

# Lessons from the Dead

Lessons learned from human cadavers  
about ways to improve clinical  
outcomes

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Disclosure: Zoll Speakers Bureau



# Areas of Inquiry

ITP and ICP and CerPP changes with ACD+ ITD vs S-CPR

ICP and CerPP changes with:

head up and ACD+ITD

incomplete chest wall recoil

Cervical collars

Mechanical+ITD flat vs head up

Effect of Airway devices on Carotid flow during CPR

# 2 CPR Methods

Standard CPR (S-CPR)

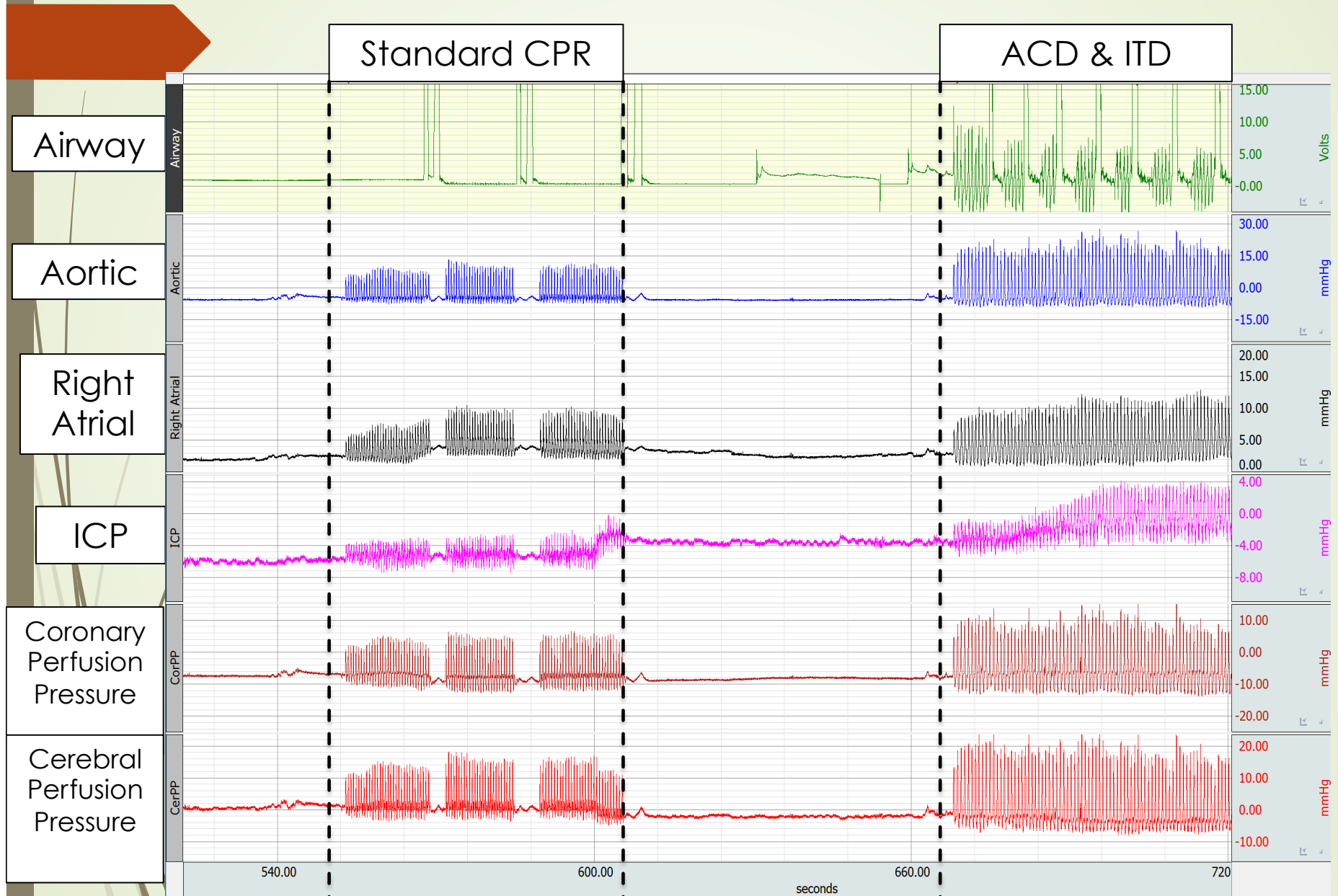


versus

ACD-CPR + ITD (ACD+ITD)



