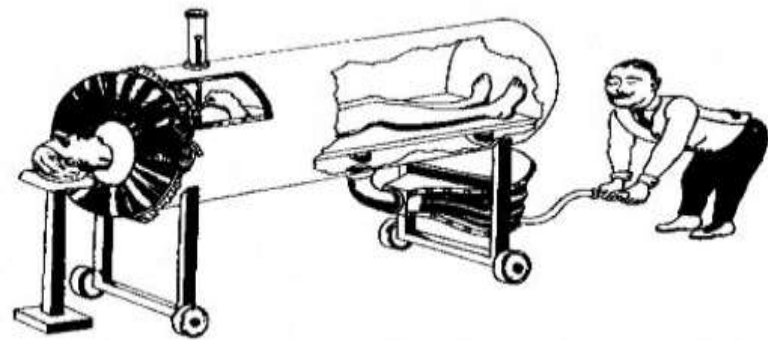
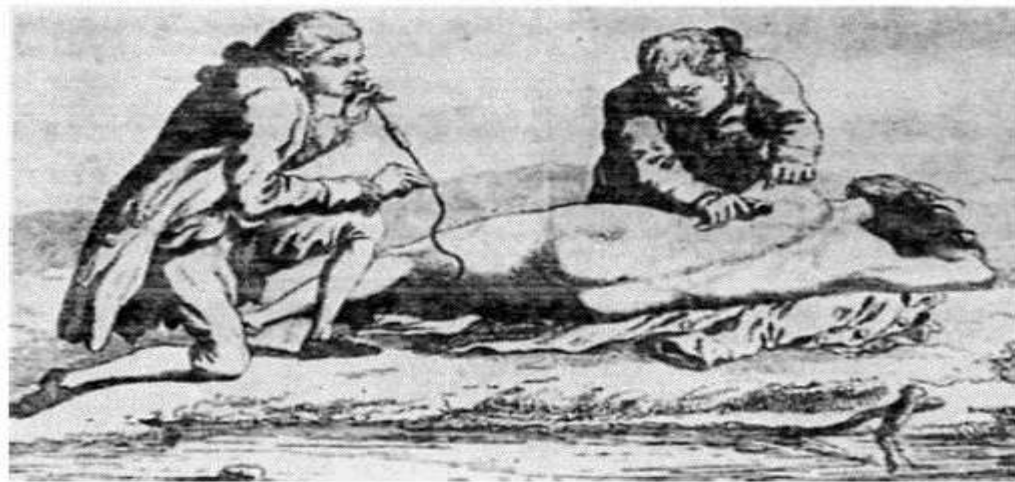


TABLE 3-3 Expanded Classification of Modes of Ventilator Operation

Mode	MANDATORY BREATH				SPONTANEOUS BREATH			
	Control	Trigger	Limit	Cycle	Control	Trigger	Limit	Cycle
CMV	Pressure, volume, or flow	Time	Pressure, volume, or flow	Time, pressure, volume or flow	—	—	—	—
PCV	Pressure	Time	Pressure	Time	—	—	—	—
V-ACV	Pressure, volume, or flow	Pressure, volume, or flow	Pressure, volume, or flow	Time, pressure, volume, or flow	—	—	—	—
P-ACV	Pressure	Pressure, volume, or flow	Pressure	Time	—	—	—	—
AMV	Pressure, volume, or flow	Pressure, volume, or flow	Pressure, volume, or flow	Time, pressure, volume, or flow	—	—	—	—

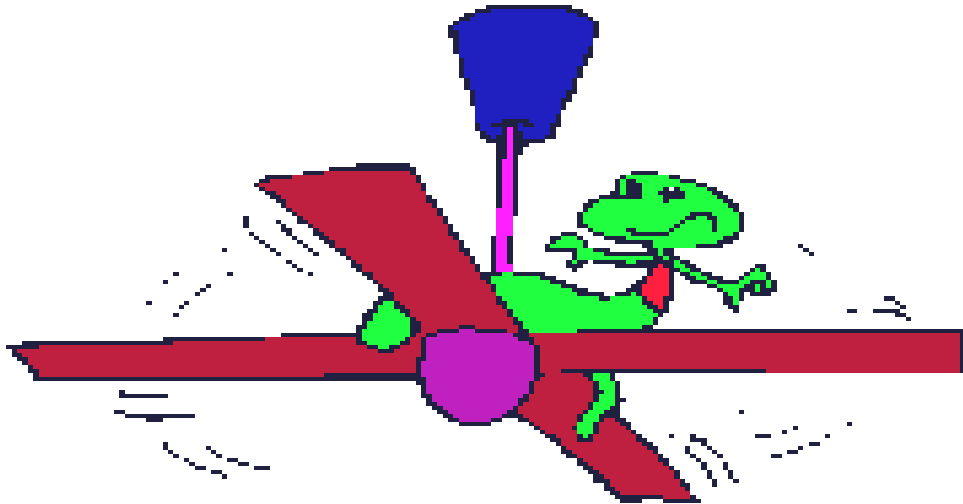
TABLE 3-5 New Modes of Ventilation That Vary Gas Delivery within a Breath or between Breaths

