

Author Year Country PEDro Score Research Design Sample Size	Methods	Outcomes																				
Sabour et al. 2018 Iran RCT PEDro=7 N=57	<p><b>Population:</b> Mean age: Not reported; Gender: males=45, females=12; Time since injury=&gt;2 yr; Level of injury: C=9, T=41, L=7; Severity of injury: Not reported.</p> <p><b>Intervention:</b> Participants were randomized to a control group and a nutritional education group in which they attended a total of 5 education session over a 7-month period.</p> <p><b>Outcome Measures:</b> Body weight and serum concentrations of total cholesterol (TC), triglyceride (TG), high-density lipoprotein (HDL), and low-density lipoprotein (LDL). Two-way repeated measure of analysis (ANOVA) was used.</p>	<ol style="list-style-type: none"><li>ANOVA showed no significant effect of the intervention on TG, TC, HDL, and LDL levels (<math>p&gt;0.05</math>).</li><li>Test of within subject contrast revealed no significant effect of the intervention on level of LDL (<math>p=0.159</math>), TC (<math>p=0.224</math>), TG (<math>p=0.172</math>) or HDL (<math>p=0.081</math>).</li><li>Changes in TC level were not significantly different between intervention and control group (<math>p=0.224</math>).</li><li>No significant differences in weight (<math>p=0.64</math>), height (<math>p=0.10</math>), waist circumference (<math>p=0.92</math>), or BMI (<math>p=0.71</math>) between intervention and control groups at baseline.</li><li>No significant changes in weight (<math>p=0.97</math>) or waist circumflex (<math>p=0.361</math>) observed in the intervention group compared to the control group.</li><li>No significant influence of nutritional education on anthropometric measurements, lipid profile, and blood pressure in patients with spinal cord injury.</li></ol>																				
	<p><b>Effect Sizes:</b> Forest plot of standardized mean differences (SMD <math>\pm</math> 95%C.I.) as calculated from pre- and post-intervention data.</p> <table><caption>Data from Forest Plot: Sabour et al. 2018; Control vs. Nutrition Education Program</caption><thead><tr><th>Measure</th><th>SMD (95% C.I.)</th></tr></thead><tbody><tr><td>Total Cholesterol</td><td>0.26 (-0.26, 0.78)</td></tr><tr><td>Triglycerides</td><td>0.09 (-0.43, 0.61)</td></tr><tr><td>LDL</td><td>0.25 (-0.27, 0.77)</td></tr><tr><td>HDL</td><td>0.20 (-0.32, 0.72)</td></tr><tr><td>Very Low-Density Lipoprotein</td><td>0.09 (-0.43, 0.61)</td></tr><tr><td>LDL/HDL Ratio</td><td>0.55 (-0.02, 1.08)</td></tr><tr><td>Weight</td><td>0.22 (-0.31, 0.74)</td></tr><tr><td>Waist Circumference (cm)</td><td>0.32 (-0.20, 0.84)</td></tr><tr><td>BMI</td><td>0.33 (-0.19, 0.85)</td></tr></tbody></table>		Measure	SMD (95% C.I.)	Total Cholesterol	0.26 (-0.26, 0.78)	Triglycerides	0.09 (-0.43, 0.61)	LDL	0.25 (-0.27, 0.77)	HDL	0.20 (-0.32, 0.72)	Very Low-Density Lipoprotein	0.09 (-0.43, 0.61)	LDL/HDL Ratio	0.55 (-0.02, 1.08)	Weight	0.22 (-0.31, 0.74)	Waist Circumference (cm)	0.32 (-0.20, 0.84)	BMI	0.33 (-0.19, 0.85)
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Szlachcic et al. 2001 USA Prospective Controlled Trial N=222	<p><b>Population:</b> Gender: males=198, females=24; Level of injury: complete, incomplete; Time since injury=&gt;2 yr.</p> <p><b>Intervention:</b> Subjects who had a cholesterol level <math>&gt;5.2</math>mmol/L (<math>n=86</math>) were referred to either a dietary consultation where they were advised to modify daily intakes as follows: total fat&lt;30% of kcal, saturated fat&lt;10% of kcal, cholesterol&lt;300 mg, carbohydrate=60% of kcal, or no treatment.</p> <p><b>Outcome Measures:</b> Total cholesterol (TC), high-density lipoprotein cholesterol (HDL), low-density lipoprotein cholesterol (LDL), triglycerides.</p>	<ol style="list-style-type: none"><li>TC decreased in the dietary counseling group from 6.1 mmol/L to 5.8 mmol/L (<math>p&lt;0.001</math>) and slightly increased in the control group from 4.2 mmol/L to 4.3 mmol/L (<math>p=0.006</math>).</li><li>LDL was reduced from 4.1 mmol/L to 3.9 mmol/L (<math>p=0.004</math>) in the dietary counseling group; there was no change for controls.</li><li>Neither group experienced significant changes in HDL or triglyceride values.</li></ol>																				
Koutrakis et	<p><b>Population:</b> Mean age=<math>57.6\pm12.4</math> yr; Gender:</p>	<ol style="list-style-type: none"><li>Statistically significant positive association</li></ol>																				

