

Prevention Of Secondary Complications Through An Adapted Nutritional Screening Model For Spinal Cord Injured Patients

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Introduction:

Current models of nutritional screening are not adapted to the lower energy expenditure of Spinal Cord Injury (SCI)-patients. The risk of positive energy balance induces a high risk of obesity and serious complications to SCI. It is important to identify patients at risk to take preventative initiatives.

Methods:

The Spinal Cord Injury Centre of Western Denmark has developed an electronic nutritional screening model which addresses following factors: Stress-metabolism, para- or tetraplegia, whether the patient is walking, bed-bound or mobilized to a manual wheelchair.

The assessment of patients' energy and protein requirement is based on a nutritional screening including registration of nutrition and hydration related to height and weight and results in an individualized nutrition plan.

An audit of 32 patients was conducted to compare the nutritional screening model adapted to SCI (ERNA) and the Danish nutritional screening model for hospitalized persons (DNSM).

Results:

In the adapted model the average energy consumption and the calculated protein requirement are 13.9% respectively 16.7% lower than the Danish model. 48% of the reviewed cases were rated differently, comparing the risk of malnutrition. The Danish nutrition screening model detected only 43.8% of SCI-patients at risk of malnutrition (59.8% ERNA).

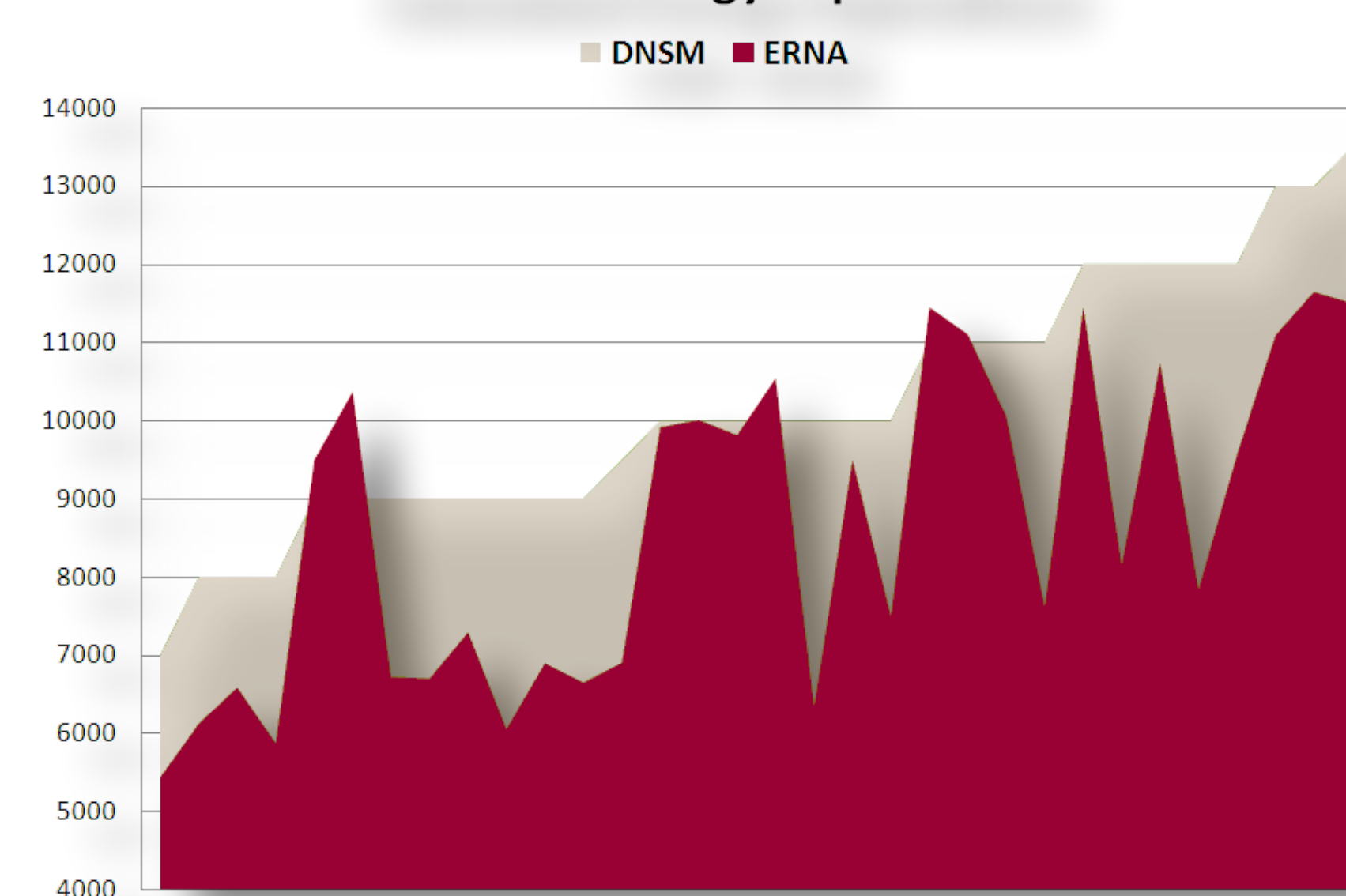
Conclusion:

The adapted nutritional screening model estimates the energy and protein expenditure of persons with SCI and takes the loss of muscle mass, the level of injury and performance into account. It is easy accessible, more targeted and precise to launch preventative initiatives against under- and overweight.