	Within-Breath Variability				Between-Breath Variability			
	Proportional-assist ventilation (PAV)				Pressure-regulated volume control (PRVC)			
	Automatic tube compensation (ATC)				Volume support (VS)			
	Volume-assured pressure support (VAPS)				Adaptive-support ventilation (ASV)			
VAPS	—	—	—	—	Pressure, volume, or flow	Pressure, volume, or flow	Pressure	Pressure, volume, or flow
BIPAP VS	Pressure	Time	Pressure	Time	Pressure	Flow	Pressure	Flow
ASV	Pressure	Time, pressure, volume, or flow	Pressure	Time	Pressure	Pressure, volume, or flow	Pressure	Flow
ATC	—	—	—	—	—	Pressure, volume, or flow	Pressure	Flow
PAV	—	—	—	—	—	Pressure, volume, or flow	Pressure	Flow

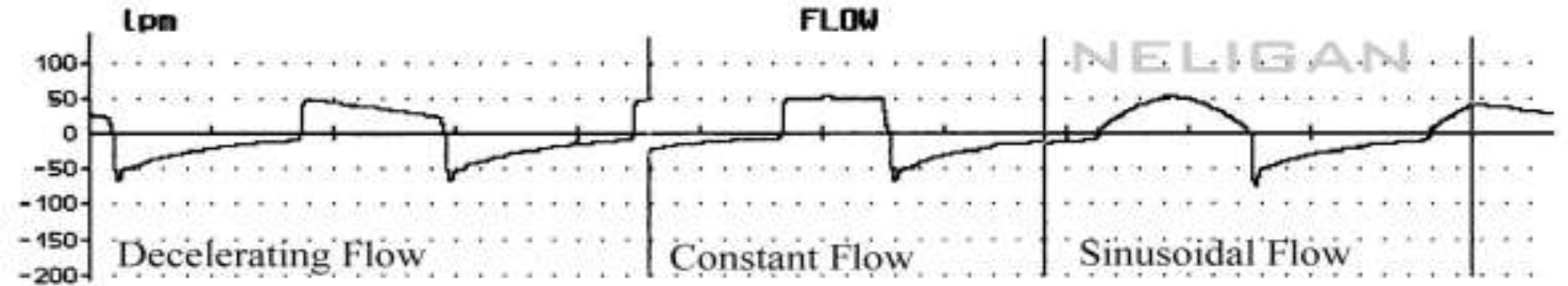
Abbreviations: CMV, volume-controlled mechanical ventilation; V-ACV, volume assist-control ventilation; P-ACV, pressure assist-control ventilation; AMV, assisted mechanical ventilation; VC-IMV, volume-controlled intermittent mandatory ventilation; VC-SIMV, volume-controlled synchronized intermittent mandatory ventilation; CPAP, continuous positive airway pressure; PCV, pressure-controlled ventilation; PC-IMV, pressure-controlled IMV; PC-SIMV, pressure-controlled SIMV; PC-PRV, pressure-controlled inverse-ratio ventilation; APRV, airway pressure release ventilation; BiLevel, bilevel pressure ventilation; MMV, mandatory minute ventilation; VAPS, volume-assured pressure support; BIPAP, bilevel positive airway pressure; VS, volume support; ASV, adaptive-support ventilation; ATC, automatic

??? CE ESTE UN VENTILATOR ???

