



**HANDBOOK
for
DIPLOMATE CANDIDATES**

www.CBCN.us

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DEFINITION OF A DCBCN

A Diplomate of the Chiropractic Board of Clinical Nutrition (DCBCN) is a licensed chiropractic physician who has successfully completed a 300-hour post-doctoral program in clinical nutrition or equivalent. Clinical Nutrition is defined as the prevention and treatment of disease using nutritional therapeutics. The program must be approved by the CBCN and cover the items that will be tested in the certifying examination.

The Diplomate devotes a significant portion of their career work to nutrition in a patient, research and/or teaching setting and can coordinate nutrition services with other health care professionals. The Diplomate has satisfied the requirements of, and is certified by, the Chiropractic Board of Clinical Nutrition.

WHAT IS CERTIFICATION

Board certification in clinical nutrition provides formal recognition of nutrition knowledge by Chiropractic Diplomates. It is a voluntary certification, by examination, focusing on individual competence in this specialized practice area. States vary as to whether and how a Diplomate may hold themselves out as a specialist so the CBCN recommends each Diplomate check with their licensing board on this issue.

WHAT CERTIFICATION MEANS

Certification is a means to protect the public and promote delivery of safe, effective clinical nutrition services from qualified diplomates by:

- A. Formally recognizing those doctors who have met the eligibility requirements and successfully passed the examination.
- B. Establishing and measuring the level of competency required for Diplomate certification.
- C. Providing a standard of knowledge for Diplomate certification thus helping the public, 3rd party payors, organizations and other health care professionals in assessing the DCBCN.
- D. Encouraging continued professional growth in the practice of clinical nutrition through annual recertification.

ROLE DELINEATION

Role Description for a Diplomate of the Chiropractic Board of Clinical Nutrition (DCBCN)

The Doctor of Chiropractic who is a Diplomate of the Chiropractic Board of Clinical Nutrition (DCBCN) possesses the knowledge and skills necessary to practice clinical nutrition.

The DCBCN is a portal of entry, primary health care, practitioner who has received additional education and training in nutritional assessment, diagnosis, treatment, and case management for the promotion of individual and public health and well-being.

The responsibilities of a DCBCN may include, but are not limited to:

- Obtaining a relevant case history and review of systems.
- Performing appropriate physical, neuromusculoskeletal, nutritional, and chiropractic evaluations.
- Ordering, performing, and/or reviewing diagnostic imaging and interpreting results.
- Ordering, performing, and/or reviewing clinical laboratory tests and special studies and interpreting results.
- Correlating clinical findings to arrive at a clinical impression and/or diagnosis.
- Applying therapeutic nutritional recommendations including but not limited to: diets and dietary interventions, micro and/or macro levels of vitamins, minerals, trace elements, enzymes, amino acids, fatty acids, herbs, glandulars, natural hormones, homeopathic remedies, phytochemicals, nutraceuticals, and medical foods.
- Maintaining appropriate documentation for the practice of clinical nutrition.
- Promoting healthy lifestyles, public health and wellness, and the prevention of disease.
- Managing patient care safely and effectively.

ELIGIBILITY REQUIREMENTS

1. The applicant must hold the degree of Doctor of Chiropractic from a CCE accredited college (USA) or its equivalent.
2. The applicant must show evidence of having successfully completed a post-doctoral program in nutrition of at least three hundred (300) credit hours, from a chiropractic college or university, institution, foundation or agency whose program is approved by an accrediting agency recognized by the U.S. Department of Education, or an agency having a reciprocal agreement with the recognized agency. The topics of study required are delineated in the by-laws of the CBCN. The entity from which the applicant has completed his/her course of study must certify to the Board that the applicant has satisfactorily completed three hundred (300) credit hours of post-doctoral instruction in nutrition.
3. The applicant must possess and show a license or registration to practice chiropractic for a minimum of 2 years and be in good standing with the respective licensing/registration agency.
4. The candidate must apply, on a form specified by the Board, on or before the Board designated deadline.
5. The candidate must submit:
 - a. Official transcript directly from the institution where the post-doctoral nutrition education was completed. If education is other than a 300-hour nutrition diplomate or master's program, a detailed course syllabus should accompany the transcript.
 - b. Two (2) written case histories from actual patient files in the format provided by the CBCN along with the required case history attestation.
6. The candidate must submit non-refundable fees set by the Board.

ADMINISTRATION OF EXAMINATION

This certification program is sponsored by the Chiropractic Board of Clinical Nutrition (CBCN). The 200-question written examination for the CBCN is developed jointly with the National Board of Chiropractic Examiners (NBCE) and administered electronically by various testing centers across the country. Questions concerning the content of the examination should be directed to CBCN at: CBCN.us@gmail.com.

