MULTIPLE SCLEROSIS SPECIALIST CERTIFICATION EXAMINATION

Handbook for Candidates

WINTER 2017 TESTING PERIOD
Application Deadline: January 2, 2017
Testing Begins: Saturday, February 4, 2017
Testing Ends: Saturday, February 18, 2017

SUMMER 2017 TESTING PERIOD
Application Deadline: July 1, 2017
Testing Begins: Saturday, August 5, 2017
Testing Ends: Saturday, August 19, 2017

PROFESSIONAL TESTING CORPORATION® 1350 BROADWAY • 17th FLOOR • NEW YORK, NY 10018

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This handbook contains necessary information about the Multiple Sclerosis Specialist (MSCS) Examination. Please retain it for future reference. Candidates are responsible for reading these instructions carefully. This handbook is subject to change.

PURPOSES OF MULTIPLE SCLEROSIS CERTIFICATION

Multiple Sclerosis is a complex and lifelong disease that affects many aspects of an individual's life. Management across the lifetime of multiple sclerosis will require the expertise of multiple disciplines working together to meet the dynamic needs of the person and the family. Rapid advances in the treatment of multiple sclerosis require that health professionals have the basic knowledge and skills necessary to provide optimal care. The Consortium of Multiple Sclerosis Centers supports a voluntary certification process that reflects the knowledge of multiple disciplines in the specialized area of multiple sclerosis care. The Multiple Sclerosis Specialist Certification provides formal recognition of a specialized body of knowledge felt to be necessary to provide optimal care to those individuals and families living with multiple sclerosis.

Certification is intended to promote quality and consistent care to those living with multiple sclerosis by:

1. Formally recognizing knowledge across the multiple disciplines that are necessary for multiple sclerosis care delivery.

2. Establishing a level of knowledge required for Multiple Sclerosis Specialist Certification.

3. Providing encouragement for continued personal and professional growth in the care of individuals with multiple sclerosis.

4. Providing a standard of knowledge requisite for certification, thereby assisting the employer, public, and members of the health professions in the assessment of healthcare professionals involved in multiple sclerosis care.

DEFINITION OF MULTIPLE SCLEROSIS CARE

Multiple sclerosis care may cover clinical practice concepts underlying clinical practice, assessment and interventions in clinical practice, advocacy, education, and research. This may include but is not limited to health professionals who practice in the following settings:

- Private Medical Practices
- Rehabilitation Centers (acute or sub-acute)
- Hospitals
- Multiple Sclerosis Centers or Clinics
- Home or Community Care Programs
- Nursing Homes
- Assisted Living Facilities
- Pharmaceutical or other Commercial Organization
- Academic Programs
- Research Facilities

ELIGIBILITY REQUIREMENTS

It is suggested that candidates have a minimum of one year of experience in providing services for or interacting with individuals with multiple sclerosis. Candidates must meet the following requirements:

1. Be a currently licensed (or appropriate equivalent) healthcare professional. A copy of your license or certification must be submitted with your application.

2. Complete and file an Application for the Multiple Sclerosis Specialist Certification Examination.

3. Pay the required fee.

ADMINISTRATION

The Certification Program is sponsored by the Consortium of Multiple Sclerosis Centers (CMSC). The Certification Examination for Multiple Sclerosis Specialist is administered on behalf of the CMSC by the Professional Testing Corporation (PTC), 1350 Broadway - 17th Floor, New York, New York 10018, (212) 356-0660, www.ptcny.com. Questions concerning the examination should be referred to PTC.

ATTAINMENT OF CERTIFICATION AND RECERTIFICATION

Eligible candidates who pass the Certification Examination for Multiple Sclerosis Specialist are eligible to use the registered designation MSCS after their names and will receive certificates from the CMSC. A registry of Multiple Sclerosis Certified Specialists will be maintained by the CMSC and may be reported in its publications.

Certification as a multiple sclerosis specialist is recognized for a period of five years at which time the candidate must retake and pass the current Certification Examination for Multiple Sclerosis Specialist or meet such alternative requirements as are in effect at that time in order to retain certification.

REVOCATION OF CERTIFICATION

Certification will be revoked for any of the following reasons:

1. Falsification of an Application.

2. Revocation of current healthcare credential or license.

3. Misrepresentation of certification status.

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

APPLICATION PROCEDURE

1. Read and follow the directions on the application and in this handbook. All applications must be completed online. The application can be found on Professional Testing Corporation's website at https://secure.ptcny.com/apply/.

2. The online application and appropriate fees for the examination must be received on or before the appropriate deadline listed in this handbook.

