



TITLE: Nutrition Assessment and Interventions for Wound Care: Guidelines

DATE: 07 April 2016

RESEARCH QUESTIONS

1. What are the evidence-based guidelines for conducting nutrition assessment in patients receiving wound care?
2. What are the evidence-based guidelines for providing nutritional support in patients receiving wound care in non-acute settings?
3. What are the evidence-based guidelines regarding the provision of micronutrient supplementation in patients receiving wound care?

KEY FINDINGS

Eleven systematic reviews and 14 evidence-based guidelines were identified regarding nutrition and wound care.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2011 and April 1, 2016. Internet links were provided, where available.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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Table 1: Selection Criteria

Population	Adult patients at risk for developing wounds due to immobility or receiving wound care in non-acute or rehabilitation settings
Intervention	Q1: Nutrition assessment Q2: Nutritional support (excluding tube feeding, total parenteral nutrition, enteral nutrition) Q3: Micronutrient supplementation
Comparator	No comparator required
Outcomes	Evidence-based guidelines regarding best practices for Q1: Nutrition assessment Q2: Provision of nutrition support Q3: Provision of micronutrient supplementation
Study Designs	Health technology assessments, systematic reviews, meta-analyses, evidence-based guidelines

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by evidence-based guidelines.

Eleven systematic reviews and 14 evidence-based guidelines were identified regarding nutrition and wound care. No relevant health technology assessments were identified.

Additional references of potential interest are provided in the appendix.

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

1. Velez-Diaz-Pallares M, Lozano-Montoya I, Abraha I, Cherubini A, Soiza RL, O'Mahony D, et al. Nonpharmacologic Interventions to Heal Pressure Ulcers in Older Patients: An Overview of Systematic Reviews (The SENATOR-ONTOP Series). *J Am Med Dir Assoc*. 2015 Jun 1;16(6):448-69.
[PubMed: PM25737261](#)
2. Garcia-Fernandez FP, Pancorbo-Hidalgo PL, Agreda JJ. Predictive capacity of risk assessment scales and clinical judgment for pressure ulcers: a meta-analysis. *J Wound Ostomy Continence Nurs*. 2014 Jan;41(1):24-34.
[PubMed: PM24280770](#)
3. Langer G, Fink A. Nutritional interventions for preventing and treating pressure ulcers. *Cochrane Database Syst Rev*. 2014;6:CD003216.
[PubMed: PM24919719](#)
4. Wilkinson EA. Oral zinc for arterial and venous leg ulcers. *Cochrane Database Syst Rev*. 2014;9:CD001273.
[PubMed: PM25202988](#)

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[PubMed: PM22895918](#)
11. Reddy M. Pressure ulcers. *BMJ Clin Evid* [Internet]. 2011 [cited 2016 Apr 6];2011. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3217823>
[PubMed: PM21524319](#)

Guidelines and Recommendations

12. Treatment of pressure ulcers: a clinical practice guideline from the American College of Physicians. *Ann Intern Med* [Internet]. 2015 [cited 2016 Apr 6];162(5):370-9. Available from: <http://annals.org/article.aspx?articleid=2173506>
See: Recommendation 1
13. National Guideline Clearinghouse. Guideline for management of wounds in patients with lower-extremity arterial disease. In: National Guideline Clearinghouse [Internet]. Rockville (MD): Agency for Healthcare Research and Quality; 2014 [cited 2016 Apr 6]. Available from: <http://www.guideline.gov/content.aspx?id=49162&search=nutrition+assessment+wound+care>
See: Nutrition

