



**Supporting Nutrition in ALS:
Goals, Challenges, and Solutions**

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ALS CENTER *Celebrate Life...
Imagine a Cure*



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Nutrition in ALS

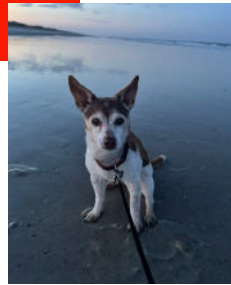
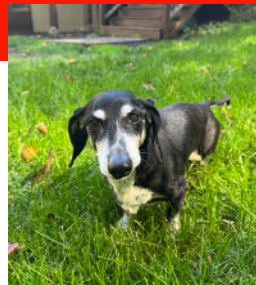
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About Me

- Registered Dietitian for 15 years
 - Undergraduate degree from UGA
 - Master's degree from FSU
- Experience with transplant nutrition, diabetes, kidney disease, weight management, malnutrition, and more
- Joined ALS team at Emory in 2021 – this has been my favorite role as a dietitian!
- Live in Roswell, GA with my husband, 3 active kids, and 2 (not so active) older dogs



My Role

- Optimize nutrition for people living with ALS
- Help navigate the nutrition challenges that can occur in ALS
- Work with ALS team to recommend nutrition interventions when needed



Nutrition Goals in ALS

1. Enjoy eating

2. Maintain body weight

3. Avoid choking

4. Adequate hydration

5. Avoid constipation

Enjoy Eating



Eating should be a pleasurable part of the day!



Ideally meals are consumed in 20 minutes or less

Longer mealtimes could indicate fatigue with eating
Increased choking risk with longer mealtimes



At least 3 meals per day (snacks likely needed for adequate calories)



Balanced meals that contain at least 3 food groups

Maintain Body Weight

- Weight maintenance = slower progression and better quality of life with disease
- Calorie requirements may be higher due to *hypermetabolic* nature of the disease in some individuals
- Adequate calorie and protein intake helps body repair and rebuild and minimize muscle breakdown for energy
- High calorie supplements may be needed (350 calories or more per serving)
 - Ex. Boost Plus, Ensure Plus/Complete, ENU, Kate Farms, Reason
 - Homemade shakes/smoothies

Smoothie Recipes



Chocolate & Peanut Butter

1 cup whole milk
1/2 avocado
1 frozen banana
2 Tbsp peanut butter
1 scoop chocolate protein powder
(or 1 Tbsp cocoa powder)



Blueberry Pie

1 cup whole milk
1 cup plain Greek yogurt
2 Tbsp almond butter
2 Tbsp brown sugar
1 cup frozen blueberries
1 tsp cinnamon



Mixed Berry

1 cup whole milk
1 scoop vanilla protein powder
1 frozen banana
1/2 cup raspberries
1/2 cup blueberries
1/2 cup greek yogurt



Pina Colada

1 cup coconut milk
1 scoop vanilla protein powder
1 frozen banana
1 cup fresh pineapple
1/2 cup ice



Green Machine

1 cup coconut milk
2 cups fresh spinach
1 frozen banana
1 apple
1/2 avocado
1/4 cup almond butter

Cherry Chocolate

1 cup whole milk
1 scoop chocolate protein powder
1/2 avocado
1 cup fresh pitted cherries
1/2 cup ice
1 Tbsp cocoa powder



Pumpkin Pie

1/3 cup whole plain yogurt
1/2 to 1 cup whole milk
1/2 cup canned pumpkin
2 Tbsp oats
2 tsp honey
1/2 tsp pumpkin pie spice



Creamsicle

1/3 cup coconut milk
1/4 cup orange juice
1 frozen banana
1 orange peeled and sliced
1/2 cup greek yogurt
2 tsp vanilla

Avoid Choking

Choking reduces enjoyment of meals!

Signs of swallowing impairment or choking include:

- **Coughing or throat clearing with food or saliva**
- **Wet vocal quality**
- **Drooling**
- **Increased difficulty with dry, crumbly foods, tough meats, lettuce, mixed textures like veggie soup, rice**
- **Meals taking 30 min or longer to consume**

Work with SLP for safest food and liquid consistencies

- **Often soft, bite sized pieces with small sips of fluids to start**
- **Moisten foods with sauces, gravies, etc**

Adequate Hydration

Even slight dehydration (1.5% body water loss) can show physical and mental declines

- Thicker mucus and lower quality saliva (doesn't provide adequate moisture to mouth)
- Constipation
- Kidney and urinary tract health

Minimum of 48-64 oz (6-8 cups) of fluid per day

- All liquids count...except alcohol
- Water, juice, sports drinks, sodas, lemonade, coffee, tea, etc.
- Canned fruits and veggies, smoothies, shakes, drinkable yogurts, high calorie nutrition supplements

Goal is pale yellow urine

Avoid Constipation

Constipation is twice as common with people with ALS

Causes

- Inadequate fiber
- Inadequate hydration
- Decreased mobility
- Gastric *dysmotility* (GI muscles unable to move bowel movement through system as efficiently as before)

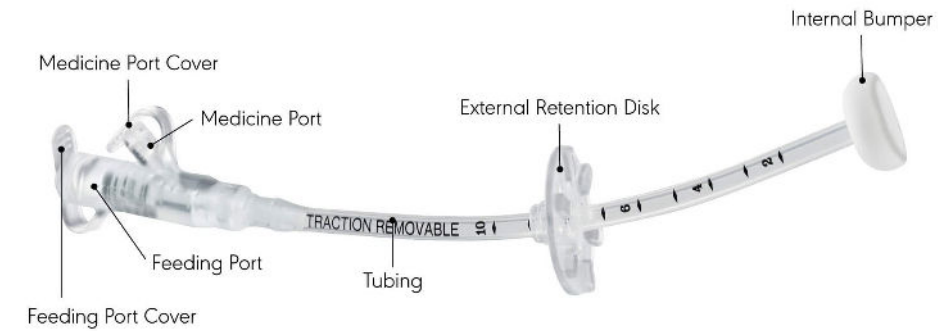
Treatment

- Adequate Hydration – 48-64 oz per day
- Adequate fiber – 20-38 g per day
- Prune juice (a natural laxative effect), Benefiber/Metamucil, fiber gummies
- Medications – Senna, Miralax, Magnesium Citrate (may need a regimen to prevent constipation)

Tube Feeding

- Indications for placement
 - Unintentional weight loss (10% or more of baseline weight)
 - Inability to consume adequate calories or hydration due to feeding difficulty, swallowing difficulty, decreased appetite, fatigue
 - FVC nearing 50% of predicted

- **PEG is most common feeding tube placed in ALS**
- **Most individuals continue to eat and drink a portion of their nutrition orally**
- **If the PEG becomes a “primary source” of nutrition, most insurance plans will help cover the cost of the formula and supplies**



Tube Feeding Formulas



- **Standard formulas** – provide generalized, balanced nutrition and works well for most individuals (ex. Kate Farms, Compleat, Isosource, Jevity)
- **Specialized formulas** – nutrition compositions designed to help manage other chronic conditions such as diabetes, kidney disease, GI conditions (ex. Diabetisouce, Nepro, Peptamen)
- **Blenderized formulas** – pureed foods placed in pouches and at a consistency that will flow through a feeding tube; some people report better tolerance with these formulas (ex. Real Food Blends, Liquid Hope)
- **Homemade pureed foods** – some individuals prefer to make their own formulas (starting guides can be provided)



Questions and Discussion

Thanks for joining today!