NOTE: In the event of an emergency or administrative irregularity that may affect score reporting, the CBCN reserves the right to adjust examination administration procedures, to withhold the reporting of a score, and to order the re-administration of an examination. An emergency or administrative irregularity may include, but is not limited to, any natural disaster (flood, tornado, hurricane, earthquake, and fire), power failure, facility equipment breakdown or other emergency that in the opinion of the CBCN and/or testing agency may affect the validity of the examination score. The final decision on examination cancellations is by the CBCN.

TESTING SITES

The CBCN examination, administered by NBCE, is available at online testing sites around the world. Most doctors will have a test site less than 100 miles from their home city.

The NBCE will send doctors approved to take the examination more detailed location and contact information approximately 30 days in advance.

EXAMINATION DISQUALIFICATION

An examinee can be disqualified from taking or continuing to take an examination or from receiving scores from an examination taken if the CBCN, the NBCE or testing center personnel concludes that:

1. The examinee has provided false or misleading information or failed to provide material information on his or her application.
2. The examinee has taken an examination for another person or another person takes an examination in the examinee's place.
3. The examinee has cheated, based either upon observation or statistical analyses of answers.
4. The examinee has engaged in any act or conduct that has jeopardized or could jeopardize the security or integrity of CBCN examinations, including (but not limited to) the copying, removal or reproduction of any portion of the examination, including the memorization of questions and answers for possible disclosure to any other person at any time;
5. The examinee has failed to adhere to instructions given at the examination administration.
6. The examinee has engaged in any form of communication during an examination in which examination information has been given to or obtained from another person or signaling device, including papers, phones, texts or other reference materials.

7. The examinee has engaged in any unethical action which gave him/her or any other examinee an advantage he or she would otherwise not have had.

NOTE: The CBCN may annotate transcripts of examinees who engage in any of the aforementioned behaviors.

APPLICATION PROCEDURES

All applications are now being handled through www.Certemy.com. The link is available is available <https://www.cbcn.us/applications-new>. Applicants are cautioned to read and follow instructions when completing the application forms. Non-refundable fees must be paid before application will be submitted.

Once approved by the CBCN, the Candidate will also have to register to take the exam with the NBCE online at <https://mynbce.org/nutrition/>.

EXAMINATION -- ADMINISTRATION FEES

CBCN exam fee must be paid when completing the application on www.Certemy.com. NBCE charges a separate fee for administering the exam that is paid to them directly.

The CBCN Board has the right to change any of the fees and will notify candidates within 45 days of any changes.

EXAMINATION FEE -- \$475.00

Possible additional fees

Returned Application Fee -- **\$50.00** (returned to the applicant for any reason)

Returned Bank Funds -- **\$35.00**

Regrading failed case histories -- **\$100 each**

CASE HISTORY GUIDELINES

One of your requirements for CBCN certification is preparing two (2) PUBLISHABLE case histories from actual patients you have treated. You may use a family member, but you may not use yourself as a patient. Patients should have follow-up visits and tests to demonstrate progress.

Each case history must consist of two parts:

- 1) A complete case history covering everything as itemized on the Grading sheet, including rationale and documentation to demonstrate that you are an expert in nutrition.
- 2) A **publishable** case history in a narrative format that includes a title, keywords, abstract, body, and references. The following link will give you an outline order of what is expected for a publishable case history: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2597880/>

There is a great deal of confusion about what this means. We will have an example of a publishable case history on our website. This should be a document that other doctors who are not as well trained in nutrition can read and understand and learn from.

You have learned a great deal in your 300-hour program, including some terrific tools to help treat your patients. However, the purpose of preparing these case histories is to demonstrate YOUR knowledge and thought process from beginning to end of the case. Using some of these tools in these specific cases will help demonstrate that you are an expert in the field of nutrition.

The case history must include a complete description of the patient's chief complaint gleaned from your consultation, not simply based on what the patient states on your forms. Other complaints should be documented similarly.

Our guidelines for grading (see guidelines) provide a specific list of items that should be included in your case history, but it is not intended to be a fill-in the blank form.

Your report should be separated into clearly demarcated sections describing the history, exam findings, significant test results and how you arrived at your conclusion (diagnosis), what you recommended (tests, dietary changes and supplements), why and what the results were.

Your case history should be succinctly and intelligently written. 25% of your case history grade will be based on how publishable your case history is.

In addition, your final report should include an addendum complete with documentation which should include your consultation notes, examination results, and diagnostic test results. But please don't include pages and pages of blood tests that we must sift through. If you have serial blood tests, we recommend putting them in a spreadsheet so we can see the progression of the case easily.

Finally, once complete, scan your case history and all documentation (you can take it Kinko's or Staples to scan it) and upload it to your Certemy.com account or email to cbcn.us@gmail.com directly.

