

Exam Content Outline 2024-2028

Domain	Title	% of Test
I	Principles of Nutrition	13%
II	Nutritional Biochemistry	12%
III	Nutrients & Human Health	13%
IV	Nutrition Assessment	13%
V	Clinical Intervention & Monitoring	16%
VI	Medical Nutrition Therapy	15%
VII	Public Health	12%
VIII	Practice Management	6%

Domain I: Principles of Nutrition

- Practical application of evidence-based research
- Physiology of the digestive tract (motility, absorption, secretion, intestinal barrier function)
- Digestion, absorption, and transport of macronutrients and micronutrients
- Inflammatory pathways including insulin, oxidative stress, and fatty acid oxidation
- Effect of microbiome on metabolism of macronutrients and micronutrients, including use of probiotics and prebiotics
- Nutritional considerations related to physiologic changes associated with life cycle stage
- Effect of microbiome on body composition and metabolism
- Tailoring of assessment and therapy specific to life cycle stage
- Nutritional considerations related to psychological and social factors associated with life cycle stage
- Effects of age, gender, and physical activity on body composition and energy expenditure
- Disease risk and prevalence related to socioeconomic status, geographic residency, ethnicity, and life cycle stage
- Regulation of fluid, electrolyte, and acid-base balance
- Basic understanding of nutritional genomics research in practice
- Calculation of individual caloric requirements
- Estimation of caloric values of specific meals

Domain II: Nutritional Biochemistry

- Nutritional considerations related to psychological and social factors associated with life cycle stage
- Metabolism (biochemical pathways and reactions) of carbohydrates, lipids, proteins, and micronutrients, and physiologic changes associated with life cycle stage
- Role of oxidative stress and detoxification pathways on health status
- Nutritional biochemical pathways, including energy production and detoxification genomics research in practice
- Chemistry of enzymes, co-factors, and organic acids
- Lipid metabolism, including cytokine and eicosanoid pathways
- Epigenetics: methyl donor biochemistry and hypo and hyper methylation specific to life cycle stage

Domain III: Nutrients & Human Health

- Macronutrient and micronutrient food sources and impact on health
- Nutrient deficiency and insufficiency: causes, symptoms, and treatment
- Appropriate use of nutrient supplementation
- Supplemental sources of nutrients
- Functional and medical foods and their impact on health
- Role of oxidative stress and detoxification pathways on health status
- Structure and function of soluble and insoluble fiber and impacts on health
- Role of key phytochemicals and zoochemicals in health
- Chemistry of enzymes, co-factors, and organic acids
- Impact of agricultural methods and food processing, preparation, and storage on nutrient value
- Tolerable upper intake levels of nutrients
- Nutrient toxicity: causes, symptoms, and treatment
- Dietary Guidelines and Dietary Reference Intakes for preventive and therapeutic interventions
- Nutrients used in fortification and applicable food sources

Domain IV: Nutrition Assessment

- Lifestyle factors that impact nutrient needs and compliance, such as exercise, stress, and sleep
- Comprehensive medical nutrition health history
- Use of behavior change strategies such as Motivational Interviewing and Stages of Change Theory
- Evaluation of laboratory data, including identification of optimal value ranges
- Identify signs and symptoms of nutrient status
- Identification of symptoms that require medical referral
- Evaluation of functional testing (organic acid, stool, and saliva tests for adrenals and hormones)
- Evaluation of hormonal and neurotransmitter imbalances based on laboratory assessment
- Computerized analysis of food intake
- Body composition analysis (skin fold, bioelectrical impedance, waist-to-hip, BMI, other)
- Assessment of single-nucleotide polymorphisms (SNPs)
- Nutritional inborn errors of metabolism

Domain V: Clinical Intervention & Monitoring

- Gauging and optimizing client compliance
- Consideration of client's personal and cultural beliefs when developing nutrition intervention plans
- Malabsorption and effects on macronutrients and micronutrient status
- Effectiveness and contraindications of various diets
- Drug/herb action, duration of action, purpose and dose of a client's current therapeutic regimen
- Interactions between drugs and foods, alcohol, vitamins, minerals, herbs, phytochemicals, and zoochemicals
- Nutrient depletions related to commonly used drugs
- Evidence-based dose and duration of nutraceutical use for common conditions
- Evidence-based use of common botanical supplements for health promotion and common conditions
- Synergistic effects and antagonistic interactions of nutrients in foods and supplements
- Effects of disordered eating patterns on nutrition status, body composition, and body functions
- Safety, toxicity, and interactions of botanical supplements
- Good manufacturing practices and other quality markers for nutritional supplements

- Application of national guidelines, policies, consensus recommendations, and evidence-based research in the development of personalized therapeutic interventions
- Linking childhood behaviors to obesity and other chronic health issues in adults
- Impact of nutritional genomics on health

Domain VI: Medical Nutrition Therapy (MNT)

- MNT for gastrointestinal disorders
- MNT for food allergies and intolerances
- MNT for autoimmune disorders
- MNT for mental health/mood disorders
- MNT for insulin resistance and type 2 diabetes
- MNT for cardiovascular disease, dyslipidemias, and hypertension
- MNT for endocrine disorders
- MNT for obesity
- MNT for cognitive and neurodegenerative disorders
- MNT for hepatic disorders
- MNT for neurodivergence
- MNT for dermatological disorders
- MNT for bone disorders
- MNT for type 1 diabetes
- MNT for cancer
- MNT for renal disorders
- MNT for hematologic disorders
- MNT for mastication, swallowing, and nutrient absorption disorders
- MNT for pulmonary disorders
- MNT for surgical procedures
- MNT for communicable diseases and sequelae
- MNT for bariatric surgery

Domain VII: Public Health

- Impact of environmental toxicity on health
- Translation of nutritional epidemiology into practice
- Factors that negatively affect food quality and safety
- Causes and preventative measures for common foodborne illnesses
- Identification of populations at risk for food safety issues
- Tracking current outbreaks of food borne illness and communication with clients

Domain VIII: Practice Management

- Compliance with ethical standards
- Working within scope of practice and in collaboration with other healthcare professionals as needed
- Evaluate sources of nutrition information for trustworthiness and bias
- HIPAA compliance requirements
- Licensure and certification
- Cultural competency and mitigating implicit bias
- Insurance coverage and reimbursement