14. National Guideline Clearinghouse. Interventions for prevention and treatment of pressure ulcers. In: Prevention and treatment of pressure ulcers: clinical practice guideline. In: National Guideline Clearinghouse [Internet]. Rockville (MD): Agency for Healthcare Research and Quality; 2014 [cited 2016 Apr 6]. Available from: <http://www.guideline.gov/content.aspx?id=48865&search=nutrition+assessment+wound+care>
See: *Nutrition in Pressure Ulcer Prevention and Treatment*
15. O'Donnell TF Jr, Passman MA, Marston WA, Ennis WJ, Dalsing M, Kistner RL, et al. Management of venous leg ulcers: clinical practice guidelines of the Society for Vascular Surgery (R) and the American Venous Forum. *J Vasc Surg* [Internet]. 2014 Aug [cited 2016 Apr 6];60(2 Suppl):3S-59S. Available from: [http://www.jvascsurg.org/article/S0741-5214\(14\)00851-9/pdf](http://www.jvascsurg.org/article/S0741-5214(14)00851-9/pdf)
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See: *Ancillary Measures*
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17. National Guideline Clearinghouse. Special populations. In: Prevention and treatment of pressure ulcers: clinical practice guideline. In: National Guideline Clearinghouse [Internet]. Rockville (MD): Agency for Healthcare Research and Quality; 2014 [cited 2016 Apr 6]. Available from: <http://www.guideline.gov/content.aspx?id=48867&search=nutrition+assessment+wound+care>
See: *'Nutrition' mentioned throughout*
18. Registered Nurses' Association of Ontario. Assessment and management of foot ulcers for people with diabetes [Internet]. Toronto: Registered Nurses' Association of Ontario; 2013 Mar. [cited 2016 Apr 6]. (Clinical best practice guidelines). Available from: <http://rnao.ca/sites/rnao-ca/files/AssessmentManagementFootUlcerDiabetes.pdf>
See: *Nutritional Assessment, page 20*
19. Houghton PE, Campbell KE, CPG Panel. Canadian best practice guidelines for the prevention and management of pressure ulcers in people with spinal cord injury. A resource handbook for clinicians [Internet]. Toronto: Ontario Neurotrauma Foundation; 2013 Feb. [cited 2016 Apr 6]. Available from: http://onf.org/system/attachments/168/original/Pressure_Ulcers_Best_Practice_Guideline_Final_web4.pdf
See: *Body Weight and Nutrition, page 51*
20. Kelechi TJ, Johnson JJ, WOCN Society. Guideline for the management of wounds in patients with lower-extremity venous disease: an executive summary. *J Wound Ostomy Continence Nurs*. 2012 Nov;39(6):598-606.
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See: General Care Issues and Interventions - Nutrition
22. Pressure ulcer prevention and treatment [Internet]. Winnipeg (MA): Winnipeg Regional Health Authority; 2012 Nov. [cited 2016 Apr 6]. (Clinical practice guideline). Available from: <http://www.wrha.mb.ca/extranet/eipt/files/EIPT-013-004.pdf>
See: Nutrition for Pressure Ulcer Prevention, page 29
23. The Australian Wound Management Association. Australian and New Zealand clinical practice guideline for prevention and management of venous leg ulcers [Internet]. Osborne Park, Australia: Cambridge Publishing; 2011 Oct. [cited 2016 Apr 6]. Available from: http://www.nhmrc.gov.au/files_nhmrc/publications/attachments/ext003_venous_leg_ulcers_aust_nz_0.pdf
See: Nutritional Assessment, page 21 and 8.1.5 Nutrition and hydration, page 34
24. Trans Tasman Dietetic Wound Care Group. Evidence based practice guidelines for the nutritional management of adults with pressure injuries [Internet]. Geelong, Australia: Dietitians Association of Australia; 2011. [cited 2016 Apr 6]. Available from: <http://daa.asn.au/wp-content/uploads/2011/09/Trans-Tasman-Dietetic-Wound-Care-Group-Pressure-Injury-Guidelines-2011.pdf>
25. Risk assessment & prevention of pressure ulcers. Supplement [Internet]. Toronto (ON): Registered Nurses' Association of Ontario; 2011. [cited 2011 Apr 6]. (Nursing best practice guideline). Available from: http://rnao.ca/sites/rnao-ca/files/Risk_Assessment_and_Prevention_of_Pressure_Ulcers.pdf
See: Recommendation 3.9

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APPENDIX – FURTHER INFORMATION:

Previous CADTH Reports

26. Dressing materials for the treatment of pressure ulcers in patients in long-term care facilities: a review of the comparative clinical effectiveness and guidelines [Internet]. Ottawa (ON): CADTH; 2013 Nov 18. [cited 2016 Apr 6]. (Rapid response report: summary with critical appraisal). Available from: <https://www.cadth.ca/sites/default/files/pdf/htis/dec-2013/RC0496%20Pressure%20Ulcer%20Care-Final.pdf>
27. Serum albumin testing for wound healing potential and nutritional status: clinical effectiveness [Internet]. Ottawa (ON): CADTH; 2009 Oct 14. [cited 2016 Apr 6]. (Health technology inquiry service. Health technology assessment). Available from: https://www.cadth.ca/sites/default/files/pdf/K0092_Serum_Albumin_Testing_final.pdf

Systematic Reviews – Mechanisms of Action

28. Sinno S, Lee DS, Khachemoune A. Vitamins and cutaneous wound healing. J Wound care. 2011 Jun;20(6):287-93.
[PubMed: PM21727879](#)

Randomized Controlled Trials

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[PubMed: PM23627791](#)

Economic Evaluations

30. Tuffaha HW, Roberts S, Chaboyer W, Gordon LG, Scuffham PA. Cost-effectiveness and value of information analysis of nutritional support for preventing pressure ulcers in high-risk patients: implement now, research later. Appl Health Econ Health Policy. 2015 Apr;13(2):167-79.
[PubMed: PM25650349](#)

Review Articles

31. Lozano-Montoya I, Velez-Diaz-Pallares M, Abraha I, Cherubini A, Soiza RL, O'Mahony D, et al. Nonpharmacologic interventions to prevent pressure ulcers in older patients: an overview of systematic reviews (The Software ENgine for the Assessment and optimization of drug and non-drug Therapy in Older peRsons [SENATOR] Definition of Optimal Evidence-Based Non-drug Therapies in Older People [ONTOP] Series). J Am Med Dir Assoc. 2016 Apr 1;17(4):370.
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[PubMed: PM25215468](#)
35. Thomas DR. Role of Nutrition in the Treatment and Prevention of Pressure Ulcers. *Nutr Clin Pract*. 2014 Jun 24;29(4):466-72.
[PubMed: PM24961876](#)
36. Ubbink DT, Santema TB, Stoekenbroek RM. Systemic wound care: a meta-review of cochrane systematic reviews. *Surg Technol Int*. 2014 Mar;24:99-111.
[PubMed: PM24700218](#)
37. White-Chu EF, Conner-Kerr TA. Overview of guidelines for the prevention and treatment of venous leg ulcers: a US perspective. *J Multidiscip Healthc* [Internet]. 2014 [cited 2016 Apr 6];7:111-7. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3930479>
[PubMed: PM24596466](#)
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[PubMed: PM24170591](#)
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