# SCPR vs. ACD & ITD



# What is the optimal head position during CPR?

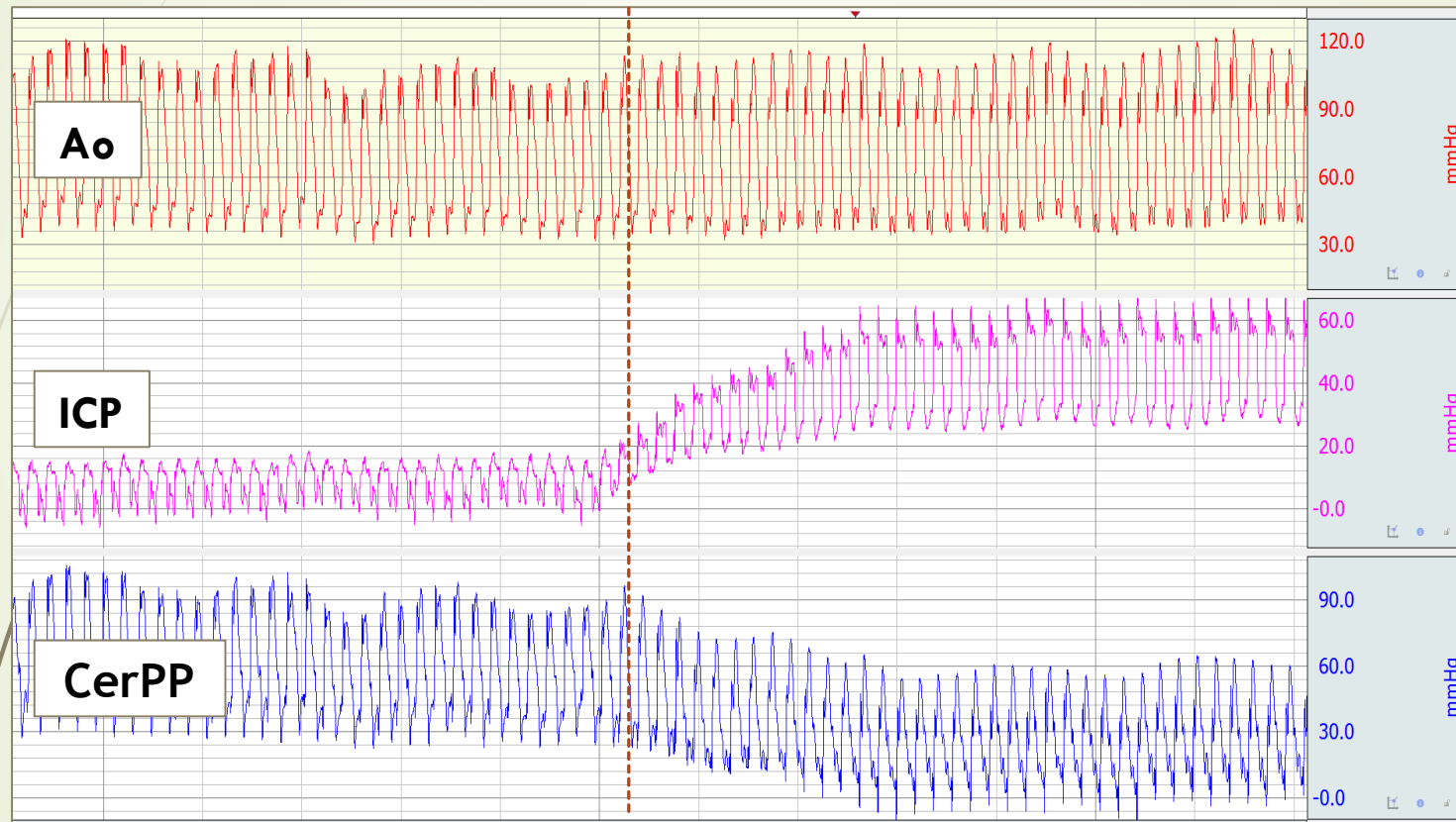
Will elevation of the head with circulatory enhancement technologies (e.g. ITD and/or ACD) to generate good flows

1. Increase brain blood flow?
2. Reduce the concussion with each compression?
3. Lower ICP?
4. Improve neurological outcomes?