CBCN Examiners will also ask candidates to orally defend one of their case histories within one month of being graded. This may be done live at our annual meeting, or video conference call. At least two examiners will question the candidate.

Blind Case History: Candidates will be provided an additional case history and will be questioned on this “patient.”. Candidates will be expected to provide feedback on additional testing, interpretation of results, diagnosis, dietary suggestions and supplement recommendations.

CASE HISTORY ATTESTATION

This is to certify that the two (2) Case Histories I submitted to the CBCN as part of the certification examination are original, actual patient case histories from my own practice. All the data collected and treatment prescribed was done by me personally or under my direction. Each final Case History should be in a form suitable for publication with appropriate documentation provided.

Each case history is typed, double spaced with 1-inch margins. I will scan the completed case histories and all documentation (or bring to local printer to scan) and email scanned document to the CBCN.

I understand a minimum passing grade is 75. The grade is an average of the grades from the CBCN Diplomates who review the case histories. We may provide suggestions and/ or recommendations to be used prior to being submitted for publication.

I understand that the case histories are the property of the CBCN and may be submitted for publication and will not be returned.

I agree to abide by the decision of the CBCN.

Printed Name _____

Signature _____

Date _____

WITHDRAWAL AND REFUND POLICY

The CBCN will accept a written request to withdraw from the examination and issue a partial refund if the CBCN receives the cancellation request at least 45 days prior to the examination period. Refunds will be issued approximately three weeks after receipt of written notice to withdraw. There is NO refund for administrative fees.

Written requests to withdraw must be sent certified mail to:

CBCN
c/o Dr. Bill Rice
4360 Northlake Blvd. #209
Palm Beach Gardens, FL 33410

The CBCN will issue **NO refunds** of fees to applicants who:

1. Apply, but fail to take the examination
2. Apply, but take only a portion of the examination
3. Withdraw from or become ineligible to take the examination after the cancellation deadline
4. Who fail to comply with the testing center's policy and are therefore unable to take or complete the examination

Fees will **NOT** carry over nor transfer from one examination administration period to another. Applicants must submit a completely new application with all the correct fees when applying for examination on a later date.

SUBJECTS OF EXAMINATION

Examination for qualifying a candidate to be certified as a diplomate may cover any of the following subjects as they relate to the understanding and use of diet, vitamins, minerals, trace elements, herbs, enzymes, homeopathic medicines or other substances associated with the practice of clinical nutrition to upgrade the diet or the function of the body in relation to any of the following:

1. The Biochemistry and Physiology of Nutrition.
2. The Nutrients and Their Characteristics, Functions and Metabolism.
3. The Consultation and Examination in Clinical Nutrition.
4. Laboratory Testing
5. Diets in Health and Disease
6. Dietary and Nutritional Aspects in the General Management of Disease, Syndromes and Symptoms:
 - A. Oral Cavity and Gastrointestinal Tract
 - B. Endocrine System
 - C. Cardiovascular System
 - D. Pulmonary System
 - E. Urogenital System
 - F. Neuromusculoskeletal System
 - G. Fever, Infections and Inflammation
 - H. Blood Disorders
 - I. Hyperimmunity and Hypoimmunity
 - J. Trauma and Injury
 - K. Bariatrics including Weight Management and Eating Disorders
7. Nutrition for Infancy and Adolescence
8. Nutrition for the Female including Pregnancy and Lactation
9. Nutrition for the Male
10. Nutrition for Geriatrics, Aging and Longevity
11. Nutrition for Physiological Stress
12. Dietary and Nutritional Aspects in Management of Neurological and Psychiatric Disorders.
13. Nutrient-Nutrient and Drug-Nutrient Interactions and Reactions.
14. Cultural, Religious and Ethnic Issues
15. Public Health Issues
16. Radiographic and Advanced Imaging Diagnosis of Common Metabolic Disorders.
17. Use of Herbs and Botanicals – Herb-Nutrient-Drug Interactions & Reactions
18. Use of Homeopathy.
19. How to Perform Research and Write a Publishable Article
20. How to Write a Publishable Case History

REPORT OF RESULTS

Candidates will be notified in writing within three (3) months of the close of the testing period of their having passed or failed the examination. Additionally, failing candidates will be given a score analysis.

Successful candidates will receive a numbered certificate, suitable for framing, from the Chiropractic Board of Clinical Nutrition. The certificate is the property of the CBCN and is to be returned to the CBCN should certification be revoked, for reason, in the future.

RE-EXAMINATION

Failed written or case history portions of the examination must be rewritten within three (3) years or the candidate must rewrite the entire examination. The fees for rewriting failed parts of the examination will be set annually by the Board.

Failed case histories must be resubmitted within 6 months.

