

Physiological and psychological changes during specialized inpatient care for anorexia nervosa – the ANE project

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Introduction: Guidelines and research on inpatient treatment of severe anorexia nervosa are limited.

Aim: To investigate changes in physiological and psychological parameters during inpatient treatment at the specialized eating disorder center for children and young adults in Gothenburg, Sweden.

Method: Patients with anorexia nervosa were recruited at arrival to inpatient treatment. Body composition (DXA) and resting energy expenditure (REE; Indirect calorimetry) were measured within the first days of treatment. Eating Disorder Examination Questionnaire (EDE-Q) and Clinical Impairment Assessment (CIA) were completed within the first days. Physiological and psychological parameters were repeated at the end of treatment, before discharge.

Results: Twenty-two women, 16-24 years old, mean disease duration of 3,8 years, were included. Comorbidity was present in 54%. Body mass index (BMI) increased significantly during treatment from 15,3 to 18,4 kg/m². Total fat free mass increased from 35 to 39 kg (11%) and total fat mass increased from 9 to 14 kg (59%). Low skeletal muscle mass as defined by ALSTI below 5,7 kg/m² was found in 100% of patients at admission and in 55% at discharge. Osteope-

nia was found in 50%. Daily energy balance, estimated from change in body energy content by repeated DXA scans separated by 33-70 days, were between 443 and 1381 kcal/day, with a mean of 967 kcal/day. Measured REE from admission to discharge increased by 20% from 1196 kcal/d to 1503 kcal/d. Predicted REE from seven equations differed from measured REE by 4-35%. Changes in total scores of EDE-Q (4,41 to 2,8) and CIA (36,1 to 24,9) from admission to discharge were significant.

Discussion: Specialized inpatient care has the potential of improving both physiological and psychological parameters in young individuals with severe anorexia nervosa. Clinical assessment of energy requirements must be individualized. Prediction equations deviated from measured REE, telling us that standard equations are a poor substitute in the absence of measured REE.