# Change of Position: Head Down

Supine 0° CPR

30° Head down CPR



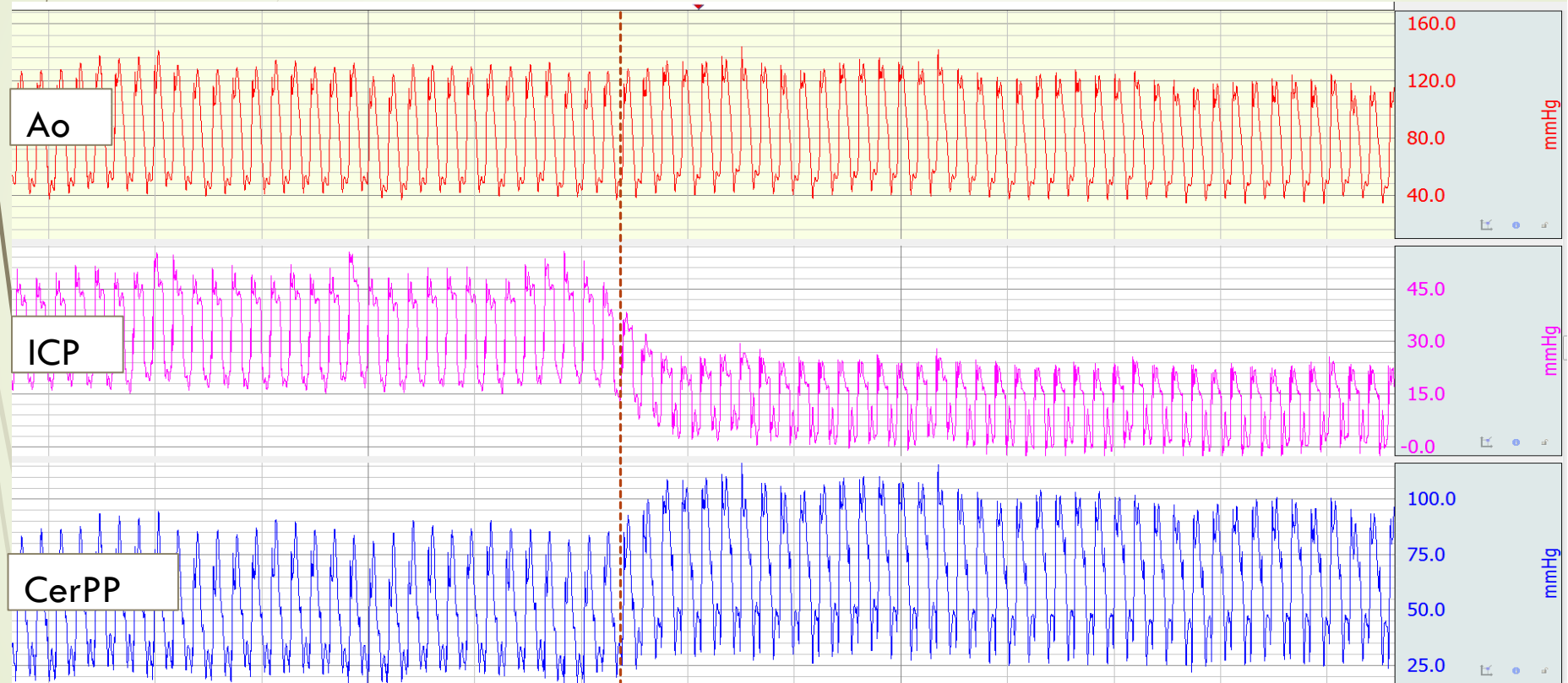
Change of position  
(CPR + ITD: rate 100/min)