CONFIDENTIALITY

The CBCN will follow procedures to ensure that each applicant's examination results are held confidential. However, the Board will update the Diplomate listing within three months after each examination so that the consumer may make informed choices about providers according to certification status as follows:

1. Diplomate
2. Date Certified
3. Date Recertified
4. Active or Inactive Status

DISCRIMINATION NOTICE

The CBCN does not discriminate for the purposes of application, examination, continuing education, recertification or any other activity of the Board on the basis of age, sex, religion, marital status, national origin, race, language, or disability. All candidates and members are considered on the basis of their skill and knowledge as practitioners based solely on their ability to treat the consumer safely and effectively. The CBCN complies with all applicable federal and state laws including the Americans with Disabilities Act (ADA) with respect to certification and recertification responsibilities. If you have any special accommodation needs, please indicate specifically what those needs are. If these needs are highly specialized, you may be required to pay the cost for obtaining personnel or equipment to meet those needs. (Examples: interpreters or adaptive electronic equipment).

OFFICIAL CLASSIFICATION

A Doctor of Chiropractic who has satisfied the educational criteria, passed all parts of the board examination and paid all fees will be certified as a Diplomate of the Chiropractic Board of Clinical Nutrition by the CBCN and may, subject to state law, be referred to as a Board Certified Clinical Nutritionist and may use the trademarked Board acronym DCBCN providing any one or all are allowed under the law or rules of the state in which the Diplomate practices. The CBCN advises all Diplomates to check with the appropriate state agency as to what is allowed and how it can be used in advertising or any other manner.

A Diplomate of the Chiropractic Board of Clinical Nutrition must be recertified on a yearly basis to maintain the certification and use of the classification.

RECERTIFICATION

Yearly recertification is required of all Diplomates to enhance continued competence by:

1. Completing a minimum of 12 classroom credit hours of continuing education in nutrition in a program of study approved by the Board or by fulfilling one of the several other methods listed in the Bylaws, Article X.
2. Completing the recertification form.
3. Certifying to the Board they have reviewed a minimum of 12 articles in the field of nutrition, published in indexed peer reviewed journals. The diplomate is responsible for keeping a list with the names of the articles, author(s) and journal citations for audit by the Board.
4. Payment of the recertification fee.

Failure to recertify will result in suspension from the Diplomate roster and additional requirements will have to be fulfilled within a specified time to be reinstated. Failure to rectify the suspension will result in loss of certification and the doctor will be required to demonstrate continued competency by taking and passing the full Board Certification examination of the CBCN to again hold Diplomate status.

CONTACT INFORMATION CHANGE

Candidates and Diplomates are responsible to notify the CBCN promptly in writing when there is a change in contact information to avoid delays in receiving information about the examination or maintaining Diplomate status. This includes, address, phone numbers and e-mail addresses. Failure to do so may cause revocation of your Diplomate status requiring reexamination. In case of a name change, individuals must send to the CBCN a copy of the certificate of marriage or a court order of name change before their records will be entered under a new name. Applicants should include their original name on the correspondence if their name change is not yet official with the CBCN.

IMPORTANT NOTICE TO EXAMINEES

In the event of an emergency or administrative irregularity that may affect score reporting, the CBCN reserves the right to adjust in examination administration procedures, to withhold the reporting of a score, and to order the re-administration of an examination. An emergency or administrative irregularity may include, but is not limited to, any natural disaster (flood, tornado, hurricane, earthquake, fire), power failure, facility equipment breakdown or other emergency that in the opinion of the CBCN may affect the validity or reliability of the examination score. The CBCN will make the final decision on all examination cancellations.

ADMINISTRATION OF THE EXAMINATIONS

Our exam will be administered at local testing sites by NBCE.

Examinees will be required to present two forms of identification (including one government issued photo ID) at the testing center at the time of the appointment. The primary identification must include a recent photo of the applicant. Acceptable forms of the primary identification include a valid driver's license with photo, a valid state/province ID card with photo, a valid passport or military identification card. Acceptable forms of secondary identification include U.S. social security cards, a valid credit card or bank ATM card. Both forms of identification must bear the applicant's signature. Failure to bring proper identification will result in non-admittance to the testing center. If an applicant's address changes after submitting the application, the CBCN must be notified in writing as soon as possible.

Examinees should arrive at the testing center 30 minutes before the start of their scheduled test appointment to allow time to check in and receive instructions. Any applicant who arrives 30 or more minutes late for a scheduled testing appointment is considered a no-show and will forfeit all test fees. No testing aids will be permitted in the testing center. Examinees must store all personal items in a locker (including watches, wallets, purses, cell phones, notebooks, backpacks, papers, pens, coats, etc.) Examinees will be monitored at all times by audio and video recorders. Smoking will not be permitted in the testing facilities at any time. The testing computer screen will display the time remaining in each test session. It is the examinee's responsibility to monitor the time available to complete the examination.

