

CNS Supervised Practice Experience Competencies

The following are the competencies to be addressed by the supervised practice experience. Although an in-depth experience is not expected for each competency, candidates should have a basic understanding of the application of each in practice. The level of supervision should be adequate to enable the supervisor to attest to these competencies and demonstrated by the supervisor's review of 5 personalized nutrition case studies.

1. Category A: Nutrition Assessment (Min. 200 Hours Required)

Definition: Nutrition assessment is an ongoing, dynamic process that incorporates a systematic approach to collect, record, and interpret relevant data regarding a client's health status and lifestyle. The nutrition assessment is used to identify existing nutritional health issues to enable effective treatment and prevention strategies, and monitor improvements.

Competencies: Know how to elicit a patient-appropriate comprehensive personalized medical nutrition health assessment, including the following:

- a. Health history
 - i. Current health concerns, past and present health history, and family health history
 - ii. Body weight history and recent weight changes
 - iii. Psychosocial history, including access to food, occupation, living situation, smoking, drug and alcohol use
 - iv. Medication and supplement use
 - v. Review of body systems
 - vi. Mastication and swallowing difficulty, appetite, and bowel function
 - vii. Pregnancy history and/or desired pregnancy
 - viii. Sleep patterns, stress level

- b. Diet and Lifestyle history
 - i. Obtain a focused nutrition history via multi-day food record, a food frequency record, and a 24-hour recall
 - ii. Identify limitations of food records, food frequency questionnaires and recalls and understand the appropriate use of these tools
 - iii. Determine suboptimal dietary intake or status of nutrients
 - iv. Evaluate eating patterns, stress eating tendencies, and disordered eating behaviors
 - v. Identify dietary avoidance behaviors
 - vi. Identify allergies and sensitivities to foods and dietary supplement ingredients based on history and symptoms reports
 - vii. Physical activity - identifying frequency, intensity, type, and limitations on exercise
 - viii. Identify Stages of Change for making dietary and other lifestyle modifications
 - ix. Assess environmental toxicity factors that may negatively affect food quality (pesticides, xenobiotics, GMO's, hormones, food additives, PCB, heavy metals)



- c. Biochemical and laboratory assessment
 - i. Evaluate signs of vitamin and mineral deficiencies or toxicities
 - ii. Interpret functional testing (organic acid, stool, saliva) as it applies to nutrition-related conditions and systemic imbalances
 - iii. Monitor growth, weight, and BMI
 - iv. Identify hormonal and neurotransmitter imbalances based on laboratory assessment
 - v. Identify personalized and biochemical laboratory value ranges as compared to normal reference value ranges

- d. Genetic/genomic factors
 - i. Demonstrate understanding of the basics of gene expression, transcription, and translation
 - ii. Assessment of single nucleotide polymorphisms (SNPs)
 - iii. Demonstrate understanding of genetic disorders in nutrient metabolism
 - iv. Evaluate family health history as it relates to current health status and risk factors

- e. Anthropometrics
 - i. Be familiar with the following anthropometric measurements: mid-arm circumference, triceps skin-fold, and mid-arm muscle circumference
 - ii. Be familiar with bioelectric impedance
 - iii. Be familiar with waist-to-hip ratio measurements
 - iv. Be familiar with emerging tools of anthropometrics (ultrasound, DEXA, MRI, CT scanning, and air displacement plethysmography)

- f. Assessment of diet impact on health issues
 - i. Be familiar with computerized analysis of food intake
 - ii. Determine individual micro- and macro- nutrient requirements using guidelines and recommendations customizing them according to the individual's age, sex, body type, reproductive status, activity level, and metabolism

- g. Identification of clinical status
 - i. Identify symptoms that require medical referral
 - ii. Correlate constellations of symptoms for the most effective and efficient treatment protocols

2. Category B: Nutrition Intervention (Min. 200 Hours Required)

Definition: A nutrition intervention consists of planned actions designed to change nutrition-related or lifestyle-related behaviors for the purpose of resolving health issues or optimizing health. It may involve any of the following activities: research related to treatment plan, development of personalized medical nutrition



therapy interventions, client education, counseling and management of individuals or groups, food preparation instructions, shopping, sustainability practices, and behavioral/motivational counseling.