# Change of Position: Head Up

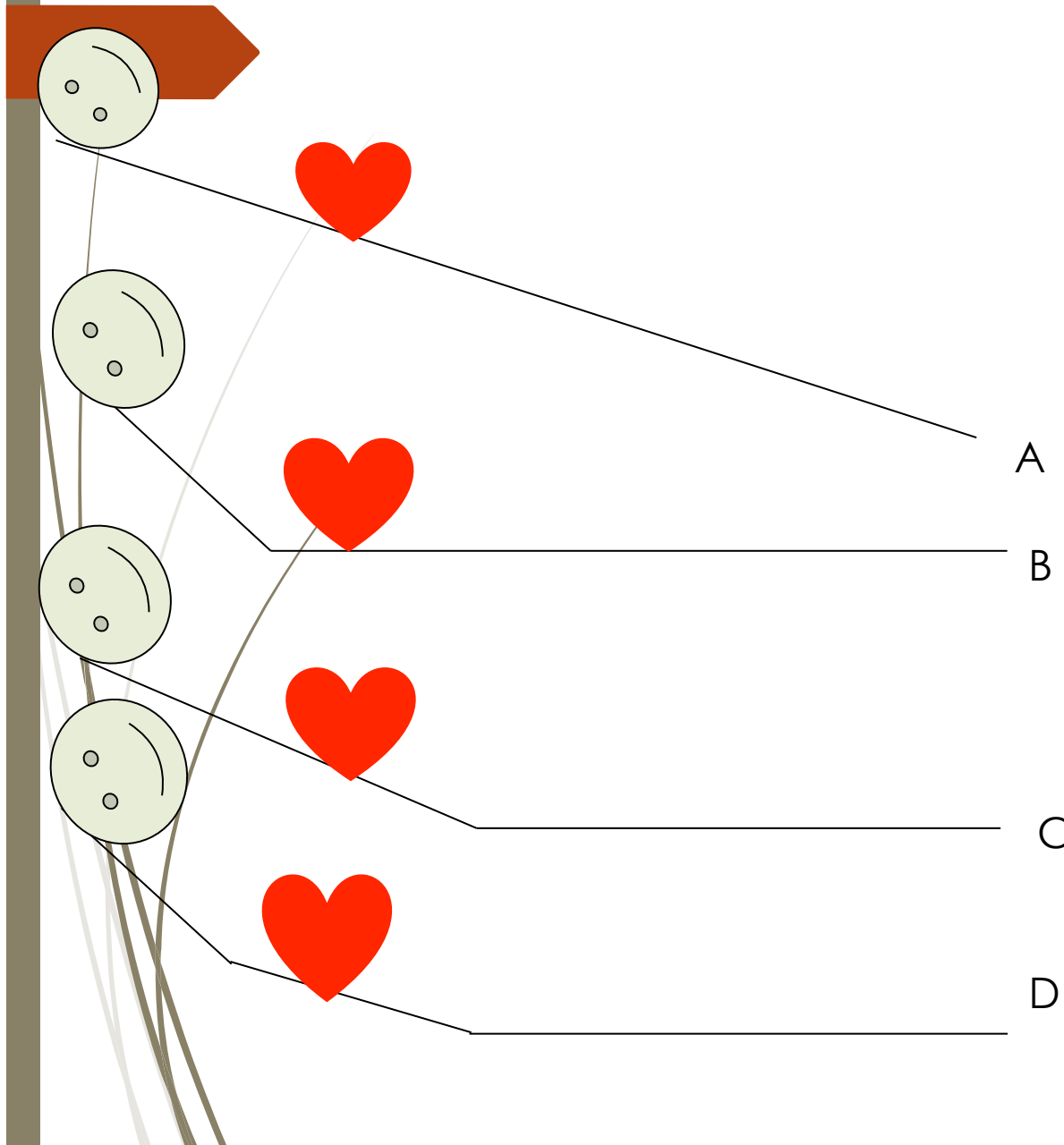
Supine 0° CPR

30° Head up CPR



Change of position  
(CPR + ITD: rate 100/min)