IMPORTANT NOTE

An examinee can be disqualified from taking or continuing to take an examination or from receiving scores from an examination taken if any CBCN or testing center official concludes that:

1. The examinee has provided false or misleading information or failed to provide material information on his or her application;
2. The examinee has taken an examination for another person or another person takes an examination in the examinee's place;
3. The examinee has cheated, based either upon observation or statistical analyses of answers;
4. The examinee has engaged in any act or conduct that has jeopardized or could jeopardize the security or integrity of CBCN examinations, including (but not limited to) the copying, removal or reproduction of any portion of the examination, including the memorization of questions and answers for possible disclosure to any other person at any time;
5. The examinee has failed to adhere to instructions given at the examination administration;
6. The examinee has engaged in any form of communication during an examination in which examination information has been given to or obtained from another person;
7. The examinee has engaged in any unethical action which gave him/her or any other examinee an advantage he or she would otherwise not have had.

NOTE: The CBCN may annotate transcripts of examinees who engage in any of the aforementioned behaviors.

INQUIRIES AND COMMENTS

You may contact the CBCN via fax, phone, mail or email (**Email is preferred.**)

Tel: 561.320.2852

Fax: 561.370.6214

Email: cbcn.us@gmail.com

Address: 4360 Northlake Blvd. #209 Palm Beach Gardens, FL 33410

The CBCN staff gives timely personal attention to incoming correspondence. If applicants wish to verify receipt of correspondence by the CBCN, they are advised to use certified mail, return receipt requested, or other delivery methods that provide proof of receipt. The CBCN is not responsible for information provided over the telephone unless that information is verified in writing.

TEST PLAN

The Test Plan shows the percentage of questions on the 200-question written examination covering the topics listed below. The topics and percentages are based on the Delphi Study and statistically valid Job Analysis of Chiropractic physicians who are Diplomates of the CBCN.

1. 15% - Case History
2. 10% - Nutrition-Related Physical and Orthopedic/Neurologic Examinations, including Anthropometrics
3. 15% - Laboratory and Nutrition-Specific Tests; Nutrition-Related Physiology
4. 5% - Imaging and Special Studies
5. 20% - Diagnosis
6. 15% - Treatment: Nutritional Interventions
7. 20% - Case Management: Indications, Interactions, Counseling, Documentation, Prognosis, Outcome Measures

COURSE TOPIC GUIDELINES

The following Course Topic Guidelines lists most of the topics that may be covered in the Diplomate examination. These topics are covered in nutrition Diplomate programs or nutrition courses given through chiropractic colleges or other institutions of higher learning. Many of these topics are covered in continuing education classes which can also generate an official transcript.

Introduction to the Study of Nutrition, Assessment and Evaluation

- a. Why is the study of nutrition important
- b. Nutrition and its relation to health
- c. Trends in the American diet
- d. Adequacy of the American diet
- e. Cultural, age and economic factors
- f. Clinical appraisal of patient, questionnaires and forms
- g. Psychological evaluation, stress and other questionnaires
- h. Physical examination of nutrition patient - how it differs from medical and musculoskeletal examination; examples shown
- i. Laboratory testing
- j. Information on how to choose supplement companies
- k. Risk management issues including the nutrition informed consent

Laboratory I

Introduction to laboratory analysis for the nutrition practice including routine blood chemistries and organ profiles

- a. Urinalysis
- b. Hair analysis
- c. Salivary testing
- d. Stool analysis
- e. Nutrient level determination

Nutritional Aspects in Gastrointestinal Disease

1. Organs
 - a. Mouth
 - Tooth decay
 - Bleeding gums
 - Periodontal
 - b. Stomach
 - Dyspepsia
 - Gastritis
 - Ulcers
 - Hiatal hernia
 - c. Gallbladder
 - d. Intestine
 - Dysbiosis

- Irritable bowel syndrome
- Malabsorption syndrome
- Parasitic infections
- Infectious diarrhea
- Colitis
- Leaky gut syndrome
- Diverticulitis
- Constipation
- Hemorrhoids

2. Functional laboratory testing for GI disorders

3. Diets for specific GI disorders

Nutrient-Nutrient and Drug-Nutrient Interactions, Contraindications and Risk Management