Competencies:

- a. Nutrition relationship to disease or system (Personalized Medical Nutrition Therapy). Formulate applicable dietary and nutraceutical interventions for prevention, modulation, and management for the following chronic, systemic disorders:
 - i. Obesity
 - ii. Cardiovascular disease, dyslipidemias, and hypertension
 - iii. Insulin resistance and non-insulin dependent diabetes
 - iv. Endocrine disorders
 - v. Autoimmune disorders
 - vi. Gastrointestinal disorders
 - vii. Hematologic disorders
 - viii. Bone disorders
 - ix. Hepatic disorders
 - x. Pulmonary disorders
 - xi. Renal disorders
 - xii. Cognitive / neurological disorders
 - xiii. Food allergies and intolerances
 - xiv. Post bariatric surgery
 - xv. Post general surgical procedures
 - xvi. Mastication, swallowing, and nutrient absorption disorders
 - xvii. Dermatological disorders
 - xviii. Mental health/mood disorders
 - xix. Cancer
 - xx. HIV/AIDS

- b. Drug-nutrient/drug-herb interactions
 - i. Identify common drug-nutrient and drug-herb interactions affecting glucoregulation, coagulation, and metabolism
 - ii. Identify drug-herb action duration of action, indication and dose of a patient's current therapeutic regimen
 - iii. Identify dietary factors that affect the actions of common drugs and the underlying mechanisms of action
 - iv. Identify nutrient depletions which can occur related to commonly used drugs
 - v. Identify interactions between drugs and foods (including herbs) and their constituents
 - vi. Assess the interaction of nutrients with alcohol



- c. Interactions between nutrients
 - i. Assess the synergistic effects and antagonistic interactions of nutrients in foods and supplements and how they may impact the health status of an individual

- d. Dietary therapeutics and behavior optimization
 - i. Assess the advantages and limitations of popular diets
 - ii. Identify the therapeutic usefulness of specific foods
 - iii. Apply scientific evidence and methods when developing specific dietary recommendations
 - iv. Assess the link between behaviors learned in childhood and their impact on obesity and other chronic health issues in adulthood
 - v. Apply psychological and motivational skills to enhance clinical outcomes
 - vi. Gauge and optimize compliance with recommendations

- e. Nutraceutical and supplement therapeutics
 - i. Apply evidence-based dose and duration of use of nutraceuticals for common conditions
 - ii. Develop working knowledge of good manufacturing practices and other markers of quality end-products

- f. Eating behaviors
 - i. Assess the effects of disordered eating patterns on nutritional status, body composition, and function
 - ii. Assess the impact of personal and cultural beliefs on dietary and lifestyle patterns and be able to address these beliefs when developing nutrition intervention plans

- g. Data comprehension and translation
 - i. Assess individual patient data and compare with other data (national guidelines, policies consensus statements, expert opinions, and previous outcome experience) to develop nutritional therapeutic interventions

- h. Botanical and related therapies
 - i. Develop working knowledge of the effects of common botanical supplements and their indication for health promotion
 - ii. Assess the safe use and potential toxicity of botanical supplements

3. Category C: Nutrition Monitoring or Evaluation (Min. 200 Hours Required)

Definition: Regular re-evaluation of treatment plan and goals in accordance with evaluation of improvements made based on symptoms and overall health status. Includes review of clinical research, standards of care, and other indirect contact.

Competencies: Included in Categories A and B above.



4. **Category D: Practice Management.**

Definition: There are certain Federal and State laws and requirements that must be considered when operating a nutrition practice. These competencies should be integrated in all work done during the Supervised Practice Experience and demonstrated to the supervisor(s).

- a. HIPAA compliance requirements
- b. Refer clients to appropriate healthcare providers when their care requires services outside the scope of practice of a CNS
- c. Ensure compliance with the BCNS Code of Ethics
- d. Be familiar with state/federal licensure and certification requirements that impact practice rights
- e. Be familiar with regulations related to insurance coverage and reimbursement

Remaining hours may be in any of the above categories.