

Certification Examination for Physician Nutrition Specialists



NATIONAL BOARD OF
PHYSICIAN NUTRITION
SPECIALISTS

Candidate Handbook 2023

Application Deadline*	Testing Window
April 19, 2023	May 20 – June 3, 2023
October 4, 2023	November 4 – November 18, 2023

***Applications will not be accepted after this date**

Administered by:



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www.ptcny.com/contact

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This Handbook contains necessary information about the Certification Examination for Physician Nutrition Specialists. Please retain it for future reference. Candidates are responsible for reading these instructions carefully. This Handbook is subject to change.

CONTACT INFORMATION

<p>Professional Testing Corporation (PTC)</p> <p>www.ptcny.com</p> <p>(212) 356-0660</p>	<ul style="list-style-type: none"> • Apply for examination • Obtain general application policy and procedure information • Obtain information about testing policies and procedures • Transfer to a new Testing Period • Request Test Accommodations • Request Hand Score • Question about score reports • Miscellaneous inquiries
<p>Prometric</p> <p>www.prometric.com/NBPNS</p> <p>(800) 741-0934</p>	<ul style="list-style-type: none"> • Schedule test appointment • Reschedule test appointment (within a testing period) • Cancel test appointment • Find directions to test site • Questions regarding testing sites and appointments
<p>National Board of Physician Nutrition Specialists (NBPNS)</p> <p>http://www.nbpns.org</p>	<ul style="list-style-type: none"> • General Information • Maintenance of Certification

ATTENTION CANDIDATES

This handbook contains necessary information about the NBPNS Certification Examination for Physician Nutrition Specialists. It is required reading for those applying and taking the examination. All individuals applying for the examination must comply with the policies, procedures, and deadlines in this Handbook and attest to this by signing the Candidate Attestation found on the application. Please retain this handbook for future reference. This handbook is subject to change. See www.ptcny.com for handbook updates.

ACCESSING CELL PHONES AND ELECTRONIC DEVICES AT ANY TIME WHILE YOU ARE TAKING THE EXAM IS PROHIBITED. YOU CAN ONLY REMOVE SNACKS, DRINKS, MEDICINE OR PERSONAL HEALTHCARE ITEMS FROM YOUR LOCKER- NO BACKPACKS, BAGS, POCKETBOOKS OR CLOTHING CAN BE REMOVED WHILE YOUR EXAM IS IN SESSION.

CERTIFICATION

The National Board of Physician Nutrition Specialists (NBPNS) endorses the concept of voluntary, periodic certification for physicians to become nutrition specialists. Our certification is one part of a process called credentialing, focusing specifically on physicians, and is an indication of current competence in a specialized area of medical practice. Board certification in medical nutrition is highly valued and provides formal recognition of nutrition practice by providers.

Certification as a Physician Nutrition specialist provides formal recognition of knowledge and practice in the field by:

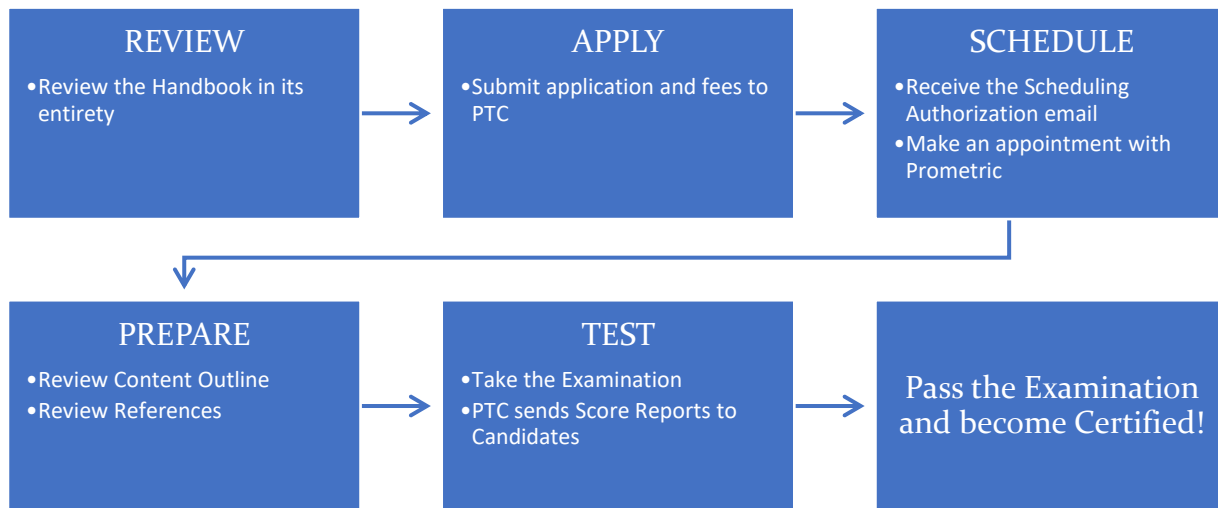
1. Recognizing formally those individuals who meet the eligibility requirements of the National Board of Physician Nutrition Specialists (NBPNS) and pass the Certification Examination for Physician Nutrition Specialists.
2. Encouraging continued personal and professional growth in the practice of medical nutrition.
3. Establishing and measuring the level of knowledge required for certification as a physician nutrition specialist.
4. Providing a standard of knowledge requisite for certification; thereby assisting the employer, public, and members of the health professions in the assessment of the physician nutrition specialist.