Risk management for the clinical nutritionist includes knowledge of

- Nutrient-nutrient interactions and reactions

- Nutrient-drug interactions and reactions

Metabolism I

CARBOHYDRATES

- General considerations

- Dietary significance

- Monosaccharide

- Disaccharides

- Polysaccharides

- Digestion and absorption

FATS

- General considerations

- Composition, classification and characteristics

- Functions

- Digestion and absorption

- Metabolism

- Cholesterol, Prostaglandins, phospholipids

- Essential fatty acids and triglycerides

PROTEIN

- General considerations

- Composition, classification and characteristics

- Functions

- Digestion and absorption

- Metabolism

- Enzymes

- Energy Metabolism

Female Nutrition

- Common female diseases and syndromes
- PMS
- Osteoporosis
- Menopause
- Vaginitis
- Candidiasis
- Endometriosis
- Cystitis
- PCOS
- Estrogen Dominance Syndrome
- Pregnancy
- Lactation
- Functional laboratory testing for female disorders
- Diets for specific female disorders

Nutrition in Infancy and Adolescence

- Infancy
- Growth
- Nutritional requirements
- Feeding considerations
- Alternatives to processed baby foods
- Supplementary foods
- Allergies
- Specific health issues
- Colic
- Ear Infections
- Iron deficiency anemia
- Adolescence
- Growth and development
- Evaluation of the child's nutritional state
- Age group need differences
- Food habits
- School lunch program
- Nutrition education
- Specific health issues
- Dentition and nutrition
- Obesity
- ADD and ADHD
- Autism
- Functional laboratory testing for infant and adolescent disorders
- Diets for specific infants and adolescents

Nutrition Practice and Risk Management, Research Paper Presentation, and Examination

General nutrition practice management tools will be covered including:

- incorporating nutrition into an existing practice
- redirecting patient dollars already spent on supplements
- risk management

Submit and present 1 literature research paper suitable for publication, typed in proper format with a minimum of 25 references

Musculoskeletal Nutrition

Nutrition consideration should always be included in the complete management of soft tissue injuries or complaints and those of bone tissue as well. Satisfactory repair of injured tissue and the maintenance of strong, healthy soft tissue will decrease the frequency and severity of injury.

Soft Tissue Nutrition

- a. Acute injury
- b. Disc
- c. Chronic sprain/strain
- d. Myofascial / Fibromyalgia
- e. Carpal tunnel

Bone and Joint Nutrition

- a. Fractures
- b. Osteopenia, osteoporosis, osteomalacia
- c. Arthritis

Functional laboratory testing for musculoskeletal disorders

Diets for specific musculoskeletal disorders

The Role of Vitamins, Macro and Trace Minerals as Nutrients, Water

Vitamin

Minerals

Trace minerals

Water

Geriatrics and Longevity

Characteristics of aging including

- Vision loss
- Hearing loss
- Dry skin
- Constipation/diarrhea
- GERD
- Dysphagia
- Arthritis
- Sarcopenia/osteopenia
- Anemia

Physiologic and metabolic changes

Memory loss/Alzheimer's disease

Multiple medication side effects

Functional testing

BIA, grip strength, albumin, metabolic markers

Nutritional and diet requirements

Obtaining adequate calorie intake

Dentition complications

Drug-nutrient interactions

Hyperimmunity – Nutritional considerations for allergies, autoimmune disorders and dermatology

Allergies

- a. Acute and latent allergies
- b. Nutritional considerations in autoimmune disorders
- c. The role of the GI tract in both problems
- d. Food additives and preservatives

Dermatology

Functional laboratory testing for hyperimmune disorders

Diets for specific hyperimmune disorders

Hypoimmunity - Phytochemicals, Immunology, HIV/AIDS, and Cancer

- a. Understanding phytochemicals and their role in nutrition
- b. Nutritional support for the immune system
- c. Nutrition for HIV/AIDS support
- d. Diet, nutrition and cancer prevention
- e. Discussion on alternative cancer therapies

Herbal Medicine: Introduction and Clinical Applications

- a. Basic introduction to and understanding of herbology
- b. Understanding the various preparations and when to use
- c. Dosage for pediatric, adult and geriatric patients
- d. Use of herbs in the treatment of common illnesses

Risk management issues including government regulations, manufacturing practices and standardization, herb-nutrient and herb-drug interactions

Nutrition in Blood Diseases, Infections and Metabolic Disorders

- a. Blood disorders
 - Anemia
 - Leukemia
- b. Acute and chronic infections
 - Antibody and hormonal response
- c. Metabolic Disorders
 - Metabolic Syndrome
 - Diabetes mellitus and gestational diabetes
 - Thyroid dysfunction
 - Adrenal disorders
 - HPA axis dysfunction
 - Rheumatoid arthritis

Functional laboratory testing for metabolic disorders

Diets for specific disorders

Stress Management, Research Paper Presentations

Adrenal hormone and stress management protocols including relaxation exercises and techniques

