# NUTRITION

U.S. Department of Health and Human Services Nutrition Competencies covered in the College of Medicine Curriculum (February 2026):

- Nutritional content of foods, macronutrients and micronutrients
- Pathological states affecting nutrient absorption
- Identifies nutrient deficiencies, recommends foods/supplements
- Difference between food allergies and intolerance including gluten
- Energy nutrient requirements across lifespan
- Nutritional differences: minimally processed vs ultra-processed foods
- Interprets nutrition labels and menu labeling
- Clinically assisted nutrition (enteral/parenteral) - recommended at the GME level for appropriate specialties only
- Functions of essential nutrients
- Principles of healthy balanced diet per national guidelines
- Evidence-based guidance on healthy beverage consumption
- Mitochondrial metabolism and energy regulation: understanding nutrient-driven ATP synthesis and how overnutrition leads to insulin resistance
- Structural components from food: recognize how dietary amino acids, essential fatty acids and cholesterol build protiens, membranes and hormones
- Micronutrient cofactors in enzymatic function: master how vitamins and minerals drive reactions and how deficiencies undermine function
- Hormonal regulation through food composition: understand how meal composition affects GLP-1, CCK, PYY, leptin and insulin signaling
- Microbiome-immune crosstalk: understand fiber fermentation producing butyrate for gut integrity and how ultra-processed diets cause dysbiosis
- Cognitive and behavioral nutrition: apply mindful eating practices that enhance hormonal signaling and reduce reward-driven eating
- Food bioavailability and synergies: knowledge of preparation methods enhancing absorption
- Chronobiology and circadian nutrition: understand how meal timing affects nutrient absorption, hormonal rhythms, and metabolic efficiency
- Assesses nutritional status by integrating dietary history, clinical measurements (height, weight, BMI, skeletal muscle mass, visceral fat), and laboratory findings
- Comprehensive nutrition-focused physical examination
- Interprets exam data and biomarkers for malnutrition risk
- Personalized metabolic biomarker interpretation: using fasting insulin levels, oral glucose tolerance testing (OGGT), HOMA-IR, TG:HDL ratio, advanced lipid panels, omega-3 index, and vitamin D to guide interventions
- Continuous glucose monitoring (CGM) interpretation: analyze CGM data patterns to identify glycemic variability and guide dietary modifications
- Early warning sign recognition: interpret nutrition-related symptoms (fatigue, bloating, anxiety) and signs (brittle nails, hair thinning)
- Integrates evidence-based nutrition information into patient care
- Uses behavior change models to counsel patients
- Guides patients on lifelong dietary patterns for chronic disease
- Brief counseling for visceral adiposity/metabolic syndrome
- Motivational interviewing for nutrition change: apply structured interviewing techniques to enhance autonomy and sustainable behavior change
- Food journaling guidance: teach patients to maintain detailed food journals for pattern identification and accountability
- Mindfulness-based eating interventions: implement eating awareness training to improve hormonal signaling
- Patient empowerment and dietary autonomy: foster long-term self-efficacy through education, biomarker monitoring, and collaborative goal-setting
- Interoceptive awareness training: help patients develop awareness of internal hunger/satiety cues to regulate intake naturally
- Works with other health professionals for multidisciplinary nutrition care
- Makes appropriate referrals to support patient health goals
- Digital health technology integration: understand and recommend evidence-based wearables and platforms supporting nutrition outcomes
- Screens for food/nutrition needs and patients' ability to obtain sufficient nutrition, makes appropriate referrals
- Creates culinary nutrition SMART goals for personal use and patient care
- GLP-1 agonists counseling with diet and lifestyle guidance
- Identifies factors affecting personal health and nutrition status
- Environmental contaminant case studies: review clinical cases linking food-based exposures to patient outcomes

## Electives

- Mindfulness-based eating interventions: implement eating awareness training to improve hormonal signaling
- Health coach and functional nutritionist collaboration: effectively co-manage patients with non-physician experts
- Dietary Guidelines analysis: critically evaluate and translate the 2025 Dietary Guidelines into clinical practice