Burns Rehabilitation Major Incident Condition Card
Inhalation Injury – Respiratory Care (Physiotherapy)

Before following this guidance, please check that it hasn't been updated.
Visit: Southwest-Burncare-Network – Mass Casualty/Major Incident webpage

Assessment - Standard Physiotherapy respiratory assessment and treatment should be followed.

INDICATION

- Damage to the lung parenchyma or respiratory tract caused by smoke, heat or chemical irritants.
- Noxious gases such as Carbon Monoxide affect the oxygen carrying capacity of the blood.
- The presence of carbonaceous secretions can occlude the airway leading to atelectasis, pneumonia, acute respiratory distress syndrome (ARDS).

TOP TIPS

- Treating a burns patient for the first time can be daunting. Don't be hesitant, the treatment must be effective
- The patient may look swollen and have an odour which can be unpleasant
- If awake, the patient may be distressed and fearful of physiotherapy. Reassure the patient you are causing no harm
- Check the patient has been given sufficient pain relief prior to treatment and has been given time for it to work
- The use of a glove over the stethoscope can help with auscultation where there are burns to the chest and back and you wish to auscultate directly onto skin

GENERAL	• Ensure patient has adequate pain relief to tolerate therapy intervention • Check the distribution of burns. If there are burns to the face, vision may be affected due to swelling. This may affect the ability of the patient to open their eyes • Check whether the patient has had a Split Skin Graft (SSG) and be guided by post-op instructions about when you can commence mobility – it is normal to wait between 2 and 5 days before commencing mobility if the lower limbs grafted • Avoid chest physiotherapy over grafted sites if possible unless deemed important to help preserve life. • Consider other injuries and follow any precautions e.g. fractures and their specific management.
AIRWAY	• Swelling caused by burns to the head and neck may cause loss of airway and difficulty opening the eyes and mouth • If the patient is self-ventilating, they may have a hoarse voice and/or stridor. • Patients require oxygen and are often intubated with an endotracheal tube (ETT) and ventilated where the airway is compromise.

	• If a secondary survey has been completed and there are no spinal precautions, the patient should be positioned upright if able, with head and neck in midline.
BREATHING	• Burns to the chest can impact on the ability to breathe deeply. Where there are circumferential full thickness burns to the chest escharotomies may have been performed to allow the rib cage to expand • Manual techniques can still be performed in this instance to the chest • Carbonaceous secretions are likely to be present causing occlusion of the respiratory tract • Standard respiratory physiotherapy assessment including assessment of oxygenation, ventilation, auscultation and ability to partake in active chest physiotherapy should be undertaken • If wheezy, check the patient is on a nebuliser regime. This may be to reduce bronchospasm or aid secretion clearance (Mucolytics). • Manual hyperinflation can be performed if physiotherapy assessment identifies difficulty clearing carbonaceous secretions or secondary infection. Consider level of ventilator support e.g. if oxygen > 60% FIO2 and peep >10 this may not be advisable • Use of saline or local alternative can be utilised in the presence of carbonaceous secretions in the early stages • Frequency of treatment should be based on clinical need, but generally these patients are treated more intensively / regularly
CIRCULATION	• Adults with burns over 15% of the total body surface area (TBSA) undergo fluid resuscitation for the first 24 hours. The patient may have a low or unstable blood pressure • If the patient is stable, self-ventilating +/- tracheostomy, on less than 40% oxygen, early mobilisation should be considered

Further Information

Further Information on burns assessment, intervention and contacts for burns services are available on your local Burn Care Network's website:

Northern Burn Care Network: https://www.northern-burncare-network.nhs.uk

London and South East Burn Care Network: https://www.lsebn.nhs.uk/

Midlands Burn Care Network: https://www.mcctn.org.uk/burns.html

South West Burn Care Network: https://www.southwest-burncare-network.nhs.uk