The NBPNS credential is not creditable toward the requirements for licensure to practice medicine in the United States.

DEFINITION OF PHYSICIAN NUTRITION SPECIALIST

A physician nutrition specialist (PNS) is a provider with training in nutrition who devotes a substantial career effort in nutrition and who can assume a leadership role in coordinating interdisciplinary clinical nutrition services and education in academic health centers, other medical centers, private practice, and other health care settings. PNS generally have backgrounds in the specialties of internal medicine, pediatrics, family medicine, or general surgery, and sometimes in subspecialties such as adult or pediatric gastroenterology, endocrinology, critical care, nephrology, cardiology, and others. They have completed a period of defined nutrition training, in addition to categorical residency training, that includes mastery of core nutrition knowledge and a mentored clinical nutrition experience; this training may be obtained in a nutrition fellowship or as part of training in another subspecialty. PNS have satisfied all requirements of, and are certified by, the National Board of Physician Nutrition Specialists.

THE CERTIFICATION PROCESS



ELIGIBILITY REQUIREMENTS

To be eligible to take the Certification Examination for Physician Nutrition Specialists, a candidate must meet three requirements:

1. Current licensure to practice medicine in the U.S., or the equivalent in other countries. All candidates for certification and recertification must be licensed to practice medicine in the country in which they reside.
2. Demonstrated expertise in nutrition defined by **two** or more of the following: *
 - a. Mentored training in clinical nutrition (requires letter of recommendation from mentor).
 - b. Dedicated service on a hospital Multidisciplinary Nutrition Team (requires letter of recommendation from hospital chief of staff or physician head of department).
 - c. Performance of research with publications in nutrition (provide documentation on curriculum vitae).
 - d. Either of the following:
 - Teaching position involving nutrition at an academic medical center (requires letter of recommendation from department chairman) OR
 - Personal statement describing the applicant's current clinical practice and how the application integrates nutrition management in their practice **AND** a letter of support by an NBPNS Diplomate attesting to the applicant's expertise in nutrition.

- e. Committee membership and/or leadership role in a national nutrition society (provide documentation on curriculum vitae).
- f. Completion of a minimum of 75 or more hours of Continuing Medical Education (CME) devoted to clinical nutrition (provide CME documentation).
- g. Regional peer-recognized leadership role in nutrition (requires letter of recommendation from peer in community).

Final acceptance of eligibility is subject to satisfactory review by the NBPNS Board.

*Requirements for eligibility have been revised due to the fact that at the present time, positions for formal training in clinical nutrition are limited. Requirements will be re-evaluated on an annual basis, as increasing opportunities for training emerge in the future.

- 4. Completion and filing of an Application for the Certification Examination for Physician Nutrition Specialists, **including copies of the candidate's current medical license and board certification.**
- 5. Payment of required fee.

COMPLETION OF APPLICATION

Step 1 – Complete Application

Go to <http://www.ptcny.com/test-sponsors/NBPNS> to view examination testing periods, application deadlines, and link to the online application. You must complete the examination application in full, using your name exactly as it appears on your current government issued photo ID such as a driver's license or a passport. Applications are not considered complete until all information and payment has been provided. The completed application must be submitted and paid for online. Retain the link to the application and your login information.

Please note, for new applications you will be asked to create a PIN number. This PIN will be used if you need to go back into your existing application.

