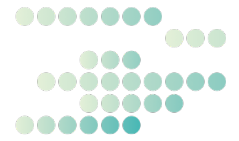
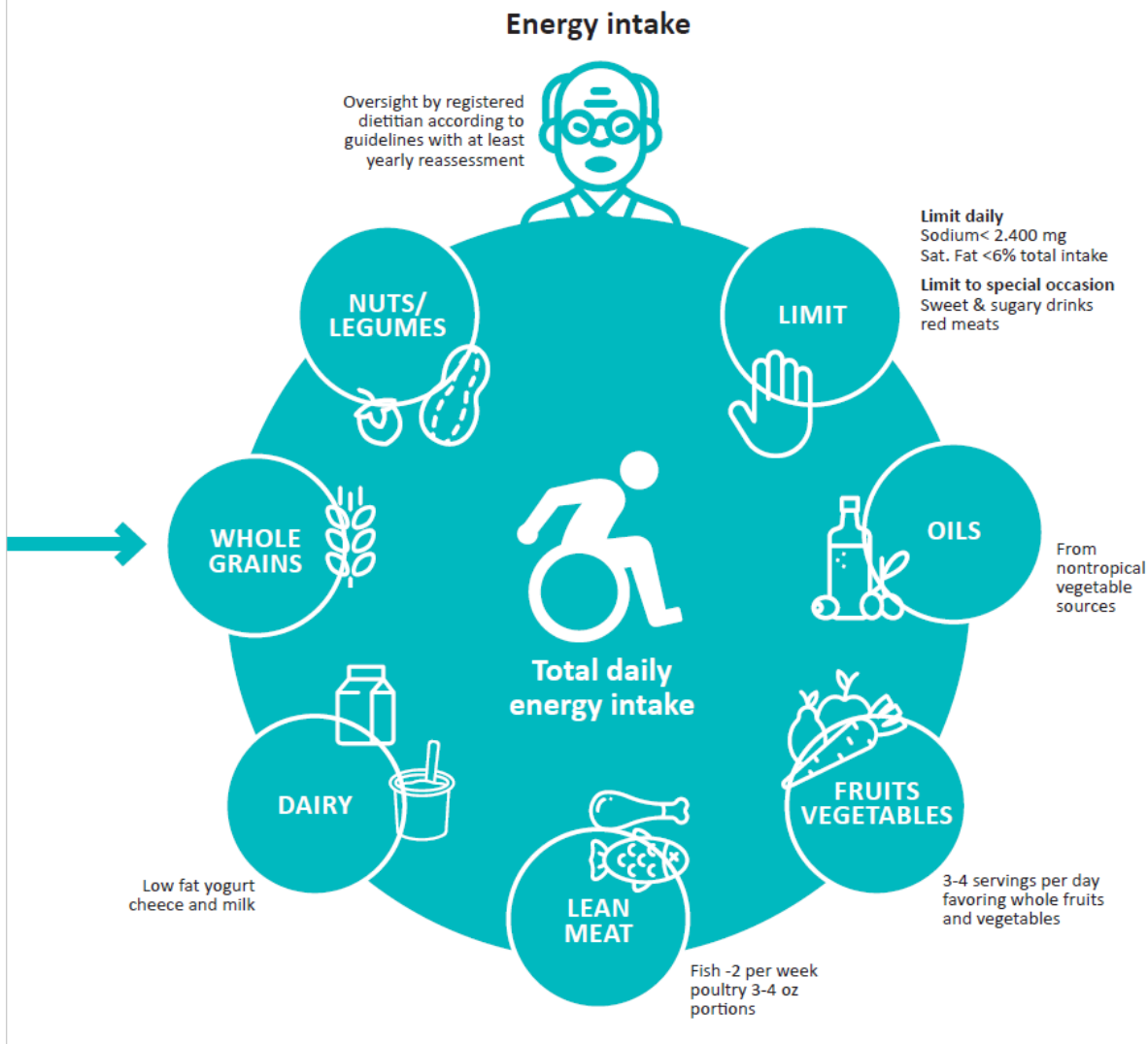


# PRESSURE ULCER/INJURY RECURRENCE

## FACT SHEET 6 OBESITY



### Obesity

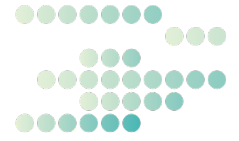


**Figure 1: Energy intake.**

Adapted from: Farkas GJ, Sneij A, McMillan DW, Tiozzo E, Nash MS, Gater DR. Energy expenditure and nutrient intake after spinal cord injury: a comprehensive review and practical recommendations. *British Journal of Nutrition*. 2022;128(5):863–87. doi:10.1017/S0007114521003822. Permission for reuse is granted.

