Chest trauma & respiratory deterioration

Treat pleural threats and support effective breathing.

INJURY PRIORITIES / ADULT TRAUMA

Assess respiratory function and physiology, not only the number of fractured ribs.

01 Recognise immediate threats

Suspected tension pneumothorax with physiological compromise requires emergency treatment. Massive haemothorax also demands rapid drainage and haemorrhage control. Do not wait for routine imaging when an immediate threat is evident.

02 Define the injury

Use ultrasound, radiography or CT according to stability. Assess the pleural space, lung, chest wall, mediastinum and diaphragm. Review associated injuries and anticipate changes with positive-pressure ventilation.

03 Make breathing possible

Provide effective analgesia, appropriate respiratory support and pulmonary care. Reassess oxygen needs, ventilation, cough and work of breathing. Selected chest-wall injuries warrant specialist discussion about surgical stabilisation.

04 Watch the trajectory

Escalate increasing oxygen requirements, fatigue, persistent air leak or ongoing thoracic bleeding. Drain output supports decision-making but must be interpreted with the clinical state and the possibility of retained blood.

WATCH POINT A small radiographic injury can be important in a patient with poor reserve or changing ventilation requirements.

DISCUSS WITH THE TEAM

Is deterioration explained by pain, lung injury, pleural pathology or another cause?

READ THE SOURCES

[1] WSES-AAST thoracic trauma guideline (2025), pleural and chest-wall injuries.