Step 2 – Submit Examination Fee and Application for Review

Receive email from PTC stating that your payment and application has been received and under review. Note: Applications will not be reviewed until payment is received.

Step 3 – Receive Approval of Application

Receive email from PTC stating that your application has been approved.

Step 4 – Receive Scheduling Authorization and Schedule Testing Appointment

Within eleven (11) weeks prior to the start of the testing period, candidates will receive a Scheduling Authorization from PTC via email from notices@ptcny.com. The Scheduling Authorization includes a PTC Candidate ID Number and information on how to set up your examination location, date, and time through Prometric. Retain this document.

You must present your current driver's license, passport, or U.S. Military ID at the testing center at the time of your examination appointment or you will be refused admission. The first and last name on the ID must exactly match the first and last name on the Scheduling Authorization.

Applicants who are not approved to sit for the examination or whose applications are incomplete 14 days prior to the first day of the testing window will receive a refund of their application fee minus the \$75 administrative fee. Refunds will be processed approximately 30 days after the end of the testing period.

EXAMINATION ADMINISTRATION AND SCHEDULING

The Certification Examination for Physician Nutrition Specialists is administered during an established two-week testing window on a daily basis, excluding holidays, at computer-based testing facilities managed by Prometric.

Scheduling Authorization

PTC will send approved candidates an email called the Scheduling Authorization. These emails are sent out about 11 weeks before the first day of the testing window. The emails come from notices@ptcny.com. Candidates cannot make an appointment until they receive a scheduling authorization. If you don't receive your email 3 weeks before the start of your testing window contact PTC.

Scheduling Examination Appointments

The Scheduling Authorization will indicate how to schedule your examination appointment with Prometric as well as the dates during which testing is available. Appointment times are first-come, first-served, so



schedule your appointment as soon as you receive your Scheduling Authorization in order to maximize your chance of testing at your preferred location and on your preferred date. **Candidates who wait until the last minute run the risk of missing out on their preferred date, time, and testing center. Candidates unable to schedule an appointment will forfeit their fees.**

After you make your test appointment, Prometric will send you a confirmation email with the date, time, and location of your exam. Please check this confirmation carefully for the correct date, time, and location. Contact Prometric at (800) 741-0934 if you do not receive this email confirmation or if there is a mistake with your appointment.

Note: International candidates may also schedule, reschedule, or cancel an appointment online at <http://www.prometric.com/NBPNS>.

IMPORTANT!

You **MUST** present your current driver's license, passport, or U.S. military ID at the test center. Expired, temporary, or paper driver's licenses will **NOT** be accepted.

The first and last name on your Scheduling Authorization **MUST** exactly match the first and last name on your photo ID. **Fees will not be refunded for exams missed because of invalid ID.**

Rescheduling Examination Appointments within a Testing Period

Candidates are able to reschedule their examination appointments within the same testing period as long as the request is submitted within the timeframe described below. Reschedule within the permitted time frame by calling or going to the Prometric website: www.prometric.com/NBPNS.

Time Frame	Reschedule Permitted?	Stipulations
Requests submitted 30 days or more before the original appointment	Yes	None
Requests submitted 29 to 5 days before the original appointment	Yes	Candidate must pay Prometric a rescheduling fee of \$50.
Requests submitted less than 5 days before the original appointment	No	Candidates who do not arrive to test for their appointment will be considered a no-show and all their examinations fees will be forfeited. Candidates will need to reapply and pay full examination fees for a future testing period.

Transferring to a New Testing Period

Candidates unable to take the examination during their scheduled testing period* may request a **ONE-TIME** transfer to a future testing period. **There is a transfer fee of \$270.00.** After you have transferred once by paying the \$270.00 fee, you will need to pay the examination fee in order to transfer a second time; so, ***please plan carefully.***

Please note: requests to transfer to a new testing period must be received within 12 months of your originally scheduled testing period.

Candidates wishing to transfer to a new testing period need to follow the steps below.

1. Go to <http://secure.ptcny.com/apply>.
2. Click "Start New Application."
3. Choose NBPNS in the first drop-down menu; then choose the new examination period in the second drop down menu and fill out the rest of the information on the page.
4. Fill out the application making sure you answer Yes to the question asking if you are transferring; **you will need to upload your supporting documentation.**

5. When you have finished the application, click “Submit Transfer Request” in the Transfers section of the application.
6. PTC Support will send you an email letting you know your transfer application was approved and that you can log back into your application and pay the one-time \$270.00 transfer fee.