Nutritional Considerations in Cardiovascular Health

- a. General considerations
 - Coronary risk factors
 - Role of diet
 - Diet prescriptions
 - Patient education
- b. Atherosclerosis
- c. Peripheral vascular disease
- d. Hypertension
- e. Ischemic heart disease
- f. Rheumatic heart disease
- g. Pulmonary heart disease

Functional laboratory testing for cardiovascular disorders

Diets for specific cardiovascular disorders

Laboratory diagnosis using computer program analysis

Functional approach to tests on blood, stool, urine, saliva to access nutrient recommendations

Show standard clinical as well as optimal nutritional ranges

Profile analysis for

- Heart disease
- Liver disease
- Kidney disease
- Gall Bladder disease
- Metabolic disease and diabetes
- Reporting, documentation and follow up testing

Use of Homeopathic Preparations in Nutrition Practice

This is an overview of homeopathy and the use of OTC products in clinical nutrition. Risk management issues will be covered including ethics and legalities.

Homeopathic Materia Medica

Potency and frequency

Specific items for constitutional vs first aid

Common preparations used in practice

Sports Nutrition for the Athlete, Bariatrics and Eating Disorders

- a. Diet for optimum athletic performance
- b. Proper nutritional supplementation for the athlete
- c. Anorexia
- d. Bulimia
- e. Obesity

Functional laboratory testing for sports disorders

Diets for specific sports disorders and training

Nutritional Aspects of Neurological and Psychiatric Disorders

- a. Headache
- b. Neuromuscular Disorders
- c. Toxicity
- d. Depression
- e. Hyperactive / Manic States
- f. Stress Management
- g. Attention Deficit

Functional laboratory testing for neurological and psychiatric disorders

Diets for specific neurological and psychiatric disorders

Diseases of the Urogenital System and Male Problems

Urogenital

- a. Glomerulonephritis
- b. Nephrosis
- c. Kidney failure
- d. Principles of dietary treatment

Conditions of the male reproductive organs

- a. Prostate
- b. Infertility

Functional laboratory testing for urogenital disorders
Diets for specific urogenital disorders

Metabolism III Interrelationships and pathways. Inborn errors of metabolism.

Show anabolism and catabolism of carbohydrates, fats and proteins, redox reactions for energy and antioxidant systems and the integration of metabolism. Integration of endocrine and other messengers for regulation of metabolism including genetic/inborn errors of metabolism will be covered.

X-ray Findings in Metabolic Disorders, Case Histories

Volume 2 Chapter 14 in Essentials of Radiology by Yokum and Rowe or like information.

In addition to the written and practical examinations, each participant in some nutrition diplomate programs will be required to submit three (3) case histories typed in proper format with supporting documentation to present and defend orally.

SAMPLE EXAMINATION QUESTIONS:

Choose the one best answer for each of the following 25 sample questions. The answers with references from the published examination texts are listed at the end.

1. Physical examination of a patient reveals yellow skin discoloration of the forehead, axillae, palms, and soles of the feet. The patient denies alcohol consumption and laboratory values for liver enzymes are within normal limits. What is the most likely etiology for the discoloration?
 - A. hypercarotenosis
 - B. hypercholesterolemia
 - C. hypertriglyceridemia
 - D. hypervitaminosis C
2. A BMI of 27 for an adult indicates which of these?
 - A. underweight
 - B. normal weight
 - C. overweight
 - D. class II obese
3. The RDA of protein for a 150 pound patient with normal kidney function, who walks two days a week for exercise, is _____ ounces.
 - A. 5.4
 - B. 7.8
 - C. 9.6
 - D. 12.2
4. Which of these additional findings is most likely present in an elderly female who complains of fatigue, weight gain, and difficulty swallowing?
 - A. thyroid enlargement
 - B. liver enlargement
 - C. white patches on the tonsils
 - D. hyperreflexia
5. To prevent sensory neuropathy, including ataxia and loss of lower limb vibratory sense, the dose of pyridoxine should not exceed _____ mg.
 - A. 100
 - B. 200
 - C. 300
 - D. 400
6. Colon cancer, IBD, and ulcerative colitis are most likely to lower stool levels of _____.
 - A. dietary polysaccharides
 - B. pathological bacteria
 - C. SCFA n-butyrate
 - D. candida