<p>al. 2018 USA Observational N=174</p>	<p>males=141, females=33; Time since injury=20.9±12.9 yr; Level and Severity of injury: Cervical motor complete and AIS C=40, Other motor complete and AIS C=65, AIS D=69. *Level and severity of injury reported such that neither could be extracted independent of one another. <b>Intervention:</b> Participants completed food frequency and health questionnaires, gave blood samples and had percent total body fat measured via dual x-ray absorptiometry (DXA). Linear regression models were conducted to evaluate cross-sectional relationships between personal, lifestyle, and nutritional factors with blood plasma levels of 25-hydroxyvitamin D [25(OH)D]. <b>Outcome Measures:</b> Dietary factors, lifestyle factors, clinical factors, and 25(OH)D.</p>	<p>between 25(OH)D and total vitamin D intake, age, years of education, total calcium intake, wine consumption, total hours of planned exercise, female sex, white race, non-smokers, and users of sunscreen (<math>p&lt;0.05</math>).</p> <ol style="list-style-type: none"> <li>No significant relationship between 25(OH)D and SCI level of injury, completeness of injury, body mass index, % total body fat, mobility mode, comorbid medical conditions, time outside between sunrise and sunset or season (<math>p&gt;0.05</math>).</li> <li>A multivariable model showed age, total vitamin D intake, total hours of planned exercise, sex, race, wine use, and smoking status remained statistically significantly associated with 25(OH)D.</li> <li>Race and total vitamin D intake were the most statistically significant predictors (<math>p&lt;0.0001</math>).</li> <li>Impacts of supplementary vitamin D intake was statistically significant (<math>p&lt;0.0001</math>) whereas dietary vitamin D intake was not (<math>p=0.305</math>).</li> <li>In a univariable model, stretching, range of motion, and physical therapy was not significantly associated with 25(OH)D.</li> </ol>
<p>Javidan et al. 2017 Iran Observational N=265</p>	<p><b>Population:</b> Mean age=36.2±10.8 yr; Gender: males=217, females=48; Time since injury: Not reported; Level of injury: paraplegia=157, tetraplegia=108; Severity of injury: AIS A=132, B=133, C=0, D=0. <b>Intervention:</b> Participants completed 24-hour dietary recalls with a Nutritionist IV 3.5.3. for analysis. <b>Outcome Measures:</b> Dietary intakes (Amino Acids, Fasting plasma glucose (FPG), Triglyceride (TG), Systolic blood pressure (SBP), diastolic blood pressure (DBP), Total cholesterol (TC), High-density lipoprotein (LDL), and Low-density lipoprotein (LDL).</p>	<ol style="list-style-type: none"> <li>Majority of the participants in the study showed low protein intake (<math>&lt;1.5</math> g/kg when 1.5-2 g/kg is recommended).</li> <li>Higher intake of isoleucine associated with higher levels of FPG (<math>p=0.007</math>), TG (<math>p=0.014</math>), SBP (<math>p=0.012</math>) and DBP (<math>p=0.04</math>).</li> <li>Dietary intake of lysine was positively related to levels of FPG (<math>p&lt;0.0001</math>), TG (<math>p=0.046</math>), SBP (<math>p=0.002</math>) and DBP (<math>p=0.009</math>).</li> <li>A significant positive relationship observed between intake of cysteine and levels of TG (<math>p=0.027</math>) and SBP (<math>p=0.048</math>).</li> <li>FPG was significantly positively related to intake of all amino acids except Cysteine, Glutamic acid, Threonine, Leucine, and Histidine (<math>p&lt;0.05</math>).</li> <li>TG was significantly higher among men (<math>p=0.015</math>), significantly higher in those with incomplete SCI (<math>p=0.016</math>), and significantly higher in those with paraplegia (<math>p=0.035</math>).</li> <li>Blood pressure (BP) was significantly higher in quadriplegics (<math>p&lt;0.0001</math>).</li> <li>Older participants had significantly higher SBP (<math>p&lt;0.0001</math>) and DBP (<math>p&lt;0.0001</math>).</li> <li>Higher SBP (<math>p=0.002</math>) and DBP (<math>p=0.001</math>) seen in those with higher total energy intake.</li> <li>BP significantly higher in those with higher carbohydrate and cholesterol intake (<math>p&lt;0.05</math>).</li> <li>Higher tryptophan intake associated with lower SBP (<math>p=0.03</math>).</li> <li>Significant correlation between glutamic acid and SBP (<math>p=0.007</math>) and DBP (<math>p=0.006</math>).</li> <li>Low BP associated with higher lysine/arginine ratio: SBP (<math>p=0.009</math>) and DBP (<math>p=0.01</math>).</li> <li>Women had significantly higher HDL (<math>p&lt;0.0001</math>).</li> </ol>

		<p>15. Age was significantly positively related to TC (p=0.015) and LDL (p&lt;0.0001).</p> <p>16. Weight was significantly positively related to TC (p&lt;0.0001) and LDL (p&lt;0.0001).</p> <p>17. Higher BMI significantly related to TC (p&lt;0.0001) and LDL (p&lt;0.0001).</p>
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