

# Nutritional Interventions in Severe Road Rash

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## BACKGROUND

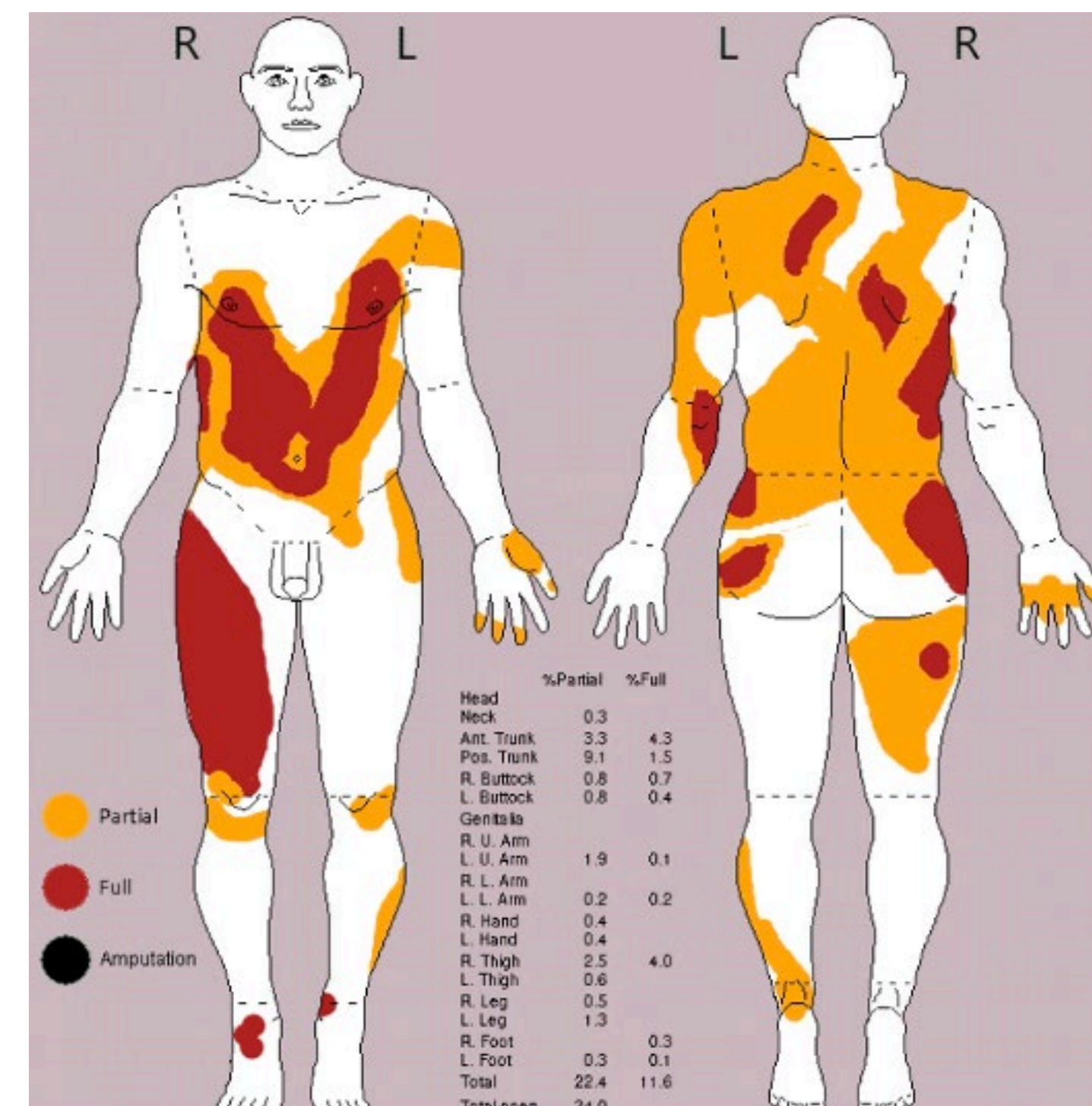
Road rash is a friction burn that can result in partial to full thickness injuries.<sup>1</sup> Mechanisms of injury include: motor vehicle accidents, falls, being dragged etc. Treatment can be complicated by contamination and foreign debris imbedded in flesh, which may require intensive debridement and antibiotic therapy.<sup>1</sup> Because of its similar nature to thermal burns, dietitians can reference the burn and trauma guidelines for nutritional intervention.

## CASE DESCRIPTION

Patient X is a 21-year-old male with an unknown medical history who sustained 34% TBSA partial and full thickness burns after being dragged underneath a car for 6 blocks. The patient arrived at Harborview Medical Center intubated and sedated on propofol. No signs of wasting were noted.