- **GENERATOR DE FLUX**



Tipuri de flux



Triger

- Timp
- Presiune
- **Flux**

Control

- Volum (FLUX)
- Presiune
- Dual

Ciclare

- Timp
- Volum
- Flux

Tipuri de respirații în ventilația mecanică

- Controlată
- Spontană
- Asistată

Moduri de ventilație

- CMV = continous mandatory ventilation
- ACV = assist control ventilation
- IMV = intermitent mandatory ventilation $\pm S$
- PCV = pressure control ventilation
- PSV = pressure support ventilation

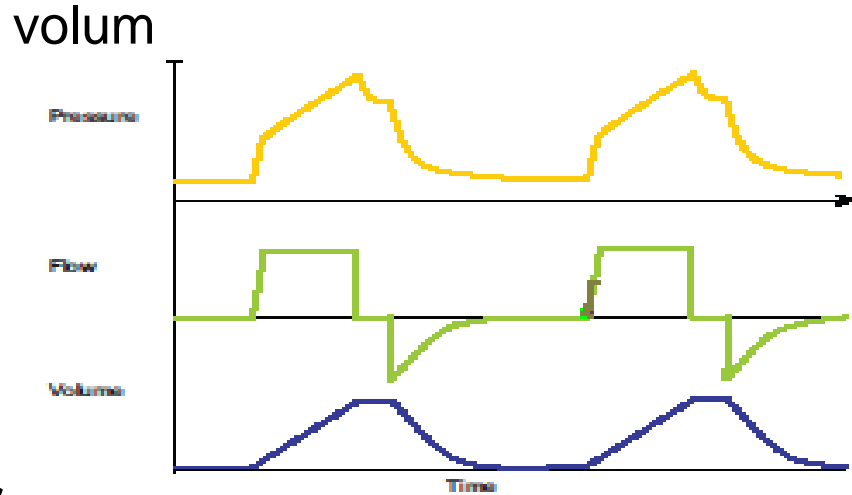
Ventilația controlată

- Flux
- Volum tidal
- Frecvența
- Raport inspir expir

Triger timp

Control flux (volum)

Ciclare timp



ACV

- Volum tidal
- Frecvența MINIMĂ
- **Trigger**
- Flux
- Pauza inspiratorie+I:E

Volum Control (Maquet)

IPPV (Drager)

ACV (Hamilton)

Respirații controlate:

Trigger timp

Control Flux (Volum)

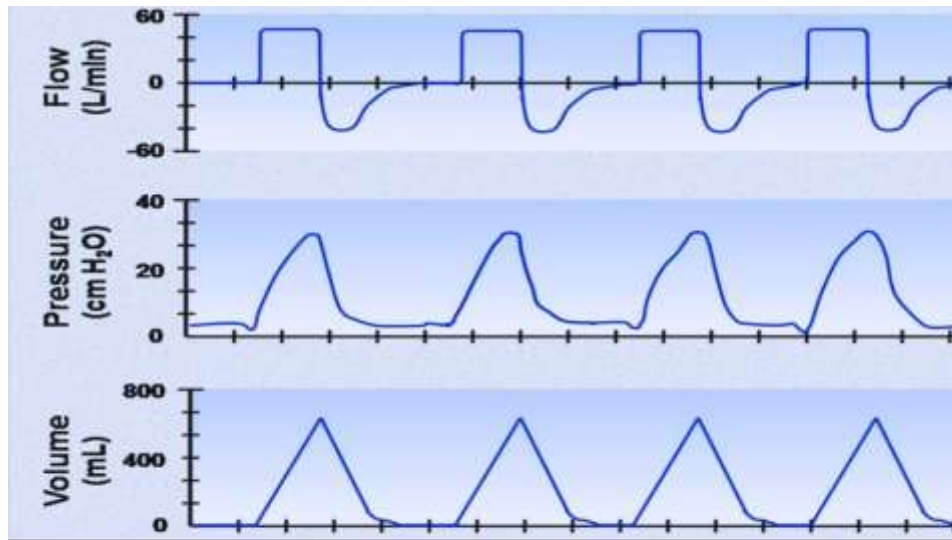
Ciclare Timp

Respirații sincronizate:

