

CPAP for Asthma? Show notes:

In this episode of The SWORBHP Podcast, Dr. Lauren Valdis, Medical Director of Education at SWORBHP and Dr. Jakob Domm (PGY-4 FRCPC Emergency Medicine resident at Western) review the current medical directive for CPAP use in Ontario, asthma physiology, and discuss why CPAP or BiPAP is sometimes used for asthma exasperation in the hospital setting but is not indicated in the prehospital setting, in Ontario.

Show notes for reference

CPAP Medical Directive for ALS PCS 5.4

Continuous Positive Airway Pressure (CPAP) Medical Directive – AUXILIARY

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Severe respiratory distress;

AND

Signs and /or symptoms of acute pulmonary edema or COPD.

Conditions

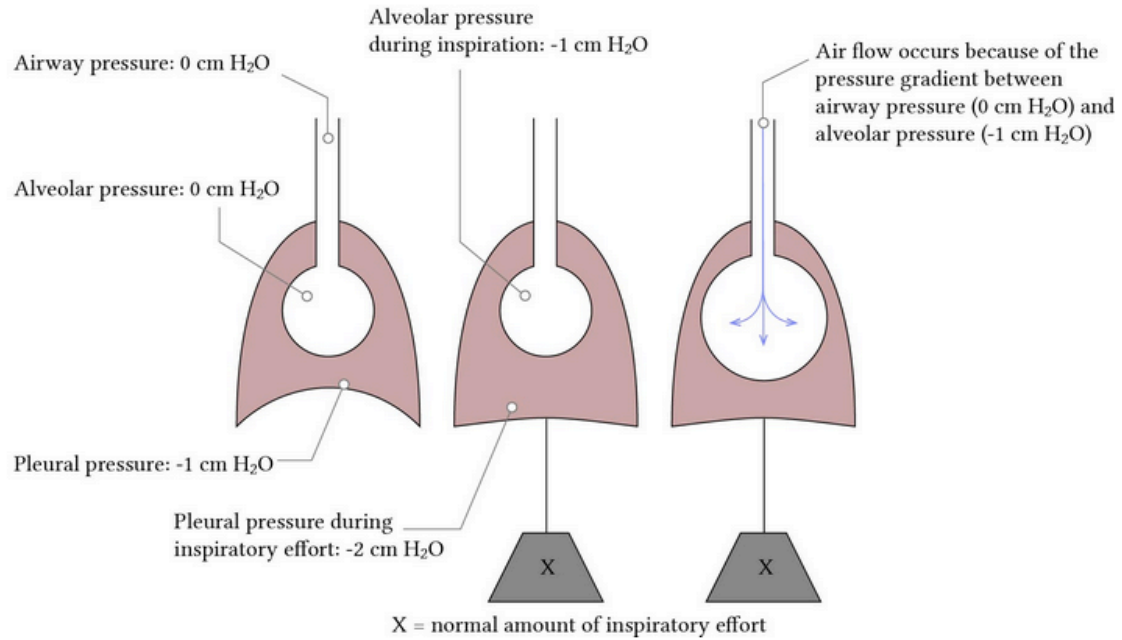
CPAP	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	Tachypnea
SBP	Normotension
Other	SpO ₂ <90% or accessory muscle use