Call 212-356-0660 if you have any questions regarding the transfer process.

If candidates are unable to attend the examination on the date for which they registered and elect not to transfer to another testing period the application will be closed and all fees will be forfeited. There will be no refund of fees.

The transfer fee is based on costs and is not punitive in nature. The transfer fee must be paid at the time the request is approved. **The candidate is also responsible for contacting Prometric and canceling the original examination appointment if one was made.**

Please be advised: Prometric does not have the authority to grant transfers to another testing period or refunds. (I think this is important to repeat from above)

Exams may only be transferred to a new testing period once; please plan carefully.

Please note: Transferring your Examination only refers to instances when a candidate is unable to take their exam during a testing period for which they have already applied. Candidates who did not pass their examination and are retaking the examination need to pay the full Examination Fee.

****If your appointment is cancelled by Prometric please contact PTC for further instruction.***

Failing to Report for an Examination



If you fail to report for an examination, you will forfeit all fees paid to take the examination. A completed application form and examination fee are required to reapply for the examination.

EXAMINATION FEES

Fee Type	Amount	Details
Examination Fee	US \$800.00	<ul style="list-style-type: none"> Non-refundable¹ Non-transferable Includes testing center fees Includes non-refundable \$75 administrative fee
Recertification Fee	US \$450.00	
Transfer Fee (Moving to a new testing window; see page 7)	US \$270.00	<ul style="list-style-type: none"> Applies to candidates who need to move to a new testing period Must submit new application & fee to PTC
Rescheduling Fee (29-5 days prior to scheduled appointment; see page 7)	US \$50.00	<ul style="list-style-type: none"> Applies to candidates who need to move their appointment within their current testing period Payable directly to Prometric Reschedule with Prometric online or over the phone



- There will be no refund of fees unless applicants are ineligible for the examination.**
- Ineligible candidates will be refunded their fees minus an administrative fee.**
- No refunds will be issued for applying for the incorrect examination or testing period, for failing to make an examination appointment, or for failing to appear at your scheduled appointment.**

Please be advised: Prometric does not have the authority to grant transfers to another testing period or refunds.

¹ Applicants who are ineligible to take the examination or whose applications are incomplete by the application deadline will have their examination fees returned minus an administrative fee.

TEST ACCOMMODATIONS

NBPNS and PTC support the intent of and comply with the Americans with Disabilities Act (ADA). PTC will take steps reasonably necessary to make certification accessible to persons with disabilities covered under the ADA. According to the ADA, an individual with a disability is a person who has a physical or mental impairment that substantially limits a major life activity (such as seeing, hearing, learning, reading, concentrating, walking) or a major bodily function (such as neurological, endocrine, or digestive system). The information you provide and any documentation regarding your disability and test accommodations will be held in strict confidence.

All approved testing accommodations must maintain the psychometric nature and security of the examination. Accommodations that fundamentally alter the nature or security of the exam will not be granted.

Testing arrangements may be made upon receipt of the application, examination fee, and a completed and signed Request for Test Accommodations Form, available from www.ptcny.com or by calling PTC at (212) 356-0660.

This form must be uploaded with the online application no later than 8 weeks prior your chosen testing period. Candidates who do not submit their Test Accommodations Form with their application may not be able to test during their chosen testing period and therefore be subject to rescheduling or transfer fees.

Only those requests made and received on the official Request for Test Accommodations Form will be reviewed. Letters from doctors and other healthcare professionals must be accompanied by the official Form and will not be accepted without the Form. All requests must be made at the time of application. Accommodations cannot be added to an existing exam appointment.

Please note: do not go to www.prometric.com or contact Prometric to request test accommodations as Prometric is not authorized to approve accommodations. All requests for test accommodations must be submitted on the PTC Request Form.

PREPARING FOR THE EXAMINATION

- Check your government issued photo ID (driver's license, passport or U.S. Military ID) when you make your examination appointment. Is it expired? Does the name on your ID match the name on your Scheduling Authorization email? Proctors at the Prometric testing center will refuse admission to candidates with expired IDs, IDs with names that do not match their records, and temporary paper IDs. Candidates will be marked as no-shows and will forfeit their exam fees.
- Check your PTC Scheduling Authorization email and Appointment Confirmation email from Prometric to make sure everything is accurate (i.e. your name, exam name, appointment date, time and location).
- Make yourself familiar with the location of your chosen testing site and any requirements they may have for parking and check the weather and traffic conditions before you leave for the testing center. Make sure you give yourself plenty of time to arrive as late arrival may prevent you from testing.
- In the event of inclement weather, check the Prometric website for site closures: <https://www.prometric.com/closures>.
- Prometric's website provides information on what you can expect on your test day, including a walkthrough of check in and security procedures: <https://www.prometric.com/test-center-security>.
- This Handbook provides the Content Outline for the Examination (see appendix). Use these to help you start studying for the examination.
- Review What to Expect at the Testing Center and Rules for the Examination below before your appointment.