Trigger: Presiune sau flux

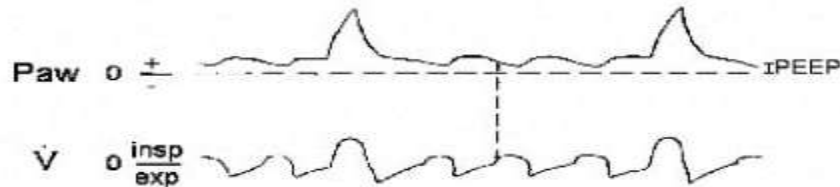
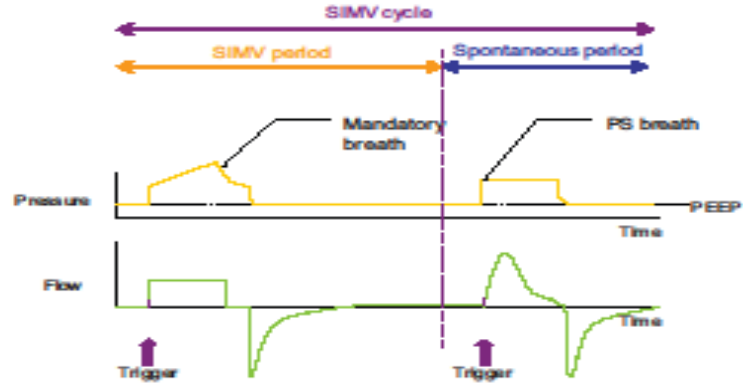
Control: Flux (Volum)

Ciclare Timp



S IMV +ASB

- Volum tidal
- Frecvența MINIMĂ
- **Trigger**
- Flux
- Pauza inspiratoric
- Suport



??? SIMV tipuri de respirații ???

Respirații controlate:

Trigger timp
Control Flux (Volum)
Ciclare Timp

Respirații sincronizate:

Trigger: Presiune sau flux
Control: Flux (Volum)
Ciclare Timp

Respirații nesincronizate:

Trigger: Presiune sau flux
Control: Presiune
Ciclare: Flux

ACV vs SIMV

- Respirațiile ce depășesc minimumul setat:
 - În ACV primesc suport "complet"
 - În SIMV primesc suport "parțial"

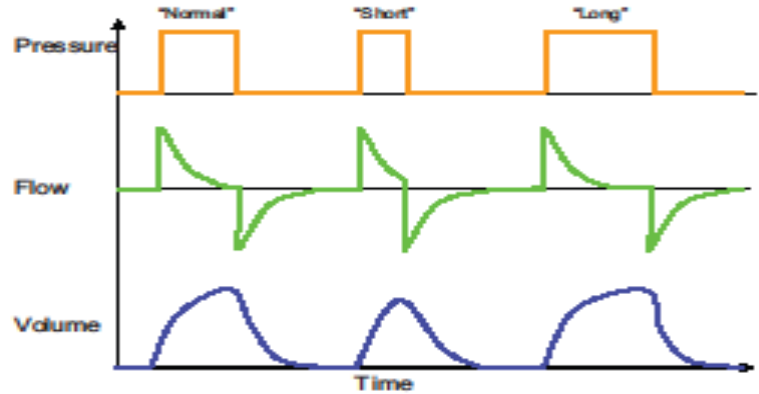
- ??? La pacientul fără respirații spontane ???