# Whole body tilt vs head/thorax elevation?

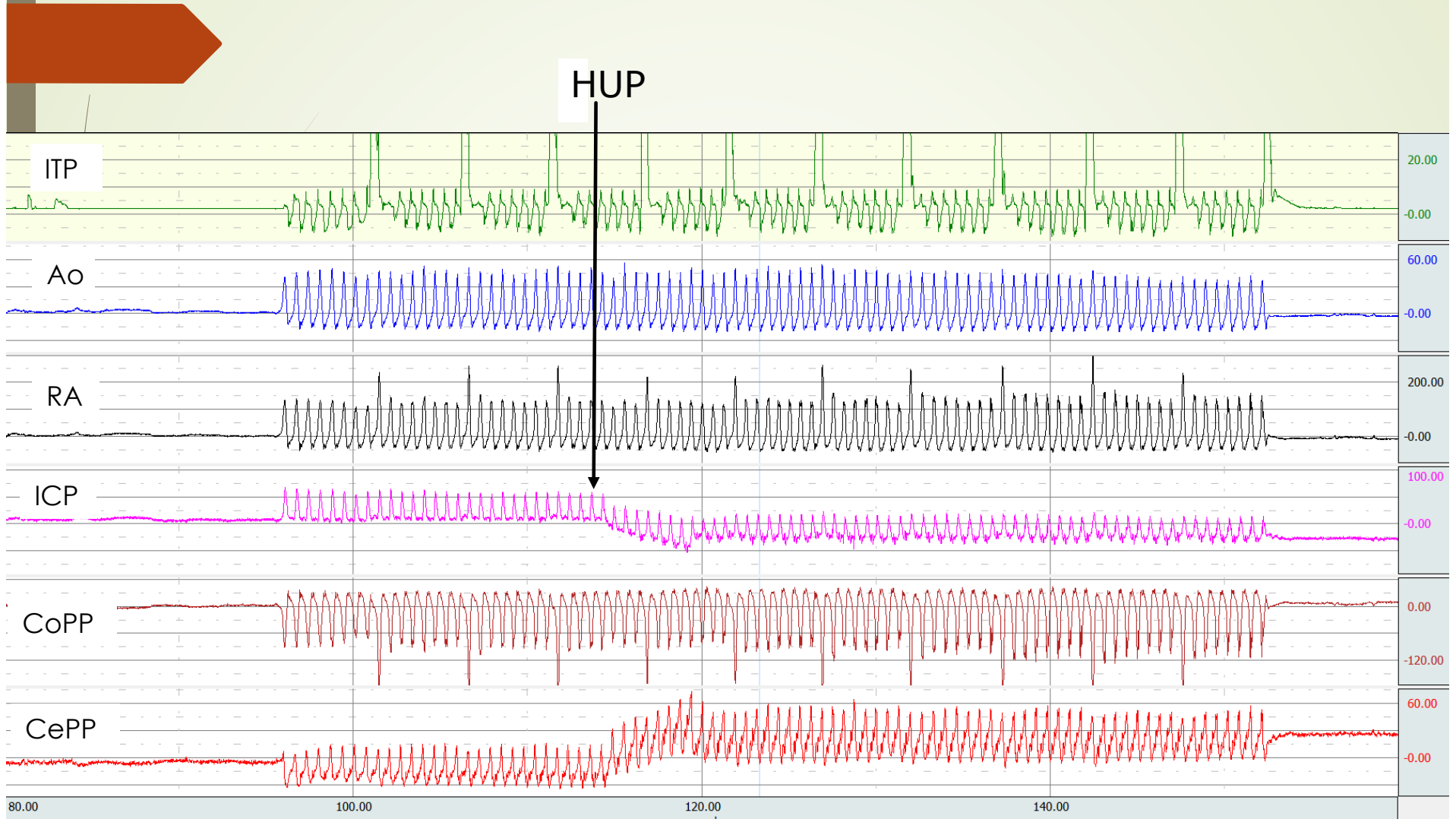


## Unique Benefits of D