WHAT TO EXPECT AT THE TESTING CENTER

PTC has partnered with Prometric Testing Centers to deliver examinations to candidates. Here is what you can expect when you arrive at your Prometric Testing Center.

- Candidate Check-In
 - Candidates will be asked to present their IDs
 - Candidates will be asked to empty and turn out their pockets
 - Candidates will be “wanded” or asked to walk through a metal detector
 - Inspection of eyeglasses, jewelry, and other accessories will be conducted. Jewelry other than wedding and engagement rings is prohibited.
 - Religious headwear may be worn into the testing room; however, it may be subject to inspection by a testing center administrator before entry into the testing room is permitted.
 - Prometric provides lockers for candidates to store their purses, mobile phones, jackets, food, drinks and medical supplies.

- During the Exam
 - No breaks are scheduled during the exam. Candidates who must leave the testing room to take a break will not be given extra time on the exam
 - Candidates are only permitted to leave the testing room to use the restroom or access food, drink, or medicine from their assigned locker.
 - Candidates who take an unscheduled break are subject to additional security screenings before being permitted to reenter the testing room
 - Accessing mobile phones, study materials, or anything other than food, drink, or medicine during the examination is prohibited
 - Smoking is prohibited at the testing center
 - All examinations are monitored and may be recorded in both audio and video format

Please keep in mind: other exams will be administered at the same time as your examination. Therefore, examinees may hear ambient noises such as typing, coughing, or people entering and exiting the testing room that cannot be avoided. Prometric is unable to provide a completely noise-free environment. However, headphones may be requested to minimize impact.

Please see [Prometric’s website](#) for more information about what to expect on testing day.

RULES FOR THE EXAMINATION

Please read the information below carefully. You are responsible for adhering to the examination rules while at the testing center.

- ⇒ You must present your current driver's license, passport, or US Military ID at the testing center. Candidates without valid ID will NOT be permitted to test. Temporary or paper copies of your ID will not be accepted.
- ⇒ Cell phones, watches, and all other electronic devices are strictly prohibited at the testing center. Please leave these items in your car or in your assigned locker at the testing center. You may NOT access your cell phone, electronic devices, or study materials from your locker at any time.
- ⇒ No papers, books, or reference materials may be accessed during a break at a locker, taken into or removed from the testing room.
- ⇒ You may ONLY access snacks, drinks, medicines, or personal healthcare items from your locker.
- ⇒ No questions concerning content of the examination may be asked during the examination session. The candidate should read carefully the directions that are provided on screen at the beginning of the examination session.
- ⇒ Candidates are prohibited from leaving the testing room while their examination is in session, except for going to the restroom, or accessing their locker for food, drink, or medicine only.
- ⇒ Bulky clothing, such as sweatshirts (hoodies), jackets, coats, and hats (except hats worn for religious reasons), and most types of jewelry may not be worn while taking the examination. Proctors will ask you to remove such items and place them in your locker. Please see [Prometric's statement on Test Center Security](#) for more information.
- ⇒ All watches, including fitness/smart watches and similar devices, cannot be worn during the examination.
- ⇒ No food/beverages are permitted inside the testing room. Leave these items in your assigned locker.



Contact PTC at (212) 356-0660 or www.ptcny.com/contact with any questions about the Examination Rules.

Irregular or improper behavior that is observed, made apparent by statistical analysis, or uncovered by other means before, during or after the examination will be considered a violation of these rules and may constitute grounds for invalidation of a candidate's examination. NBPNS will initiate an investigation and request suitable analyses and appropriate documentation.

TESTING CONDITIONS OR EXAMINATION FEEDBACK

Any candidate who feels that the examination effort was negatively impacted by the test center conditions should notify the proctor immediately. The situation should also be reported to PTC at www.ptcny.com/contact within 15 days of the test appointment. Any comments about the test itself should also be reported to PTC at www.ptcny.com/contact within 15 days of the test appointment.