COMPLETION OF APPLICATION

Candidates must complete the examination application in full, using the name exactly as it appears on the Candidate's current government issued photo ID, such as a driver's license or passport. The completed application, with all documentation (if required), must be submitted online with the examination fee. If payment is being made by check or money order, complete the online application and mail payment to:

MSCS EXAMINATION
Professional Testing Corporation
1350 Broadway, 17th Floor
New York, NY 10018

NOTE: Be certain payment clearly indicates candidate name and appropriate examination and testing period.

FEES

Please note: Fees are NOT refundable.

Application Fee for the Multiple Sclerosis Specialist Certification Examination $275

MAKE CHECK OR MONEY ORDER PAYABLE TO: **PROFESSIONAL TESTING CORPORATION**
Visa, MasterCard, and American Express are also accepted. Please complete and sign the Credit Card Payment section on the Application.

DO NOT SEND CASH.

REFUNDS

There will be no refund of fees. Fees will not be transferred from one testing period to another.

EXAMINATION ADMINISTRATION

The Multiple Sclerosis Specialist Certification Examination is administered during an established two-week testing period on a daily basis, Monday through Saturday, excluding holidays, at computer-based testing facilities managed by PSI. PSI has several hundred testing sites in the United States, as well as Canada. Scheduling is done on a first-come, first-serve basis. To find a testing center near you, visit www.ptcny.com/cbt/sites.htm or call PSI at (800) 733-9267. Please note: Hours and days of availability vary at different centers. **You will not be able to schedule your examination appointment until you have received a Scheduling Authorization from PTC.**

TESTING SOFTWARE DEMO

A testing tutorial document can be viewed, free of charge, online. Please visit www.ptcny.com/cbt/demo.htm. This document can give you an idea about the features of online testing.

SCHEDULING YOUR EXAMINATION APPOINTMENT

Once your Application has been received and processed and your eligibility verified you will be sent a Scheduling Authorization within six weeks prior to the testing period via email. If you do not receive a Scheduling Authorization at least three weeks before the beginning of the testing period, contact the Professional Testing Corporation by telephone at (212) 356-0660. **Your current, government-issued photo identification, such as a driver's license or passport, must be presented in order to gain admission to the testing center.** PTC suggests you bring a paper copy of your Scheduling Authorization and your PSI appointment confirmation to the testing center as well.

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

After you make your test appointment, PSI 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 PSI at (800) 733-9267 if you do not receive this email confirmation or if there is a mistake with your appointment.

- It is the candidates' responsibility to schedule the examination appointment.
- It is highly recommended that candidates become familiar with the testing site.
- Arrival at the testing site at the appointed time is the responsibility of the candidate. Please plan for weather, traffic, parking, and any security requirements that are specific to the testing location. Late arrival may prevent you from testing.

SPECIAL NEEDS

The CMSC and PTC supports the intent of and complies with the Americans with Disabilities Act (ADA). PTC will take steps reasonably necessary to make certification accessible to persons with disabilities covered by the ADA. Special testing arrangements may be made upon receipt of the Application, examination fee, and a completed and signed Request for Special Needs Accommodations Form, available from www.ptcny.com or by calling PTC at (212) 356-0660. This form must be uploaded with the online application at least EIGHT weeks before the testing period begins. Please use this form if you need to bring a service dog, medicine, food or beverages needed for a medical condition with you to the testing center.

Information supplied on the Request for Special Accommodations form will only be used to determine the need for special accommodations and will be kept confidential.

CHANGING YOUR EXAMINATION APPOINTMENT

If you need to cancel your examination appointment or reschedule to a different date within the two-week testing period, you must contact PSI at (800) 733-9267 no later than noon, Eastern Standard Time, of the second business day PRIOR to your scheduled appointment. PSI does not have the authority to authorize refunds or transfers to another testing period.

If you fail to arrive for your appointment or cancel without the required notice, you will forfeit your testing fee.

RULES FOR THE EXAMINATION

1. You must present your current, government issued photo ID (such as a driver's license or passport) at the time of your scheduled appointment. Candidates without their without valid ID will NOT be permitted to test.
2. All Electronic devices that can be used to record, transmit, receive, or play back audio, photographic, text, or video content, including but not limited to, cell phones, laptop computers, tablets, Bluetooth devices; wearable technology such as smart watches: MP3 players such as iPods, pagers, cameras and voice recorders are not permitted to be used and cannot be taken in the examination room. The test center may have lockers or you may be asked to lock your personal items in your car. For this reason, we suggest that you do not bring personal items with you, other than what is specifically needed for your examination.
3. No papers, books, or reference materials may be taken into or removed from the testing room.
4. 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.
5. Candidates are prohibited from leaving the testing room while their examination is in session, with the sole exception of going to the restroom.

