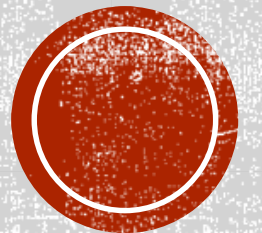


BEYOND CONVENTION: THE ROLE OF NONSTANDARD THERAPY IN MANAGEMENT OF ASTHMA

Rachel Kollmeyer, Pharm.D.

Spartan Nash

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OBJECTIVES

- Understand the role of complementary and alternative medicine (CAM) interventions for the management of asthma.
- Summarize findings from recent literature evaluating Vitamin D for the management of asthma.



GENERAL APPROACH TO NON-TRADITIONAL MEDICINE

- What is the anticipated benefit?
- What are the potential risks?
- How expensive is treatment?
- Is the treatment working?



NON-STANDARD TREATMENTS FOR ASTHMA



Supplements



Diet



Behavioral



Physical



SUPPLEMENTS - DIETARY

Vitamins A, C, E and antioxidants¹

- Unlikely or inconclusive benefit, low-risk, low-cost

Vitamin D – *next slide*

Omega-3 and omega-6 fatty acids²

- Unlikely beneficial, low-to-moderate risk, variable cost

Selenium³

- Unlikely benefit, moderate risk, low-cost

Magnesium⁴

- Inconclusive benefit, low risk, low-cost

1. Han Y, et al. Curr Opin Allergy Clin Immunol. 2015 Aug; 15(4):369-74.

2. Reisman J, et al. BMC Complement Altern Med. 2006; 6:26.

3. Shaheen S Thorax. 2007 Jun; 62(6):483-90.

4. Kazaks A, et al. J Asthma. 2010; 47(1):83.



VITAMIN D^{5,6}

- Inconclusive, low-risk, low-cost
- However, some evidence of benefit with:
 - Decreasing exacerbations requiring steroids
 - Decreasing risk of hospitalization due to exacerbations
- When to recommend:
 - Asthma patients with low vitamin D level



SUPPLEMENTS - HERBAL

Boswellia serrata⁷

- Inconclusive benefit, low-risk, low-to-moderate cost

Traditional Chinese Medicine⁸

- Likely beneficial, low-to-moderate-risk, moderate cost

Homeopathy⁹

- Unlikely beneficial, moderate risk, variable cost

Turmeric root¹⁰

- Inconclusive benefit, low-risk, low-to-moderate cost

7. Gupta I, et al. Eur J Med Res. 1998 Nov 17; 3(11):511-4.
8. Li X. J Allergy Clin Immunol. 2017 July; 120(1):25-31.
9. McCarney R, et al. Cochrane Database Syst Rev. 2004.
10. Abidi A, et al. J Clin Diagn Res. 2014 Aug; 8(8):HC19-24.



DIETARY INTERVENTIONS

DASH diet¹¹

- Potential benefit, low-risk, variable cost

Low calorie diets¹²

- Inconclusive, low-risk, variable cost

Elimination diets¹³

- Unlikely benefit, low-risk, low cost

11. Ma J, et al. Eur Respir J. 2016 Jan; 47(1):122-32.

12. Cheng J, et al. Cochrane Database Syst Rev. 2005.

13. Ziment I. Curr Opin Pulm Med. 1997; 3(1):61.



BEHAVIORAL INTERVENTIONS

Biofeedback and functional relaxation¹⁴⁻¹⁶

- Inconclusive benefit, low-risk, variable cost

Breathing exercises^{17,18}

- Inconclusive benefit, low-risk, variable cost

14. Lehrer P, et al. Chest. 2004; 126(2):352.

15. Lahmann C, et al. Psychother Psychosom. 2009; 78(4):233.

16. Huntley A, et al. Thorax. 2002; 57(2):127.

17. Cramer H, et al. Ann Allergy Asthma Immunol. 2014 Jun; 112(6):503-510.e5

18. Holloway E, et al. Cochrane Database Syst Rev. 2004.



PHYSICAL INTERVENTIONS

Acupuncture¹⁹

- Unlikely beneficial, low-risk, high-cost

Chiropractic manipulation²⁰

- Unlikely beneficial, low-risk, variable cost

Massage therapy²¹

- Inconclusive benefit, low-risk, variable cost

Physical training²²

- Likely beneficial, low-to-moderate-risk, low-cost

19. McCarney R, et al. Cochrane Database Syst Rev 2004.

20. Chiropractic: Balon J, et al. N Engl J Med 1998; 339:1013.

21. Massage: Field T, et al. J Pediatr 1998; 132:854.

22. Physical training: Carson KV, et al. Cochrane Database Syst Rev 2013.



CONCLUSION

- Utilizing non-traditional treatments for asthma should not replace conventional medicine but may be appropriate as add-on therapy.
- Risk and benefits of non-traditional treatments must be considered prior to initiating any therapy.



