

CHEST TUBE DRAINAGE SYSTEM REFERENCE SHEET

INDICATIONS FOR CHEST TUBE	● Pneumothorax ● Hemothorax ● Hemopneumothorax ● Pleural effusion ● Emphyema ● Post-thoracic surgery
SYSTEM SETUP & EQUIPMENT	● Commercial drainage unit (e.g., Atrium, Pleur-Evac) ● Consists of fluid collection chamber ● Water Seal Chamber ● Suction Regulator ● If on active suction, turn wall suction to high and regulate the suction amount from the drainage unit itself.
TRANSPORT CONSIDERATIONS	● Keep system upright and below chest ● Secure tubing to patient and stretcher ● Ensure no clamping (will lead to tension pneumothorax) ● Request spare drainage system if over filling of drainage is anticipated
KEY ASSESSMENT POINTS	● Tube Position → Secured at insertion site; connections taped/sealed ● Drainage System → Below chest level, upright, no kinks, tubing not clamped ● Water Seal → Tidaling with negative pressure respiration; intermittent bubbling; no continuous bubbling (air leak) ● Drainage → Note color, amount, and rate (mark and time levels) ● Suction (if used) → Typically -20 cmH₂O; may have gentle or intermittent bubbling

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COMPLICATIONS	● Tracheal deviation, hypotension, hypoxia → suspect tension pneumothorax ● No tidaling in water seal (may indicate obstruction or lung re-expansion) ● Cracked drainage system → Replace with Heimlich valve ● Continuous bubbling in water seal → air leak ● Rapid increase in bloody drainage (>200 mL/hr) → possible hemorrhage ● Dislodged tube → cover with occlusive dressing taped on 3 sides, notify MD
TROUBLE-SHOOTING	● System knocked over → Stand back up (re-establish water seal) ASAP, assess patient ● Disconnection → Clean disconnected ends, reconnect ● No drainage/tidaling → ENSURE TUBE IS NOT CLAMPED, check for kinks or clots ● Air leak suspected → Contact medical control for guidance
DOCUMENTATION	● Insertion site status ● Type/amount/color of drainage ● Presence of bubbling or tidaling ● Suction level and function ● Interventions and patient response

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Pleur-Evac Drainage Unit and Atrium Drainage Unit