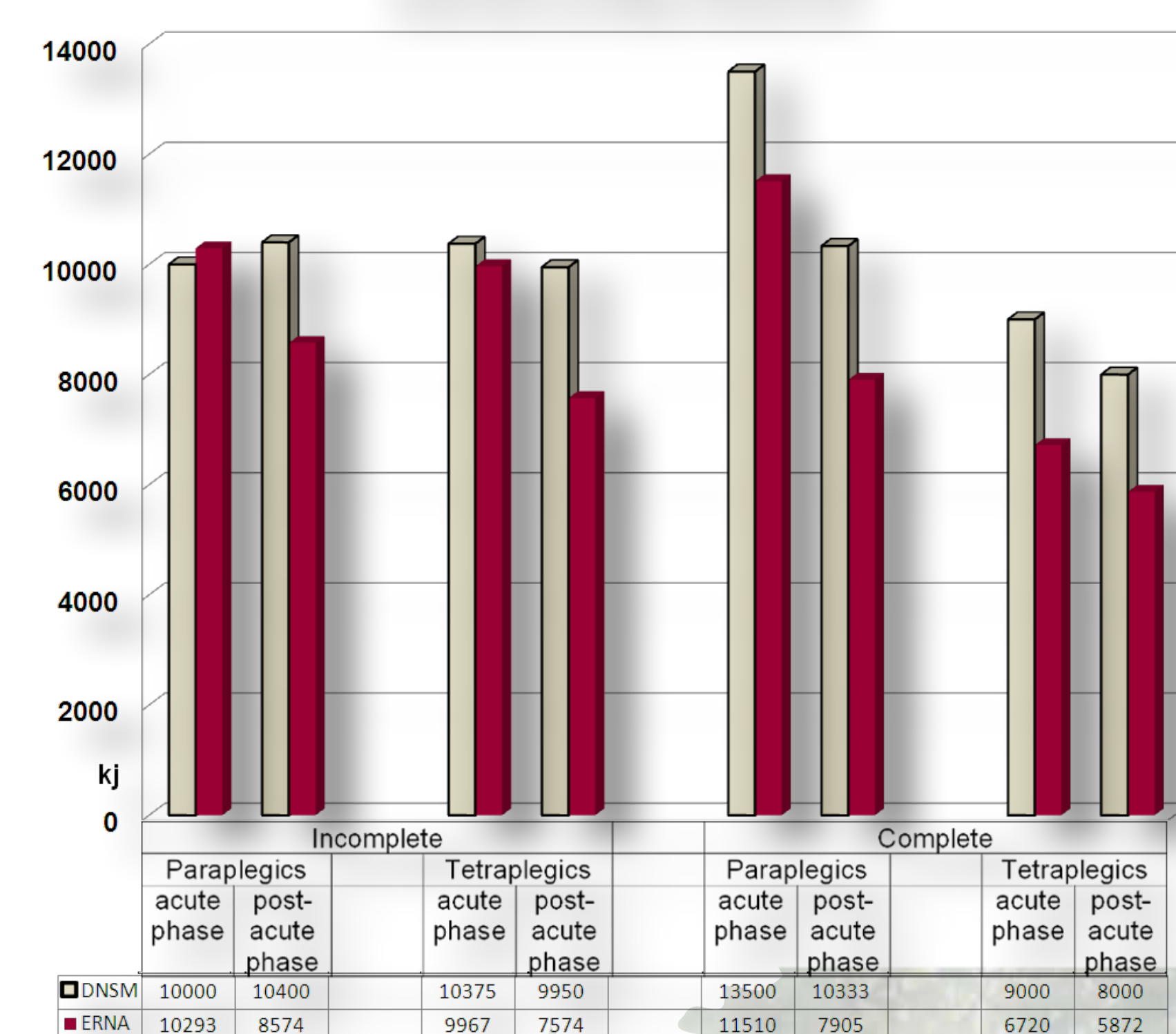
ERNA is an important tool in the clinical assessment of the patient's nutritional status, however the screening should always be followed up by a clinical evaluation of the patients overall situation, activity and well-being.



Calculated Energy Expenditure



Calculated Energy Requirement
broken down according to severity of SCI



Identified patients at risk for malnutrition