Violation of any of the rules listed above may lead to forfeiture of fees, dismissal from testing room, and cancellation of your test scores.

REPORT OF RESULTS

Candidates will be notified in writing by PTC within four weeks of 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 CMSC.

Candidates may request a handscoring of their examination once results are received. A handscore may be performed to verify the accuracy of the computerized grading of the examination as well as confirming that any questions marked as incorrect were not the correct answer. A fee is required by PTC to handscore an exam, this fee is not refundable regardless of the results of the handscoring. All requests for a handscore of the examination should be submitted directly to PTC with the required fee for handscore. The request for handscore can be found on the PTC website www.ptcny.com in the "For Candidates" section.

REEXAMINATION

The Multiple Sclerosis Specialist Certification Examination 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.

CONFIDENTIALITY

1. The CMSC will release the individual test scores ONLY to the individual candidate.
2. Any questions concerning test results should be referred to CMSC or the Professional Testing Corporation.

SCORING PROCEDURE

Prior to administration of the examination, representatives from the CMSC Certification Committee and the Professional Testing Corporation meet to review all test items for accuracy. At this meeting, the passing score for the examination is set using recognized psychometric methods. The passing score represents the number of test items determined necessary for the candidate to answer correctly to be considered as having minimal basic knowledge of multiple sclerosis.

In order to protect the security and integrity of the certification examination, neither CMSC nor the Professional Testing Corporation will release examination items, candidate responses, or keys to any candidate or agency.

CONTENT OF EXAMINATION

1. The Multiple Sclerosis Specialist Certification Examination is a computer-based examination composed of a maximum of 150 multiple-choice, objective questions with a total testing time of two (2) hours.
2. The content for the examination is described in the Content Outline starting on page 9.
3. The questions for the examination are obtained from individuals with expertise in multiple sclerosis and are reviewed for construction, accuracy, and appropriateness by the CMSC.
4. The CMSC, with the advice and assistance of the Professional Testing Corporation, prepares the examination.
5. The Multiple Sclerosis Specialist Certification Examination will be weighted in approximately the following manner:

   I. FUNDAMENTALS OF MULTIPLE SCLEROSIS 25%
   II. MULTIDISCIPLINARY MANAGEMENT OF MULTIPLE SCLEROSIS 60%
   III. PATIENT EMPOWERMENT..... 15%

CONTENT OUTLINE

I. FUNDAMENTALS OF MULTIPLE SCLEROSIS

A. Disease Process
   1. Pathophysiology
      a. Immune Dysfunction
      b. Destruction of Myelin
      c. Axonal Damage or Loss
   2. Theories of Etiology
      a. Genetics
      b. Environmental
      c. Other
   3. Epidemiology
      a. Geographic Distribution
      b. Gender/Age of Onset/Ethnicity

B. Diagnosis of Multiple Sclerosis
   1. Diagnostic Criteria
   2. Presenting Clinical Symptoms
   3. Diagnostic Testing
      a. Clinical Examination
      b. Imaging
      c. Evoked Potentials
      d. Lumbar Puncture
      e. Laboratory Testing
   4. World Health Organization Classification

C. Clinical Course and Natural History
   1. Relapsing Remitting
   2. Secondary Progressive
   3. Primary Progressive
   4. Radiologically Isolated Syndrome
   5. Clinically Isolated Syndrome (CIS)
   6. Advanced Disease

II. MULTIDISCIPLINARY MANAGEMENT OF MULTIPLE SCLEROSIS

A. Relapse
   1. Definition and Recognition
   2. Interventions
      a. Pharmacologic Management
      b. Rehabilitation Services
      c. Psychosocial Support

B. Disease Modifying Therapies
   1. Purpose
   2. Disease Modifying Agents
      a. Interferons
         1) Administration
         2) Adverse Effects
      b. Glatiramer Acetate
         1) Administration
         2) Adverse Effects

3. Immunosupressants
    a. Mitoxantrone
        1) Administration
        2) Adverse Effects
4. Infusible Medications
    a. Natalizumab
        1) Administration
        2) Adverse Effects
    b. Alemtuzumab
        1) Administration
        2) Adverse Effects
5. Oral Medications
    a. Fingolimod
        1) Administration
        2) Adverse Events
    b. Teriflunomide
        1) Administration
        2) Adverse Events
    c. Dimethyl Fumarate
        1) Administration
        2) Adverse Events
6. Other