Contraindications

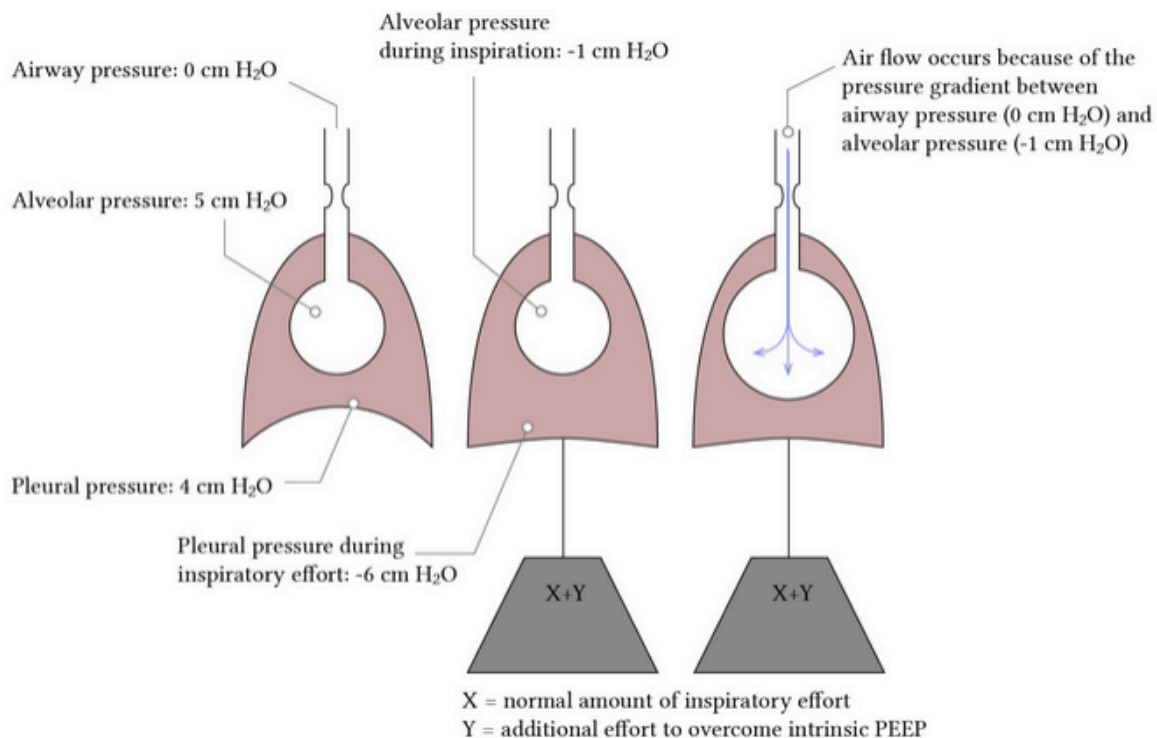
CPAP
Asthma exacerbation
Suspected pneumothorax
Unprotected or unstable airway
Major trauma or burns to the head or torso
Tracheostomy
Inability to sit upright
Unable to cooperate

Hyperinflation and auto-PEEP in asthma exasperations

Normal Breath



Breath with airway obstruction and auto-PEEP



In the case of airway obstruction (i.e. asthma) and auto-PEEP with hyperinflation, there is pressure maintained within the chest at the end of a breath because of the obstruction. Therefore, even **more** effort must be used to overcome that positive pressure, and create a negative pressure environment to pull air in. The more air that is trapped, the greater those pressures will be.

Image obtained from Deranged Physiology at <https://derangedphysiology.com/main/cicm-primary-exam/respiratory-system/Chapter-5215/intrinsic-peep-and-positive-pressure-ventilation>

Ask MAC clarification for "Major trauma or burns to the head or torso"



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Question:

Question: I was going over the CPAP standing order today and would like clarification on whether the contraindication "Major trauma or burns to the head or torso" only means for a new occurrence or does it also include persons with prior existing major trauma or burns to head and torso?

Answer:

The contraindication: Major trauma or burns to the head and torso refers to new or acute traumas, and not any previous or remote trauma issue.

The concerns stem from the suspected pneumothorax in acute trauma (sometimes we only see them on the CT scan), difficult patient assessment, impending airway problems with a patient with major burns to head and torso, basal skull fracture or intracranial injury which could limit the ability to cooperate. Also generally it is hard to sit major trauma patients upright with possible concern about spine injury.

<https://sworbhq.ca/sworbhq-ask-mac/ask-mac-234/#:~:text=Answer:,possible%20concern%20about%20spine%20injury.>

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