ACV = SIMV

Ventilația controlată

presiune

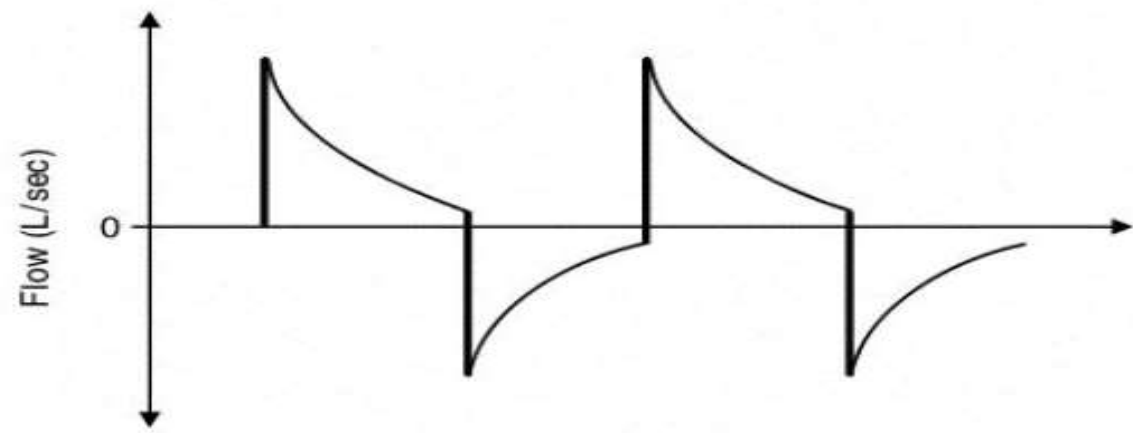
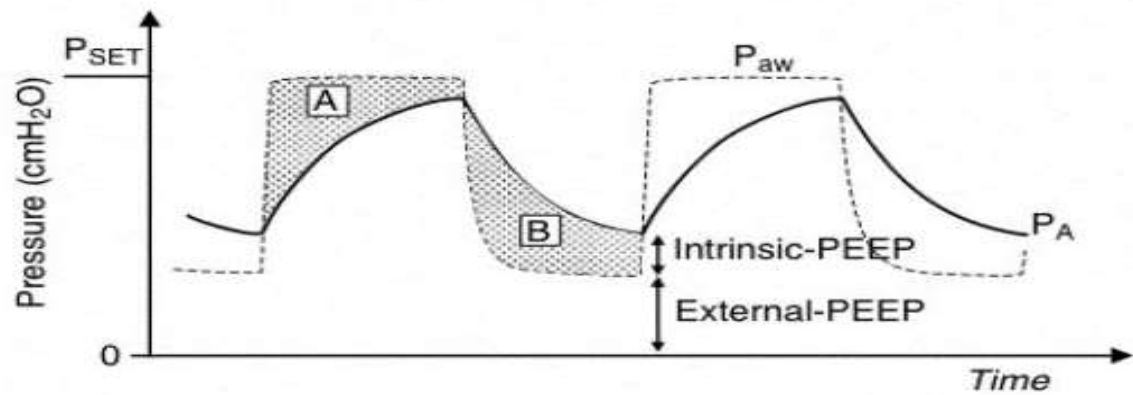
- Presiune de platou
- Frecvența
- Timpul inspirator



Triger: timp