# PRESSURE ULCER/INJURY RECURRENCE

## FACT SHEET 6 OBESITY



Component	Key points
Dietary	<p><i>Specific evidence for SCI is lacking. Recommendations should follow general guidelines EXCEPT for:</i></p> <ul style="list-style-type: none"> <li>BMI targets</li> <li>Energy requirement estimates</li> </ul> <hr/> <p><i>Energy balance must be assessed for appropriately targeted caloric deficit:</i></p> <ul style="list-style-type: none"> <li>Energy intake: Dietary analysis</li> <li>Total energy expenditure: BMR/REE; PA/Exercise; TEE</li> </ul> <hr/> <p><i>Establish caloric deficit:</i></p> <ul style="list-style-type: none"> <li>Reduce energy intake</li> <li>Reduce calorie-dense foods (ie, saturated fats)</li> </ul> <hr/> <p><i>Diet recommendations: Mediterranean-style and general guidelines:</i></p> <ul style="list-style-type: none"> <li>Increase whole grain, fruit, and vegetable intake</li> <li>Emphasis on mono-unsaturated fat sources</li> <li>Reduce saturated fats, cholesterol, and simple sugars</li> </ul> <hr/> <p><i>Malnutrition considerations:</i></p> <ul style="list-style-type: none"> <li>Macronutrient overconsumption: <ul style="list-style-type: none"> <li>Fats, cholesterol</li> <li>Simple sugars</li> </ul> </li> <li>Micronutrient underconsumption: <ul style="list-style-type: none"> <li>Vitamins: A, B5, Biotin, D, E, C</li> <li>Minerals: Ca<sup>2+</sup>, Cl<sup>-</sup>, Mg<sup>2+</sup>, K<sup>+</sup></li> </ul> </li> </ul>
Exercise	<p><i>DPP prescribes at least 150 min/wk of moderate-intensity physical activity:</i></p> <ul style="list-style-type: none"> <li>700 kcal activity target</li> <li>Achievable and beneficial in preventing diabetes</li> </ul> <hr/> <p><i>Circuit resistance training (CRT) shown to improve CMS risk in SCI<sup>31,34,36</sup> and accepted and guideline by the APTA:</i></p> <ul style="list-style-type: none"> <li>Satisfies DPP recommended weekly activity and caloric expenditure</li> <li>Satisfies WHO physical activity recommendations for adults (18-64 years)</li> <li>RHR/RPE taken before start</li> <li>2-4 min warm up: Arm cycle-ergometry set at low resistance (aerobic component)</li> <li>Consists of 6 resistive exercises: <ul style="list-style-type: none"> <li>Bicep curl, lat pulldown, chest fly, posterior row, triceps extension, shoulder press</li> </ul> </li> <li>Paired training design: <ul style="list-style-type: none"> <li>Two resistance maneuvers</li> <li>Interposed aerobic exercise</li> </ul> </li> <li>Complete circuit is repeated 3 times (1 training session)</li> <li>CRT was done 3 days/week for 24 weeks</li> </ul>
Behavior	<p><i>Structured behavioral modification therapy adapted from the DPP 16-session protocol including education, problem-solving skills training, and cognitive restructuring:</i></p> <ul style="list-style-type: none"> <li>Education/instruction on diet and exercise components and role in reducing CMS risk</li> <li>Self-monitoring of body weight, caloric intake, and exercise level</li> <li>Understanding psychosocial barriers to diet and exercise goals and developing cognitive strategies to overcome them</li> </ul>

*Note:* APTA = American Physical Therapy Association; BMI = body mass index; BMR/REE = basal metabolic rate/resting energy expenditure; CMS = cardiometabolic syndrome; DPP = Diabetes Prevention Program; RHR/RPE = resting heart rate/rate of perceived exertion; TEE = total energy expenditure; WHO = World Health Organization.

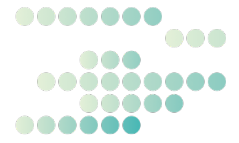
**Table 1: Components of therapeutic lifestyle intervention for CMS risk in spinal cord injury.**  
Reproduced from: Bigford G, Nash MS. Nutritional Health Considerations for Persons with Spinal Cord Injury. *Top Spinal Cord Inj Rehabil.* 2017 Summer;23(3):188–206.  
doi:10.1310/sci2303-188. Permission for reuse granted.

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# PRESSURE ULCER/INJURY RECURRENCE

## FACT SHEET 6 OBESITY

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### References

- Bigford G, Nash MS. Nutritional Health Considerations for Persons with Spinal Cord Injury. *Top Spinal Cord Inj Rehabil.* 2017 Summer;23(3):188–206. doi:10.1310/sci2303-188
- Farkas GJ, Sneij A, McMillan DW, Tiozzo E, Nash MS, Gater DR Jr. Energy expenditure and nutrient intake after spinal cord injury: a comprehensive review and practical recommendations. *Br J Nutr.* 2022 Sep 14;128(5):863–887. doi:10.1017/S0007114521003822