|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplemental Table 6** Energy requirement with different equations in patients categorized by 1) nutritional risk by screening and 2) diagnosis of malnutrition using the ESPEN criteria. | | | | | | | | |
|  | Not at risk | | Nutritional risk by screening | | Nutritional risk by screening, but not malnourished | | Malnourished according to ESPEN diagnosis | |
|  | n = 60 |  | n = 39 |  | n = 16 |  | n = 23 |  |
| **Energy requirement (kcal/day)** | Median | 95% CI | Median | 95% CI | Median | 95% CI | Median | 95% CI |
| Clinical guidelines (lower value) a | 1642 | (1588; 1705) | 1365 | (1225; 1513) | 1531 | (1275; 1638) | 1280 | (1145; 1395) |
| Reaching ≥ 75% of requirement, n (%) b | 38 | (63) | 22 | (56) | 10 | (63) | 12 | (52) |
| Clinical guidelines (higher value) a | 2205 | (2070; 2313) | 1722 | (1566; 1857) | 1838 | (1530; 2286) | 1638 | (1494; 1758) |
| Reaching ≥ 75% of requirement, n (%) b | 16 | (27) | 13 | (33) | 4 | (25) | 9 | (39) |
| Moore and Angelillo c | 1760 | (1666; 1907) | 1422 | (1243; 1594) | 1457 | (1326; 1908) | 1388 | (1161; 1575) |
| Reaching ≥ 75% of requirement, n (%) b | 32 | (53) | 22 | (56) | 10 | (63) | 12 | (52) |
| Nordenson *et al*. d | 1391 | (1266; 1515) | 1243 | (1112; 1343) | 1335 | (1065; 1561) | 1167 | (1069; 1310) |
| Reaching ≥ 75% of requirement, n (%) b | 48 | (80) | 26 | (66) | 12 | (75) | 14 | (61) |
| Harris and Benedict e | 1280 | (1254; 1362) | 1122 | (1048; 1206) | 1178 | (1020; 1426) | 1100 | (1034; 1199) |
| Reaching ≥ 75% of requirement, n (%) b | 52 | (87) | 32 | (82) | 14 | (88) | 18 | (78) |
| FFM equation based on 3 studies f | 1721 | (1495; 1947) | 1452 | (1214; 1634) | 1620 | (1129; 2030) | 1313 | (1135; 1575) |
| Reaching ≥ 75% of requirement, n (%) b | 34 | (57) | 22 | (56) | 9 | (56) | 13 | (57) |
| Basal metabolic rate with BIA g | 1497 | (1349; 1644) | 1320 | (1166; 1439) | 1430 | (1110; 1699) | 1229 | (1113; 1400) |
| Reaching ≥ 75% of requirement, n (%) b | 46 | (77) | 25 | (64) | 12 | (75) | 13 | (57) |
| Schofield h | 1448 | (1372; 1559) | 1188 | (1127; 1242) | 1232 | (1138; 1561) | 1151 | (1075; 1222) |
| Reaching ≥ 75% of requirement, n (%) b | 46 | (77) | 26 | (66) | 12 | (75) | 14 | (61) |

a Icelandic clinical guidelines for hospitalized patients (lower value 25 kcal/kg/day, higher value 30/kcal/day) (1). Adjustments were made before calculations if a patients BMI was <18.5 kg m/2 and >27 kg/m2.

b Data shown as n (%). Number of patients reaching ≥ 75% of requirement from the five meals served from the hospital kitchen.

c Moore and Angelillo (1988) (female: 14.1 x weight + 515 and male: 11.5 x weight + 952) (2)

d Nordenson *et al*. (2010) (1856 + 76.0 x FFM (kg)) (3)

e Harris and Benedict (1919) (female: 655 + 9.6 weight + 1.8 height – 4.7 age and male: 66.5 + 13.8 weight + 5.0 height – 6.8 age) (4)

f Fitting *et al.* (1989) (5), Kao *et al.* (2011) (6) and Pouw *et al.* (1998) (7) (33 kcal/kg FFM/day).

g Basal metabolic rate measured with (BIA).

h Schofield (1985) (female > 60 years: 38 x weight + 2755 kJ and male: > 60 years: 49 x weight + 2459 kJ) (8)

1. Friðriksdóttir AJ, & Möller, P. H. (2011) Clinical guidelines on patients nutrition. <http://www.landspitali.is/lisalib/getfile.aspx?itemid=28242>

2. Moore JA, Angelillo VA (1988) Equations for the prediction of resting energy expenditure in chronic obstructive lung disease. *Chest* **94**, 1260-1263.

3. Nordenson A, Gronberg AM, Hulthen L *et al.* (2010) A validated disease specific prediction equation for resting metabolic rate in underweight patients with COPD. *Int J Chron Obstruct Pulmon Dis* **5**, 271-276.

4. Harris JA, Benedict FG (1919) A biometric study of basal metabolism in man. . *Washington, DC: Carnegie Institute*.

5. Fitting JW, Frascarolo P, Jequier E *et al.* (1989) Energy expenditure and rib cage-abdominal motion in chronic obstructive pulmonary disease. *Eur Respir J* **2**, 840-845.

6. Kao CC, Hsu JW, Bandi V *et al.* (2011) Resting energy expenditure and protein turnover are increased in patients with severe chronic obstructive pulmonary disease. *Metabolism* **60**, 1449-1455.

7. Pouw EM, Schols AM, Deutz NE *et al.* (1998) Plasma and muscle amino acid levels in relation to resting energy expenditure and inflammation in stable chronic obstructive pulmonary disease. *Am J Respir Crit Care Med* **158**, 797-801.

8. Schofield WN (1985) Predicting basal metabolic rate, new standards and review of previous work. *Hum Nutr Clin Nutr* **39 Suppl 1**, 5-41.