CONTACT INFORMATION

Rachel Kollmeyer

Rachel.Kollmeyer@SpartanNash.com

(810) 287 - 7123



REFERENCES

1. Han Y, Forno E, Holguin F, Celedon J. Diet and asthma: an update. *Curr Opin Allergy Clin Immunol*. 2015 Aug; 15(4): 369-74.
2. Reisman J, Schachter H, Dales R, et al. Treating asthma with omega-3 fatty acids: where is the evidence? A systemic review. *BMC Complement Altern Med*. 2006; 6:26.
3. Shaheen S, Newson R, Rayman M, et al. Randomised, double blind, placebo-controlled trial of selenium supplementation in adult asthma. *Thorax*. 2007 Jun; 62(6): 483-90.
4. Kazaks A, Uri-Adams J, Albertson T, et al. Effect of oral magnesium supplementation on measures of airway resistance and subjective assessment of asthma control and quality of life in men and women with mild to moderate asthma: a randomized placebo controlled trial. *J Asthma*. 2010;47(1):83.
5. Jolliffe D, Greenberg L, Hooper R, et al. Vitamin D supplementation to prevent asthma exacerbations: a systemic review and meta-analysis of individual participant data. *Lancet Respir Med*. 2017 Nov; 5(11):881-890.
6. Martineau A, Cates C, Urashima M, et al. Vitamin D for the management of asthma (Review). *Cochrane Database Syst Rev*. 2016.
7. Gupta I, Gupta V, Parihar A, et al. Effects of *Boswellia serrata* gum resin in patients with bronchial asthma: results of a double-blind, placebo-controlled, 6-week clinical study. *Eur J Med Res*. 1998 Nov 17; 3(11):511-4.
8. Li X. Traditional Chinese herbal remedies for asthma and food allergy. *J Allergy Clin Immunol*. 2017 July; 120(1):25-31.
9. McCarney R, Linde K, Lasserson T. Homeopathy for chronic asthma. *Cochrane Database Syst Rev*. 2004.
10. Abidi A, et al. Evaluation of efficacy of curcumin as an add-on therapy in patients of bronchial asthma. *J Clin Diagn Res*. 2014 Aug; 8(8):HC19-24.
11. Ma J, Strub P, Lv N, et al. Pilot randomized trial of a healthy eating behavioural intervention in uncontrolled asthma. *Eur Respir J*. 2016 Jan; 47(1):122-32.



REFERENCES (CONTINUED)

12. Cheng J, Pan T, Ye G, Liu Q. Calorie controlled diet for chronic asthma. *Cochrane Database Syst Rev*. 2005.
13. Ziment I. Alternative therapies for asthma. *Curr Opin Pulm Med*. 1997; 3(1):61.
14. Lehrer P, Vaschillo E, Vaschillo B, et al. Biofeedback treatment for asthma. *Chest*. 2004;126(2):352.
15. Lahmann C, Nickel M, Schuster T, et al. Functional relaxation and guided imagery as complementary therapy in asthma: a randomized controlled clinical trial. *Psychother Psychosom*. 2009;78(4):233.
16. Huntley A, White A, Ernst E. Relaxation therapies for asthma: a systemic review. *Thorax*. 2002; 57(2):127.
17. Cramer H, Posadzki P, Dobos G, Langhorst J. Yoga for asthma: a systemic review and meta-analysis. *Ann Allergy Asthma Immunol*. 2014 Jun; 112(6):503-510.e5.
18. Holloway E, Ram F. Breathing exercises for asthma. *Cochrane Database Syst Rev*. 2004.
19. McCarney RW, Brinkhaus B, Lasserson TJ, Linde K. Acupuncture for chronic asthma. *Cochrane Database Syst Rev* 2004.
20. Balon J, Aker PD, Crowther ER, et al. A comparison of active and simulated chiropractic manipulation as adjunctive treatment for childhood asthma. *N Engl J Med* 1998; 339:1013.
21. Field T, Henteleff T, Hernandez-Reif M, et al. Children with asthma have improved pulmonary functions after massage therapy. *J Pediatr* 1998; 132:854.
22. Carson KV, Chandratilleke MG, Picot J, et al. Physical training for asthma. *Cochrane Database Syst Rev* 2013.