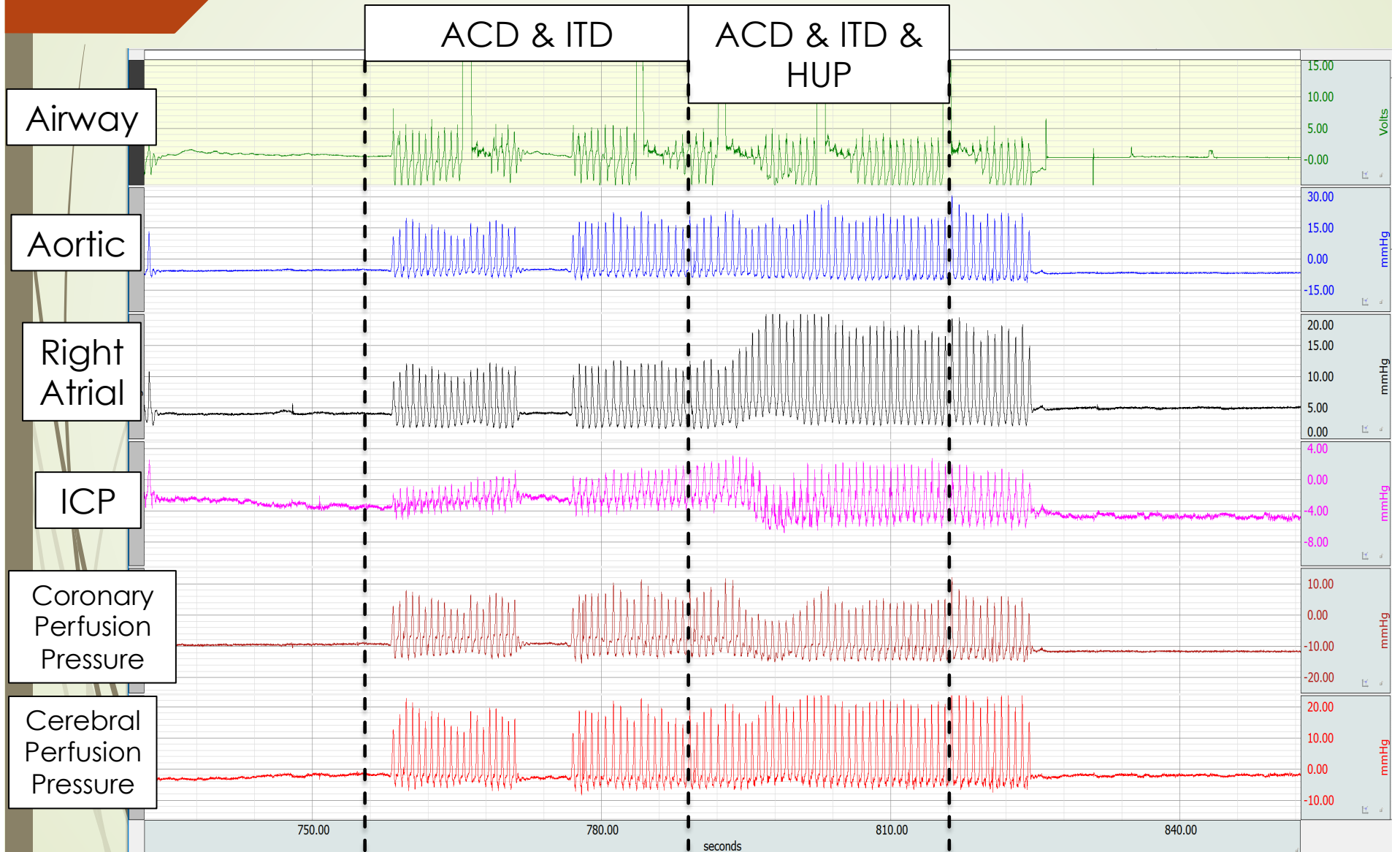
- Lower ICP
- RA pressure
- Higher CerPP
- Higher CorPP
- Preserves central blood volume
- Lower PVR



