

Karen Martin, MA, RD, LD.

Affiliations: University of Texas Health Science Center at San Antonio & the South Texas ALS Association

Presentation: Implementation of Evidence-based Practice Parameters for Amyotrophic Lateral Sclerosis (ALS): Managing Nutrition Issues within a Chronic Disease Process

**Disclosure:** I receive a salary as an employee of Walgreens Infusion Services as a Nutrition Support Dietitian and will reference the evidence base and practice parameters without commercial bias.

**Presentation Summary:** Despite the increase in nutrition research for the ALS population over the past 10-15 years, recent survey results indicated that 43.8% of respondents did not use disease specific guidelines. This presentation seeks to increase the use of ALS/MND research to guide nutrition practice.

The Quality Standards Subcommittee of the American Academy of Neurology updated the Practice Parameters for the patient with amyotrophic lateral sclerosis including drug, nutritional, and respiratory therapies following an evidence-based review.

Noninvasive ventilation (NIV) and percutaneous endoscopic gastrostomy (PEG) have some of the strongest supporting evidence. PEG feedings have stabilized weight and increased survival. NIV slowed the decline of forced vital capacity and improved quality of life. The combination of PEG and NIV therapies benefits both nutritional and respiratory statuses. NIV can spare calories used for labored breathing which increases the metabolic demand. PEG facilitates hydration, feeding, medication administration and venting, which may be needed due to aerophagia related to NIV.

The literature indicates that 79% of patients with ALS utilize high dose vitamin, mineral and nutraceutical supplements. The evidence-base for creatine and vitamin E (alone and in combination with riluzole) will be reviewed along with other popular supplements that were not included in the literature.

A nutrition management algorithm is provided with evidence-based and consensus-based recommendations indicated. A case study will be included to follow a patient's progression through the course of the disease with recommendation for managing dysphagia and nutrition challenges.

**Learning Objectives:**

1. Outline the evidence for nutrition therapies to stabilize weight and increase survival.
2. Analyze common nutritional challenges in the patient with ALS and potential remedies
3. Discover the potential benefit to nutrition and respiratory outcomes through combined use of PEG and NIV.

**Learning Assessment Questions:**

1. The ALS treatments/therapies with the best evidence are:
  - a. Noninvasive ventilation, PEG, and riluzole.
  - b. Cough assist, percussive chest vest, inhaled aerosol therapy
  - c. Noninvasive ventilation, PEG, and creatine supplementation
2. Efficacy of vitamin and nutritional supplementation on prolonging survival or quality of life has been studied for: The ALS treatments/therapies with the best evidence are:
  - a. Co-enzyme Q10.
  - b. Vitamin C
  - c. Vitamin E
  - d. Both a and c

**References:**

Martin, White. "Nutrition Assessment and Recommendations by Registered Dietitians to Patients with ALS: A survey of current nutrition practice in the United States." Presented at ALS Association Clinical Conference, Newport Beach, CA 2009.

Miller RG, Jackson, CE, et al. Practice Parameter update: The care of the patient with amyotrophic lateral sclerosis: Drug, nutritional, and respiratory therapies (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology* 2009; 73; 1218-1226.

Miller RG, Rosenberg JA, Gelinas DF, et al. Practice parameter: the care of the patient with amyotrophic lateral sclerosis (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology: ALS Practice Parameters Task Force. *Neurology* 1999; 52:1311–1323.