REPORT OF RESULTS

Candidates will be notified via email approximately four weeks after the close of the testing period whether they have passed or failed the examination. Scores on the major areas of the examination and on the total examination will be reported. Successful candidates will also receive certificates from the NBPNS. Failure to receive the report of the results should be reported to the Professional Testing Corporation at (212) 356-0660.

REQUESTING A HANDSCORE

Candidates who fail the examination may request a hand scoring of their data file. Hand scoring is a manual check of the data file by the testing service to determine if there have been any errors in scoring. Although the probability of such an error is extremely remote, this service is available. Requests for hand scoring must be received by PTC no later than 90 days after the date of the examination by completing and returning the Request of Handscore form on www.ptcny.com with payment of \$25. Candidates who fail the examination will not be permitted to see the examination questions. For reasons of test security, no candidate is allowed to review the examination or any of its items.

To ensure correct reporting of results, PTC automatically performs handscores of examinations of candidates who score within 3 points of passing as a quality control measure. Thus, it is extremely doubtful that any examination results will change from “fail” to “pass” through handscoring.

CONFIDENTIALITY

NBPNS will release the individual test scores ONLY to the individual candidate. Any questions concerning test results should be referred to NBPNS or to PTC.

REEXAMINATION

The Certification Examination for Physician Nutrition Specialists may be taken as often as desired upon filing of a new Application and fee. There is no limit to the number of times the examination may be repeated.

ATTAINMENT OF CERTIFICATION & RECERTIFICATION

A registry of Certified Physician Nutrition Specialists is maintained by the NBPNS and is posted on its website. Persons who take and pass the examination acknowledge and agree that their names will be posted on the NBPNS website.

Physician Nutrition Specialist certification is recognized for a period of 10 years at which time the candidate must retake and pass the current Certification Examination for Physician Nutrition Specialists or meet such alternative requirements as are in effect at that time in order to retain certification (i.e. maintenance of certification, MOC).

REVOCATION OF CERTIFICATION

Certification will be revoked for any of the following reasons:

1. Falsification of an Application.
2. Revocation of current physician license.
3. Misrepresentation of certification status.
4. Misuse of the NBPNS credential or trademark by associating it with unscientific and/or commercial messages.

The Appeals Committee of the NBPNS provides the appeal mechanism for challenging revocation of Board Certification. It is the responsibility of the individual to initiate this process.

CONTENT OF THE EXAMINATION

The Certification Examination for Physician Nutrition Specialists is a computerized exam composed of approximately 250 multiple choice, objective questions with a total testing time of four (4) hours.

The content of the examination is described in the Content Outline on the next page.

The questions for the examination are obtained from individuals with expertise in Physician Nutrition and are reviewed for construction, accuracy, and appropriateness by NBPNS and PTC's psychometricians. NBPNS, with the advice and assistance of the Professional Testing Corporation, prepares the examination.

The Certification Examination for Physician Nutrition Specialists will be weighted in approximately the following manner:

I.	General Aspects of Nutrition	35%
II.	Nutritional Status Assessment	10%
III.	Obesity and Related Metabolic Conditions	20%
IV.	Disease-Specific Nutrition	25%
V.	Enteral and Parenteral Nutrition Support	10%

CONTENT OUTLINE

- I. **General Aspects of Nutrition (35%)**
 - A. Nutrition Through the Life Cycle
 - 1. Infancy and Childhood
 - 2. Adolescence
 - 3. Pregnancy and Lactation
 - 4. Aging
 - 5. Gender Differences
 - B. Physiology and Pathophysiology
 - 1. Biochemical Composition of the Human Body
 - 2. Energy Metabolism
 - 3. Starvation
 - 4. The Hypermetabolic/Hypercatabolic State
 - 5. Cytokines and Eicosanoids
 - 6. Gastrointestinal Tract
 - C. Ethical Issues
 - 1. Medical and Legal Aspects
 - 2. Nutrition Therapy in End-of-Life
 - D. Nutrients
 - 1. Protein
 - a. Dietary
 - b. Essential Amino Acids
 - c. Nonessential Amino Acids
 - 2. Carbohydrates
 - a. Complex
 - b. Disaccharides
 - c. Glucose
 - d. Other
 - 3. Fiber
 - a. Properties of Dietary Fiber
 - b. Water Soluble
 - c. Water Insoluble
 - 4. Fats and Oils
 - a. Saturated
 - b. Trans Fats
 - c. Polyunsaturated Fats
 - d. Monounsaturated Fats
 - e. Cholesterol
 - f. Others
 - 5. Fat Soluble Vitamins
 - a. Vitamin A
 - b. Vitamin D
 - c. Vitamin E
 - d. Vitamin K