Control: presiune

Ciclare: timp



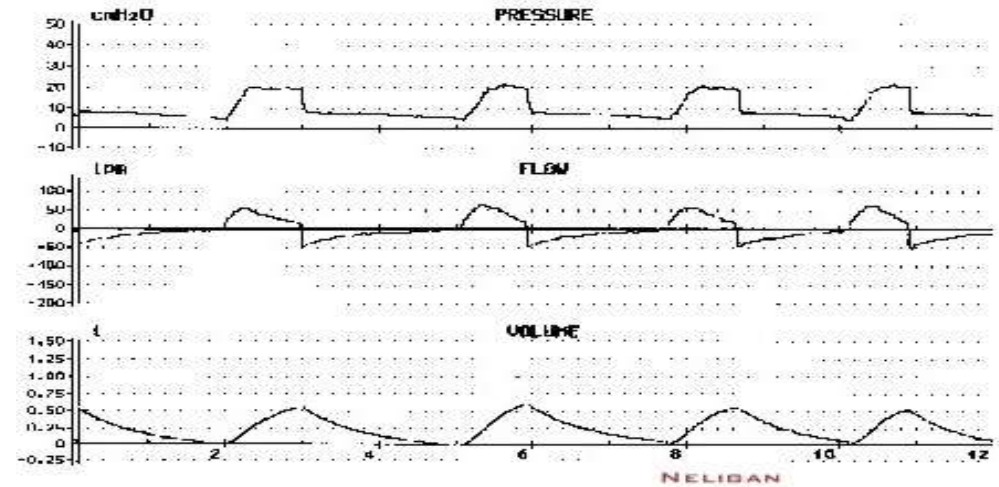
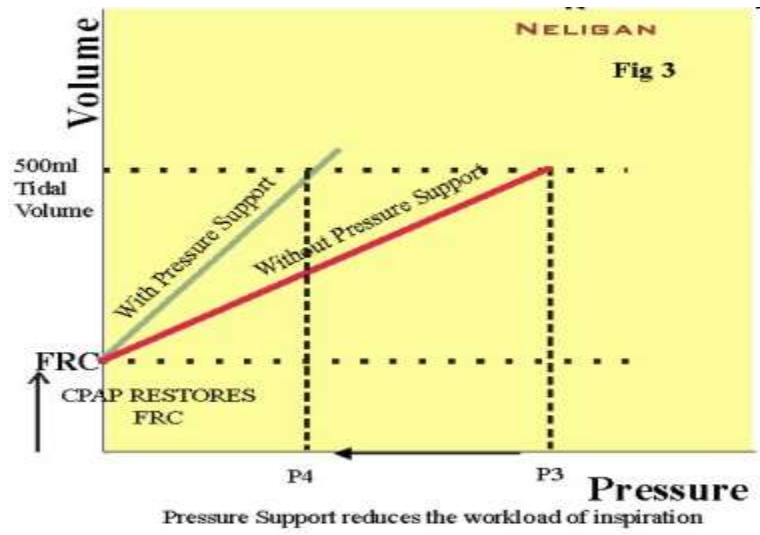
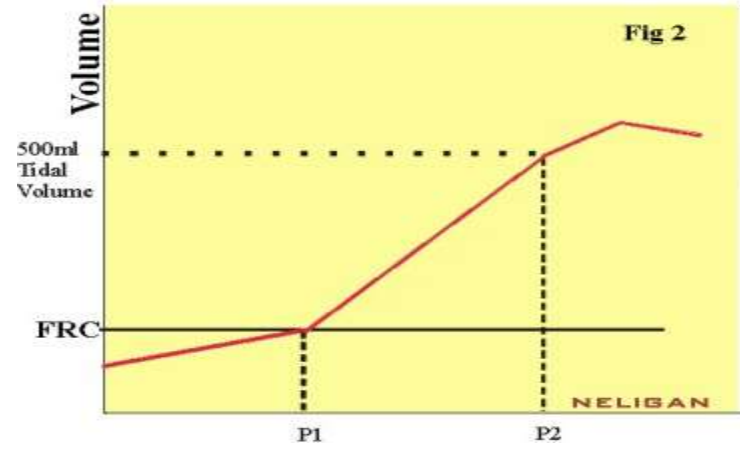
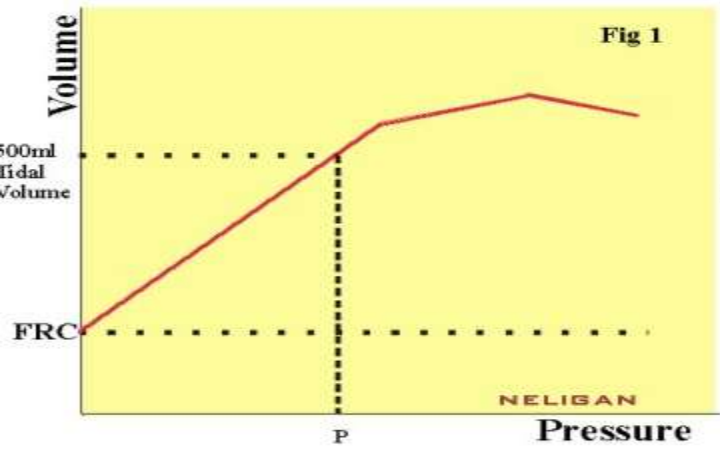
PSV