## BARRIERS TO CARE

- Inability to conduct full NFPE due to severe wounds and bandages
- No nutrition history due to sedation
- Limited guidelines for road rash specific burns



**Fig 1:** Burnman chart on HD1 showing TBSA burn of 34%. Harborview Medical Center. Epic.

## CLINICAL COURSE

### Week 1-2

- Initiated tube feeds day of admit
- Provided burn and trauma supplements per hospital protocol
- Obtained indirect calorimetry and TUN assay, adjusted tube feed and protein goals to better suit needs

**Table 1:** Initial calculated and actual energy and protein needs

	Calculated Needs	Actual Needs
Energy (kcal)	2636-3162	2376
Protein (g)	138-173	> 336*

\* to obtain positive nitrogen balance

### Week 3

- Tube feed formula adjusted based on osmolality and fiber content to manage frequent diarrhea

### Week 4-5

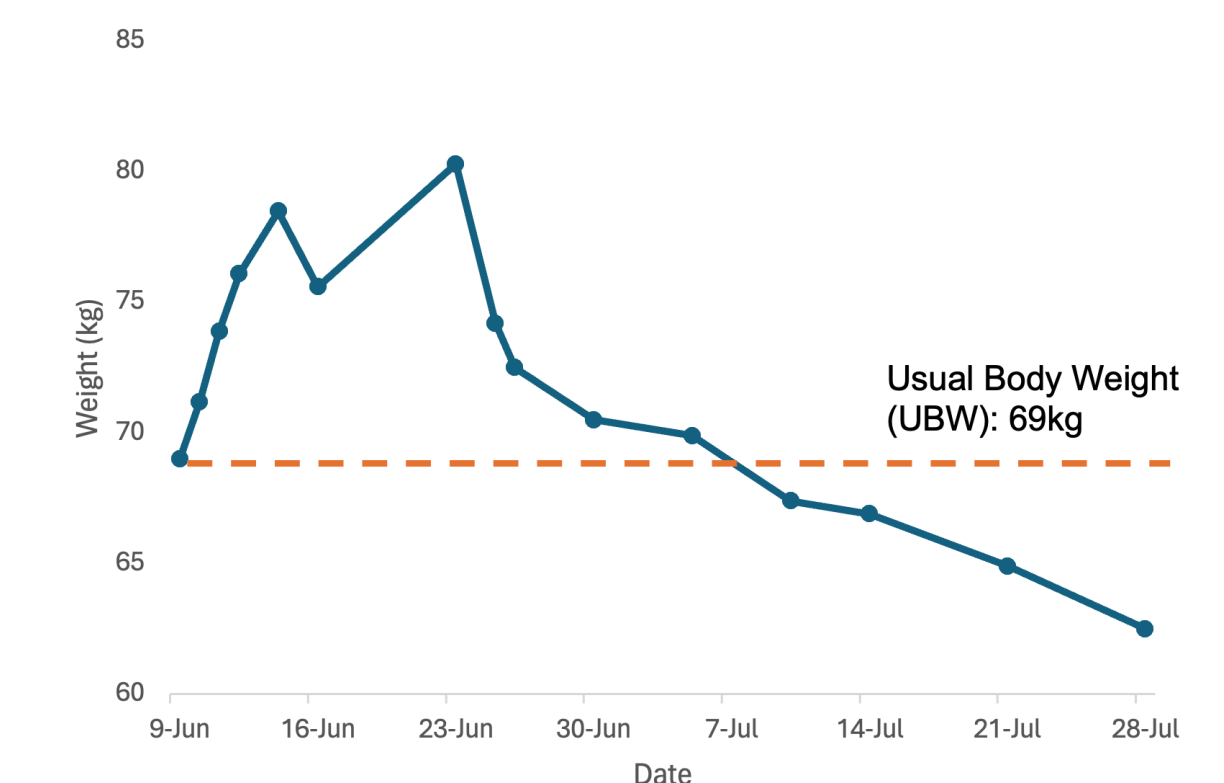
- Patient still experiencing diarrhea, transitioned to a semi-elemental formula for malabsorption

### Week 6-8

- Nutrition needs were recalculated for <10% TBSA burn
- Patient X able to take PO after passing swallow test, transitioned to cyclic feeds to promote appetite
- Moved to acute care for rehabilitation

## General Nutritional Interventions

- Ensured consistent adequate nutrition provision (>80% of needs)
- Assessed for wasting, metabolic abnormalities, and micronutrient deficiencies through weights, labs, and patient pictures
- No signs of wasting from partial NFPE
- Family able to provide nutrition history



**Fig 2:** Weight trends throughout clinical course

Initial weight gain likely due to edema. At the end of his ICU stay, Patient X's weight was slightly lower than UBW. This was expected due to a BKA and prolonged hospitalization.

## CONCLUSIONS

Dietitians can use burn and trauma guidelines for treating road rash. This case study demonstrates the importance of using objective data and reassessment when information is lacking.

## REFERENCES

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