6. Water Soluble Vitamins
 - a. Thiamin
 - b. Folic Acid
 - c. B12
 - d. Vitamin C
 - e. Others
7. Electrolytes, Minerals, and Water
 - a. Sodium
 - b. Potassium
 - c. Calcium
 - d. Magnesium
 - e. Phosphorous
 - f. Iron
 - g. Water
 - h. Others
8. Trace Elements and Ultra-Trace Elements
 - a. Zinc
 - b. Copper
 - c. Selenium
 - d. Others

II. Nutritional Status Assessment (10%)

- A. History and Physical
 1. Medical History
 2. Diet History and Counseling
 3. Physical Exam and Anthropometry
- B. Laboratory Data
- C. Body Composition
- D. Nutrient Deficiencies and Excesses
- E. Energy and Protein Requirements
 1. Energy Expenditure
 2. Protein-Energy Malnutrition
 3. Altered Requirements in Disease States

III. Obesity and Related Metabolic Conditions (20%)

- A. The Obesity Epidemic
 1. Physical Activity
 2. Food Supply
 3. Psycho-social Environment
 4. Obesogenic Environmental Factors
- B. Regulation of Energy Balance
 1. Appetite Regulation
 2. Adaption to Starvation
 3. Energy Expenditure
 4. Neuro-endocrine Regulation of Energy Balance
- C. Changes in Body Composition in Overnutrition

- D. Eating Disorders
 1. Binge-Eating Disorders
 2. Night Eating Syndrome
 3. Compulsive Overeating
 4. Anorexia Nervosa
 5. Bulimia Nervosa
 6. Other Eating Disorders
- E. Secondary Obesity
 1. Obesity Genetics
 2. Endocrine Factors
 3. Neurological Causes
 4. Pharmacologic Causes
- F. Pediatric Obesity
- G. Co-morbidities of Obesity
- H. Nonsurgical Interventions
 1. Caloric Restriction
 2. Physical Activity, Exercise, Fitness
 3. Cognitive and Behavior Therapy
 4. Popular Weight Control Programs
 5. Multidisciplinary Team Management
 6. Pharmacotherapy of Obesity
 7. Iatrogenic Complications
- I. Bariatric Surgery (Metabolic Monitoring of the Bariatric Surgery Patient)
 1. Selection and Screening
 2. Bariatric Procedures
 3. Preoperative Evaluation and Management
 4. Preoperative Monitoring Management
 5. Long Term Monitoring and Management

IV. Disease-Specific Nutrition (25%)

- A. Gastrointestinal Disorders
 1. Intestinal Failure
 2. Pancreatitis, Acute and Chronic
 3. Inflammatory Bowel Disease
 4. Irritable Bowel Syndrome
 5. Disorders of Gastrointestinal Motility and Flora
 6. Celiac
 7. Short Bowel Syndrome
- B. Hepatobiliary Disorders
 1. Cholestasis
 2. Cholelithiasis
 3. Hepatic Failure
- C. Critical Illness
- D. Infection and Sepsis
- E. Blood Lipids and Lipoprotein Disorders

- F. Endocrine Conditions
 - 1. Type 1 Diabetes
 - 2. Type 2 Diabetes
 - 3. Metabolic Syndrome
 - 4. Secondary Hyperparathyroidism
 - 5. Polycystic Ovaries and other Ob/Gyn Disorders
 - G. Renal Pathophysiology and Disorders
 - H. Cardiovascular Disorders
 - 1. Hypertension
 - 2. Atherosclerosis
 - 3. Cardiac Cachexia
 - I. Pulmonary Disorders and Respiratory Function
 - 1. Sleep Apnea
 - 2. Pulmonary Cachexia
 - J. Bone Pathophysiology and Disorders
 - 1. Metabolic Bone Disease and Osteoporosis
 - 2. Osteoarthritis
 - 3. Dental
 - K. Cancer
 - L. Anemia and Other Hematologic Diseases
 - M. Nervous System Disorders
 - N. Surgery and Trauma
 - O. Genetic and Pediatric Disorders
 - P. Transplantation
 - Q. Adverse Effects of Ethanol
 - R. Psychiatric Disorders
- V. Enteral and Parenteral Nutrition Support (10%)**
- A. Relative Merits of Enteral and Parenteral Nutrition
 - B. Indications and Contraindications
 - C. Management of Enteral and Parenteral Nutrition
 - 1. Routes
 - 2. Nutrient Composition and Glycemic Control
 - 3. Initiation and Refeeding Syndrome
 - 4. Transitional Feedings, Weaning, and Discontinuation
 - 5. Monitoring Nutritional Support
 - D. Home Enteral and Parenteral Nutrition
 - E. Complications of Nutrition Support
 - 1. Mechanical
 - 2. Physiological
 - 3. Metabolic
 - 4. Septic
 - 5. Drug-Nutrient Interactions
 - F. Pediatric Nutrition Support