- CPAP
 - **Continuous positive airway pressure**
- PEEP
 - **Positive end-expiratory pressure**
- ASB
 - **Assisted spontaneous breathing**

Triger: flux, presiune

Control: presiune

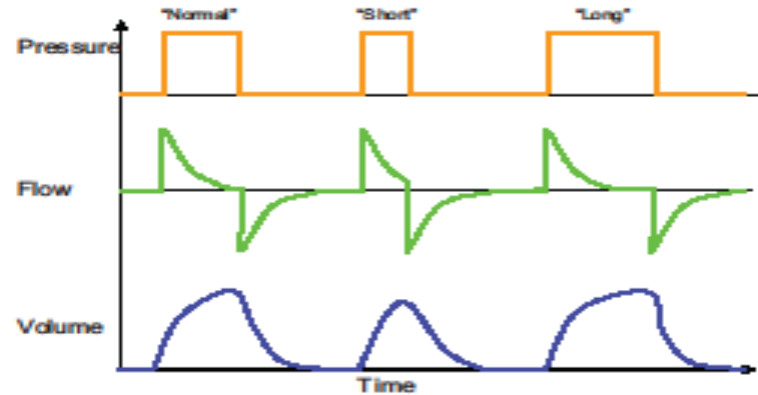
Ciclare: flux



BiLevel ventilation

PCV+PSV

Limită de presiune

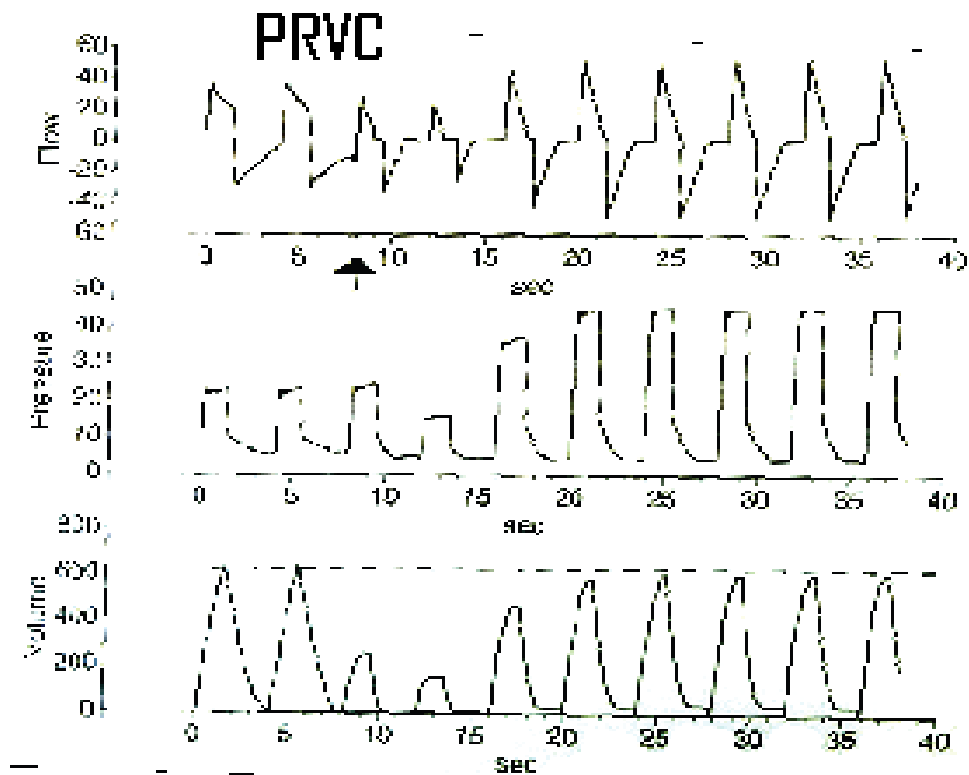


PSV vs BiPAP vs SIMV???

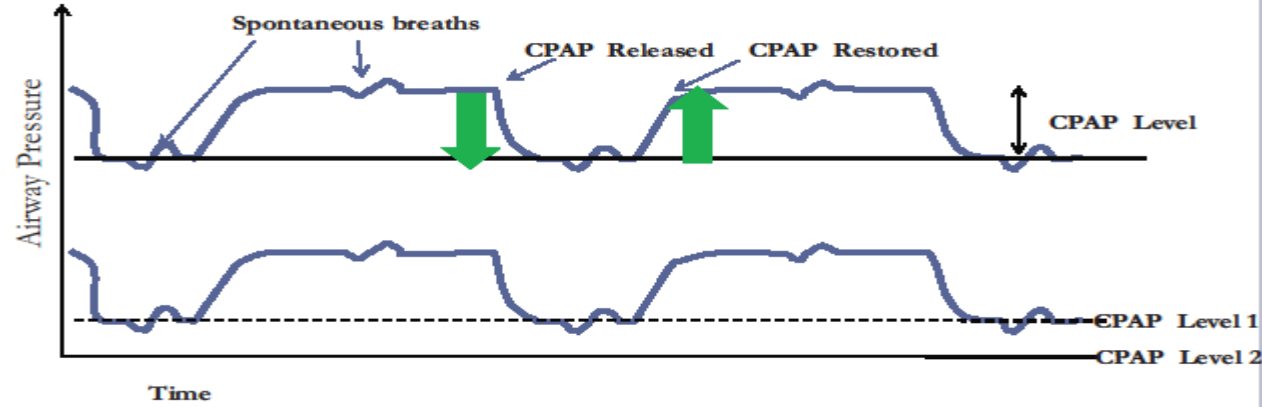
- Dacă setăm frecvența 0 în BiPAP și SIMV:

