

4.2b Composition of Enteral Nutrition: (Carbohydrate/fat): Low fat/high CHO

There were no new randomized controlled trials since the 2015 update and hence there are no changes to the following summary of evidence.

Question: Does a low fat/high CHO enteral formula affect outcomes in the critically ill adult patient?

Summary of evidence: There was only one study that compared the outcomes of a low fat enteral diet, with and without omega 3 fatty acids, to a standard diet.

Mortality: There was no difference in the incidence of mortality between the groups receiving the low fat formula or standard (RR = 0.54, 95 % confidence intervals 0.13-2.31).

Infections: Low fat formula compared to standard was associated with a significant reduction in the incidence of pneumonia ($p < 0.05$).

LOS: Low fat formula was associated with a trend towards a reduction in LOS ($p = 0.08$).

Ventilator days: Not reported.

Other complications: No differences reported.

Conclusion:

1) Low fat enteral feeding may be associated with lower incidences of pneumonia and a reduction in LOS in burn patients.

Level 1 study: if all of the following are fulfilled: concealed randomization, blinded outcome adjudication and an intention to treat analysis.

Level 2 study: if any one of the above characteristics are unfulfilled

Table 1. Randomized studies evaluating low fat/high CHO enteral nutrition in critically ill patients

Study	Population	Methods (score)	Intervention	Mortality # (%)†		RR (CI)**	Infections # (%)		RR (CI)**
				(A) + (B)	(C)		(A) + (B)	(C)	
1) Garrel 1995	Thermal injury patients > 20 % TSBA N = 43	C.Random: yes ITT: no Blinding: double (9)	(A) low fat (15 % fat) (B) low fat + fish oils vs (C) 35 % fat	(A) + (B) 3/24 (12.5)	(C) 3/13 (23)	0.54 (0.13-2.31)	(A) + (B) 3/24 (12.5)	(C) 7/13 (54)	0.23 (0.07-0.75)

Table 1. Randomized studies evaluating low fat/high CHO enteral nutrition in critically ill patients (continued)

Study	LOS days			Ventilator days		Cost		Other
	(A)	(B)	(C)					
1) Garrel 1995	45 ± 23	46 ± 23	67 ± 28	NR	NR	NR	NR	NR

C.Random: concealed randomization
ITT: intent to treat
NR: not reported
TSBA: total surface burn area

† presumed ICU mortality unless otherwise specified
± : mean ± standard deviation
** RR= relative risk, CI= Confidence intervals
LOS: length of stay