

Asphyxia




Asphyxia occurs when ventilation stops. Oxygen delivery to the tissues subsequently stops and the remaining metabolism is anaerobic. Organ failure is rapid.

Asphyxia can be caused by loss of respiratory drive, airway obstruction, or inhalation of inadequately oxygenated air.

You can trace the timecourse of organ failure in asphyxia in this exercise.

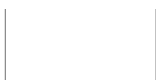
The Asphyxia Protocol

Click **Restart** to reestablish initial conditions and then record control values.

Go to  **Ventilation** and reduce central and peripheral respiratory drive to 0. Record the acute hemodynamic effects of loss of ventilation. Advance time and record data.



Blood Pressure (mmHg)





Cardiac Output (mL/Min)

Heart Rate (Beats/Min)

Stroke Volume (mL)




Arterial pO₂ (mmHg)




Blood pH

Time	Control	30 Sec	1 Min	5 Min
Blood Pressure				
Cardiac Output				
Heart Rate				
Stroke Volume				
Arterial pO ₂				
Blood pH				



You can go to  **Structure / Function** to monitor changes in organ function with time.

 **Charts** shows neurological signs.

Note that the early problem is re-establishing adequate oxygen delivery, while a later problem is re-establishing a heartbeat. See the exercise **Cardiopulmonary Resuscitation** for more on this.

References

None at this time.