PSV = BiPAP = SIMV

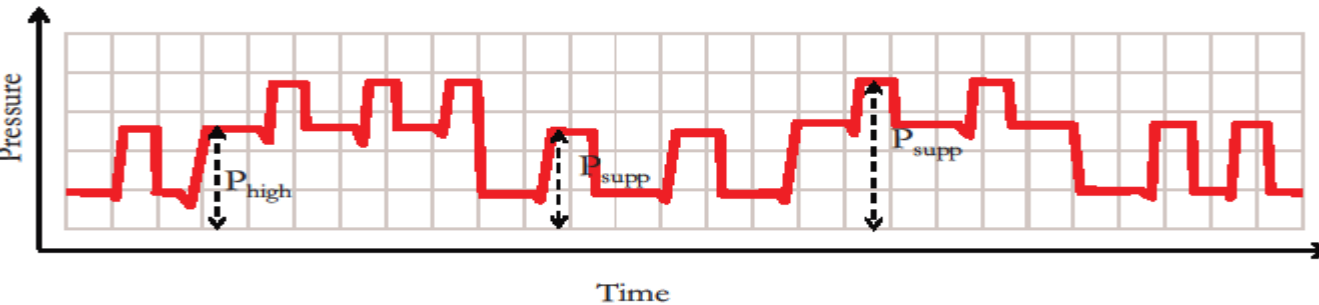
Control Dual



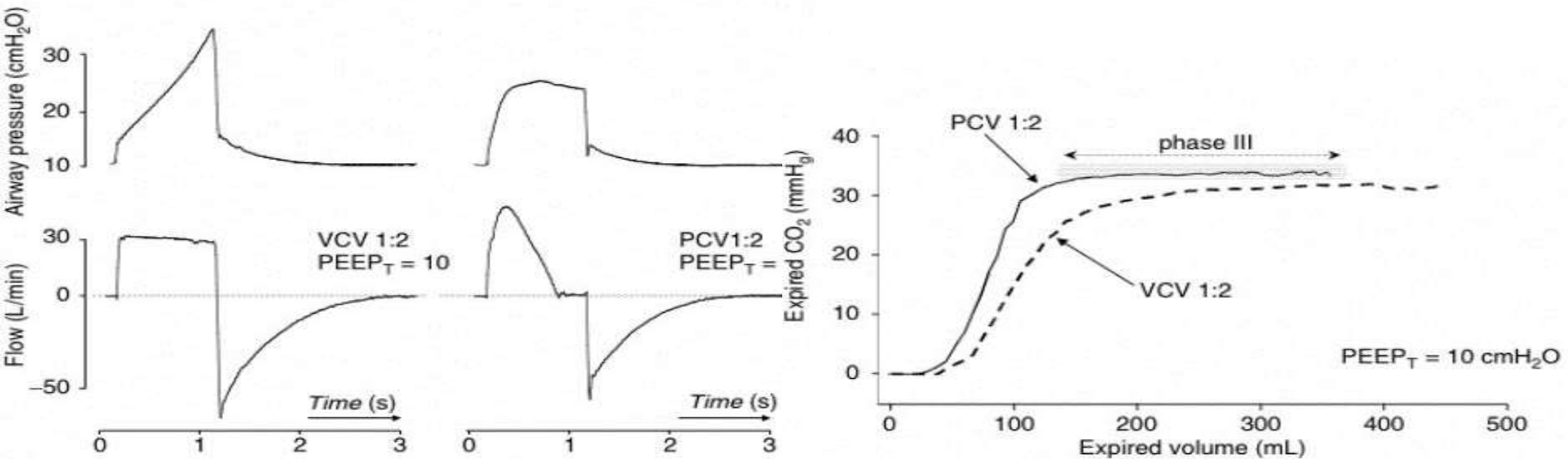
APRV



Două nivele de CPAP
ASB
PCV cu IRV



VCV vs PCV



2)

PCV vs VCV

evidence based....

- Fluxul decelerat scade presiunea de vârf, dar crește fluxul in calea aeriană
- PaCO₂ și spațiul mort scad, dar nesemnificativ clinic, in PCV
- PaO₂ crește ușor în PCV
- NU AU FOST DEMONSTRATE DIFERENȚE ÎN PROGNOSTIC SAU BAROTRAUMĂ!!!

?



Vă mulțumesc pentru timpul acordat!

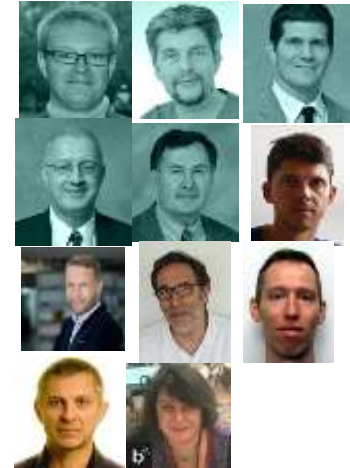
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