



# JBI BEST PRACTICE PROCEDURE

## Burns (Hypermetabolic Response): Nutrition Management

### Equipment

A standardized calorie requirement measuring tool (e.g. indirect calorimetry, Toronto predictive equation (adults), Schofield predictive equation (pediatrics)).

### Recommended Procedure

#### Purpose

Hypermetabolic response in the individual with burn injuries leads to increased nutritional requirements proportional to the severity of the injury (depth and extent of the burn). If managed appropriately the morbidity and mortality risks decrease.

#### Special Considerations

- The assessment of total body surface area (TBSA) burns and depth needs to be completed prior to calculation of nutritional requirements.
- Age, height, body weight and gender need to be documented and will be required when calculating nutritional requirements.
- Nutrition assessment needs should be completed by a Dietitian.

#### Procedure

- Commencement of early enteral nutrition (within 12-24 hours of injury) is recommended for all adult and pediatric patients sustaining > 20% TBSA burn injury and for all patients who are unable to meet their nutritional requirements orally.
- Enteral feeding regimens should be provided as a continuous regimen in the acute phase of injury (or while the “flow” phase of the catabolic response is initiated).
- Patients sustaining < 20% TBSA burn injury should be encouraged to eat and drink as soon as possible post-injury. A high protein, high energy diet with small frequent meals and high protein drinks (milk drinks or commercial supplements) should be offered.
- Nutritional supplementation of specific vitamins and minerals is recommended. A dietitian should advise on individualized nutritional requirements.
- Glycemic control should be optimized using a pharmacological approach (e.g. insulin or oral hypoglycemic agents) rather than altering nutritional support, to minimize muscle catabolism.
- The prescribed or recommended nutrition regime must be documented in the patient’s medical record.
- Actual enteral nutrition intake must be documented in the medical record which may be on a fluid balance chart.
- Oral nutrition intake may be documented in the medical record which may be on a food chart.
- Early enteral nutrition following severe burn injury:
  - Reduces calorie deficits
  - May help stimulate insulin production
  - Minimizes loss of skeletal muscle mass and promotes protein retention
  - Decreases gut permeability minimizing translocation of bacteria across the gut mucosa, leading to decreased sepsis
  - Improves rate of wound healing
  - Decreases length of hospital stay

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- Decreases morbidity and mortality

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## Last Updated

09 October 2023

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## Supporting Evidence

- JBI-ES-3635-4-Burns (Hypermetabolic Response): Nutrition Management (Pediatric and Adult)

## Occupational Health and Safety Considerations



CLINICAL COMPETENCE  
REQUIRED



HAND HYGIENE  
REQUIRED

Author(s) potential or perceived conflicts of interest are collected and managed in line with the International Committee of Medical Journal Editors (ICMJE) standards.

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For details on the method for development see Munn Z, Lockwood C, Moola S. The development and use of evidence summaries for point of care information systems: A streamlined rapid review approach. *Worldviews Evid Based Nurs.* 2015;12(3):131-8.

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