C. Symptoms (Description/Rehabilitation Strategies/Pharmacologic Interventions)
1. Fatigue
2. Pain
3. Spasticity
4. Tremor and Incoordination
5. Weakness
6. Altered Mobility and Balance Problems
7. Visual Impairment
8. Cognitive Dysfunction
9. Elimination Dysfunction
10. Altered Speech and Swallowing
11. Sexual Dysfunction
12. Altered Sensation
13. Emotional Problems
    a. Depression
    b. Anxiety
14. Other

D. Health Maintenance
1. Wellness Strategies
    a. Nutrition
    b. Exercise and Productivity
    c. Immunizations
    d. Recreation
    e. Health Screening
    f. Stress Management
    g. Spirituality
    h. Activities of Daily Living

2. Prevention of Complications
    a. Osteoporosis
    b. Contractures
    c. Skin Breakdown
    d. Aspiration
    e. Sepsis
    f. Falls
    g. Trauma
3. Rehabilitation
    a. Physical Therapy
    b. Occupational Therapy
    c. Cognitive Rehabilitation
    d. Speech/Language Therapy
    e. Vocational Therapy
    f. Assistive Technology

E. Psychosocial Issues
1. Response to Chronic Illness
3. Support Network
4. Cultural Factors
5. Family and Relationships
6. Vocational Options
7. Financial Concerns
8. Abuse and Neglect
9. End of Life Issues

F. Complementary and Alternative Therapies
G. Adherence to Treatment
H. Models of Care

III. PATIENT EMPOWERMENT

A. Advocacy
1. Patient Rights
2. Negotiating the Healthcare System

B. Patient and Family Education
1. Disease Specific Issues
2. Goal Setting/Life Planning
3. Community Resources
4. Legal Issues
5. Advance Directives
6. Clinical Research
    a. Protection of Human Subjects
    b. Informed Consent
    c. Phases
    d. Types of Research
    e. Resources and Information

SAMPLE EXAMINATION QUESTIONS

In the following questions, choose the one best answer.

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1. If an individual reports falling by catching his toe when walking with a walker, the most appropriate recommendation would be to

    1. suggest changing footwear.
    2. refer to physical therapist.
    3. use a single point cane.
    4. start using a wheelchair.

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2. The fatigue often experienced by individuals with multiple sclerosis is most likely to be worsened by

    1. cold.
    2. heat.
    3. high altitudes.
    4. animal dander.

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3. Which of the following is an example of an advance directive?

    1. Living will
    2. Treatment plan
    3. Informed consent
    4. Patient Bill of Rights

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4. Relapsing remitting multiple sclerosis can best be defined as periods of stability that are

    1. followed by slow worsening over time.
    2. intermittent and come and go throughout the day.
    3. of less than 12 hours duration and then resolve.
    4. suddenly changed with altered function due directly to the disease.

CORRECT ANSWERS TO SAMPLE QUESTIONS

1. 2, 2. 2, 3. 1, 4. 4

REFERENCES

The Consortium of Multiple Sclerosis Centers (CMSC) has prepared a suggested reference list to assist in preparing for the Multiple Sclerosis Specialist Certification Examination. These references contain journals and textbooks which include information of significance to multiple sclerosis care. Inclusion of certain journals and textbooks on this list does not constitute an endorsement by the CMSC of specific professional literature which, if used, would guarantee candidates successful passing of the certification examination.

Journals:

- MS Journal http://msj.sagepub.com
- MS and Related Disorders http://www.msard-journal.com
- Neurology http://www.neurology.org
- International Journal of MS Care http://www.ijmsc.org

Websites:

- The International Organization of MS Therapists (IOMSRT) http://iomsrt.mscare.org
- The International Organization of MS Nurses (IOMSN) http://www.iomsn.org
- Multiple Sclerosis Association of America (MSAA) http://www.mymsaa.org
- National MS Society (NMSS) http://www.nationalmssociety.org
- The Consortium of MS Centers http://www.mscare.org

Books:

Nursing practice in MS, Third Edition (A Core Curriculum). Editors: June Halper MSN, APN-C, MSCN, FAAN, and Colleen Harris, MN, NP, MSCN

Primer on Multiple Sclerosis. Editor: Barbara S. Giesser. Oxford. 2010

Multiple Sclerosis. Rodriguez M, Kantarci OH, Pirko I. Oxford. 2012

Beer S, Khan F, & Kesselring J. Rehabilitation interventions in multiple sclerosis: an overview. J. Neurol. (2012) 259:199-2008.