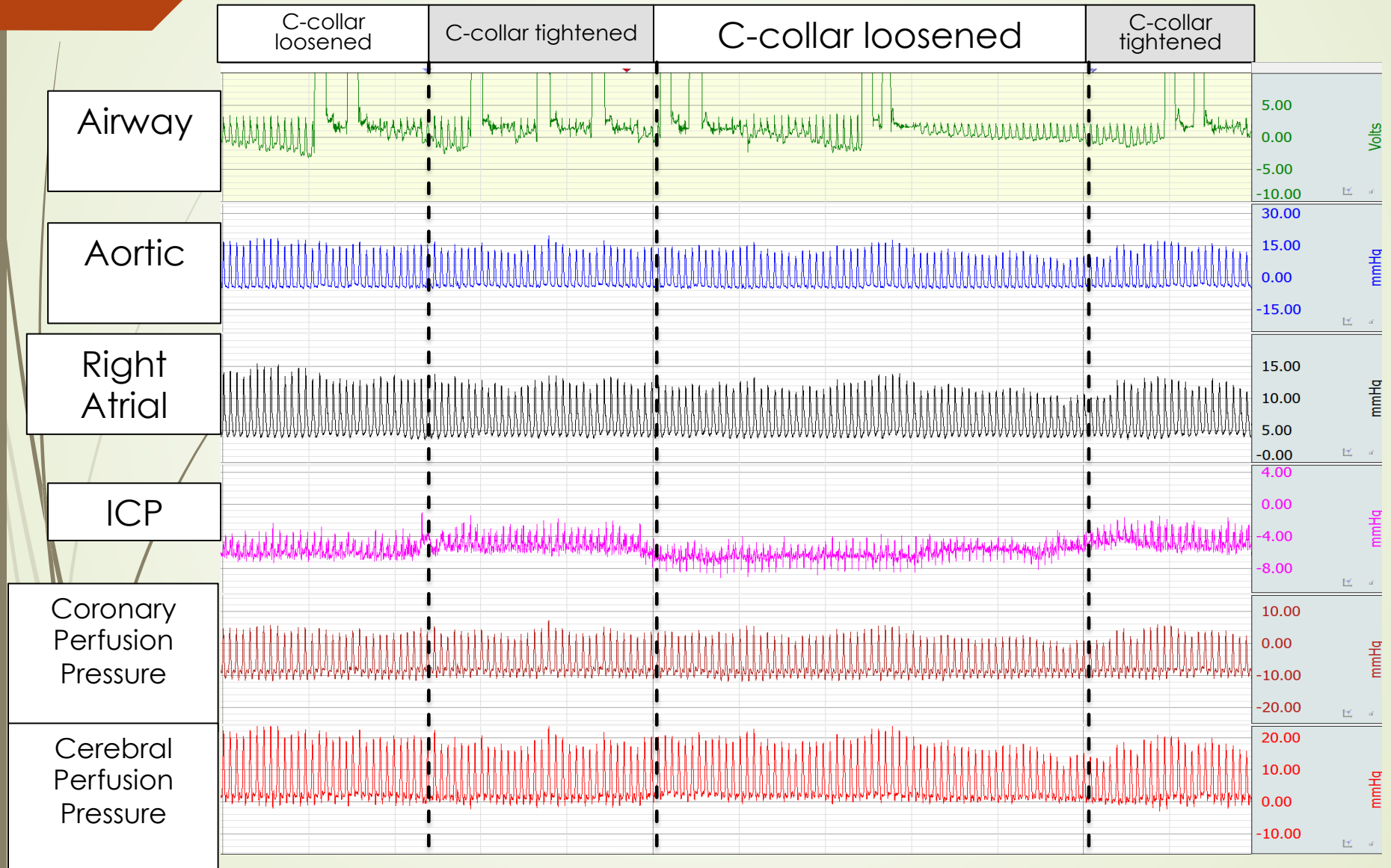
# Human Cadaver Tracing



# ACD & ITD vs. ACD & ITD & HUP



# Do C-Collars Impact Carotid flow?

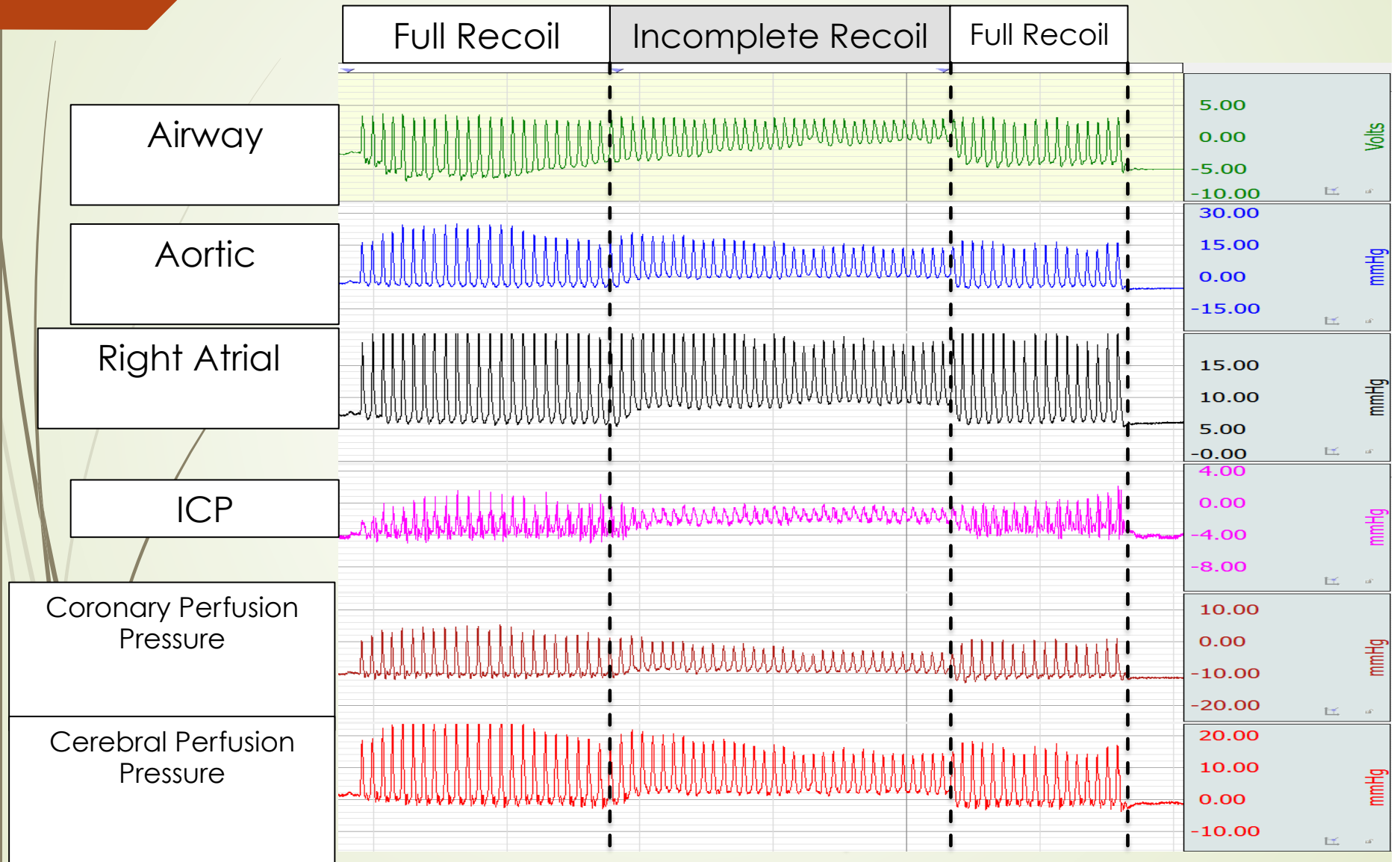




## Incomplete Chest Wall Recoil During CPR

- Causes persistent elevation of intrathoracic pressure
- Reduces venous return: physiologically like a tension pneumo
- Increases ICP and reduced cerebral perfusion

# ACD & ITD: Incomplete Recoil







Lets remember what  
makes this research  
possible







Cadaveric model has accurately reproduced physiologic findings from animal and human studies.

Cadaveric models have revealed important new physiologic impacts related to CPR and cardiac arrest management

Thank You!

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