

First Aid of LPG (cold) burns for Clinicians

Factsheet

PRESENTATION

Due to the low boiling point of Liquefied Petroleum Gas (LPG), it is stored in a pressurised, cooled liquid form, which on exposure to the skin, can result in severe cold burns similar to frostbite due to the rapid drop in temperature.

- The initial wound appears hyperaemic and oedematous, without apparent tissue necrosis.
- The appearance of superficial tissue is quite often an inaccurate indicator of underlying tissue viability, with the injury being more severe than a thermal burn due to the rapid deep penetration of liquids and gases.

FIRST AID AT THE SCENE

- Remove the person from danger and minimise the duration of exposure.
- Remove clothing that has been exposed to the agent.
- **PLEASE NOTE:** the usual recommendations for burns first aid (20 minutes of cool running water) is contraindicated in contact LPG gas cold burns
- **Rapid re-warming in a bath of water between 40 and 42°C for 15-30 minutes** with the aim of minimizing tissue loss and reducing chemical irritation. It is important to achieve this temperature range, as lower temperatures are less beneficial to tissue survival, whilst higher temperatures may produce a burn wound and compound the injury.
- Active motion whilst rewarming is recommended
- Avoid massaging the affected area during rewarming
- After rewarming, the injured area should be gently covered or draped with clean sterile material.
- Do not break any blisters.

EMERGENCY DEPARTMENT CARE

- Attend to first aid as outlined above, if it has not been attended to already.
- Opioid analgesia may be required for severe pain
- Contact local burn unit for transfer and dressing advice should be considered and implemented if referral criteria are met (see ANZBA website for transfer criteria)
- Shock may occur due to intense pain, and should be treated.
- Escharotomy may be indicated if compartment syndrome develops, or if circulation is impaired.

Information obtained from JBI Burns Node Recommended Practice: Liquefied Petroleum Gas (LPG) Burns: First Aid and Treatment <http://connect.jbiconnectplus.org/ViewDocument.aspx?0=8270>

For more information go to ANZBA Website: www.anzba.org.au