SAMPLE EXAMINATION QUESTIONS

In the following questions, choose the one best answer.

1. A product lists the following nutritional information:

Serving size 9 oz
Serving per package 1
Calories 240
Protein 19 g
Carbohydrate 19 g
Fat 10 g
Sodium 680 mg

What is the approximate percentage of calories provided by fat in this product?

1. 30%
 2. 34%
 3. 38%
 4. 42%
-

2. Although there is much evidence in favor of diets high in monounsaturated fat, the potential drawback to this, as compared with a diet high in complex carbohydrates, is that monounsaturated fat may result in

1. higher energy intake.
 2. higher cholesterol levels.
 3. higher triglyceride levels.
 4. lower HDL-cholesterol levels.
-

3. In choosing a diet low in trans fatty acids, which of the following foods should be restricted the most?

1. Olive oil
 2. Plain bagels
 3. Nonfat dry milk
 4. Solid vegetable shortening
-

4. Which of the following components of energy expenditure generally accounts for the largest proportion of the 24-hour total?

1. Thermic effect of food
 2. Resting energy expenditure
 3. Activity-related energy expenditure
 4. The energy expenditure of fidgeting
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Questions 5-7 are based on the following information.

A 51-year-old white female with a 20-year history of inflammatory bowel disease had undergone repeated surgery for removal of small and large bowel, including all of the small intestine except for 4½ feet below the stomach and the distal half of the large bowel. She is 5'6" tall. Her weight has gradually fallen from 140 lbs. to 85 lbs. since her last operation 3 years ago. The weight loss occurred despite a well-balanced diet and normal total food intake. With complaints of noting droplets of fat and grease in her stool and having low back pain, she was admitted to the hospital for further evaluation. She has taken no nutrient supplements but has recently taken oral antibiotics for urinary tract infections.

5. A 24-hour urine collection is likely to contain an abnormally large amount of

1. oxalate.
2. calcium.
3. creatinine.
4. magnesium.

6. Which of the following blood tests is most likely to be normal?

1. Thiamin
2. Calcium
3. Vitamin B12
4. Prothrombin time

7. The most reasonable amount of dietary fat to prescribe initially for her would be

1. 15 g/day.
2. 25 g/day.
3. 100 g/day.
4. 120 g/day.

Answers	
Q	A
1	3
2	1
3	4
4	2
5	1
6	1
7	2

REFERENCES

A few general references that may be useful in preparing for the examination are listed below. A more extensive curriculum guide for PNS training and directory of nutrition fellowships are available at <http://www.nbpns.org/>. Inclusion of certain journals and textbooks on these lists does not constitute an endorsement by the NBPNS of their entire content or imply a guarantee that candidates will be successful in passing the certification examination.

Bowman BA, Russell RM. Present knowledge in nutrition. 9th ed. Washington, DC: ILSI Press, 2006. A general reference resource covering most aspects of human nutrition, with chapters mainly emphasizing individual nutrients.

Heimbürger DC, Ard JD (eds.). Handbook of Clinical Nutrition. 4th ed. Philadelphia: Elsevier, 2006. A 600-page spiral-bound pocket-sized handbook covering broad aspects of clinical nutrition. Useful as a basic text and as a bedside reference manual.

Mueller, C. et al. (Eds.) The A.S.P.E.N. Nutrition Support Core Curriculum, 2nd Edition. Silver Spring, MD: A.S.P.E.N.. 2012

Shils ME, Shike M, Ross AC, Caballero B., Cousins RJ, eds. Modern Nutrition in Health and Disease. 10th ed. Baltimore: Lippincott Williams & Wilkins, 2005. A comprehensive reference source for all aspects of human nutrition, especially as related to human health and disease.

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