7. Which hormone is most likely elevated in a patient with hypertension, central obesity, insulin resistance, and sleep disturbances?
- A. relaxin
 - B. testosterone
 - C. cortisol
 - D. insulin
8. What is the most likely diagnosis for a patient with elevated salivary IgA, a positive gluten sensitivity test, pale frothy foul-smelling stools, and weight loss?
- A. celiac disease
 - B. GERD
 - C. gallstones
 - D. pancreatitis
9. Treatment of cystitis is most likely to include supplements of _____ and _____.
- A. vitamin B2; hawthorne
 - B. d-mannose; uva ursi
 - C. vitamin K; peppermint
 - D. vitamin A; bilberry
10. Starvation, sepsis, and protein catabolic states result in reduced muscle and plasma _____ levels.
- A. alanine
 - B. vitamin A
 - C. vitamin D
 - D. glutamine
11. Which of these is the most appropriate laboratory test to monitor the treatment of a patient with diabetes mellitus?
- A. Hgb A1c
 - B. D-dimer
 - C. Alkaline phosphate
 - D. C-reactive protein
12. Which of these is most beneficial in the treatment of varicose veins?
- A. engaging in minimal exercise
 - B. maintaining a high fiber diet
 - C. standing for long periods
 - D. wearing a girdle
13. Which of these diets is most appropriate for hypertensive patients?
- A. Atkin
 - B. DASH
 - C. Zone
 - D. Step

14. Which of these is associated with a finding of rough *goose bumps* skin texture over the triceps area?
- A. Hyperkeratosis
 - B. hypervitaminosis D
 - C. candidiasis
 - D. measles
15. Which of these findings is most likely to be associated with cardiovascular disease?
- A. earlobe crease
 - B. coarse hair
 - C. loss of eyebrows
 - D. thick white toenails
16. Due to its progesterogenic activity, which herb is indicated in the treatment of premenstrual stress syndrome?
- A. berberine
 - B. chaste tree
 - C. pau d'arco
 - D. peppermint
17. Which of these diets is most likely to benefit patients with fibromyalgia?
- A. high protein
 - B. low carbohydrate
 - C. vegan
 - D. low fiber
18. Which of these herbs is indicated for the treatment of morning sickness in the second trimester?
- A. dong quai
 - B. raspberry
 - C. blue cohosh
 - D. wormwood
19. Children between 1 and 3 years of age are at high risk for _____ deficiency anemia.
- A. vitamin B12
 - B. vitamin C
 - C. folate
 - D. iron
20. Which of these is the most characteristic disease associated with metabolic arthritis?
- A. gout
 - B. erosive osteoarthritis
 - C. osteoporosis
 - D. degenerative joint disease

A 35-year-old female complains of increasing early morning joint stiffness, with intermittent pain and swelling of multiple joints in the hands and feet over the past several months. The patient reports difficulty walking and using her hands to open jars or do needle work. She has lost 9 pounds without dieting over the past 6 months, and her diet is SAD with 2-3 diet Pepsi drinks per day.

Answer questions 21 thru 25 based on the above case history.

21. Which of these is the most likely diagnosis?

- A. ankylosing spondylitis
- B. gout
- C. osteoarthritis
- D. rheumatoid arthritis

22. Which of these laboratory findings is most likely present?

- A. positive IgM RF
- B. elevated urate level
- C. decreased ESR
- D. positive HLA-B27

23. What is the most likely etiology of this patient's weight loss?

- A. intake of over 2700 kCal /day
- B. increased metabolic rate
- C. high protein diet
- D. neoplasm

24. Evidence of pathophysiologic oxidative stress in this disease would support the addition of _____ and _____ supplements.

- A. copper; iron
- B. magnesium; vitamin A
- C. vitamin B12; calcium
- D. vitamin C; vitamin E

25. Treatment of this disease with methotrexate is known to produce a functional deficiency of which nutrient?

- A. vitamin B1
- B. niacin
- C. folate
- D. vitamin D

SAMPLE EXAMINATION ANSWERS

ANSWERS, with references, to the preceding 25 questions are listed below.

1. **ANS: A** Modern Nutrition in Health and Disease 10th Ed, pages 596 & 597
2. **ANS: C** Modern Nutrition in Health and Disease 10th Ed, page 765
3. **ANS: B** Modern Nutrition in Health and Disease 10th Ed, page, 845
4. **ANS: A** Modern Nutrition in Health and Disease 10th Ed, page 303
5. **ANS: A** Modern Nutrition in Health and Disease 10th Ed, page 601
6. **ANS: C** Laboratory Evaluations for Integrative and Functional Medicine, 2nd Ed, page 451
7. **ANS: C** Laboratory Evaluations for Integrative and Functional Medicine, 2nd Ed, page 560
8. **ANS: A** Laboratory Evaluations for Integrative and Functional Medicine, 2nd Ed, pages 562 & 563; Textbook of Natural Medicine, 3rd Ed, page 1563
9. **ANS: B** Textbook of Natural Medicine, 3rd Ed, pages 1601 & 1602
10. **ANS: D** Laboratory Evaluations for Integrative and Functional Medicine, 2nd Ed, page 194
11. **ANS: A** Interpretation of Diagnostic Tests, 8th Ed, page 705 & 706
12. **ANS: B** Textbook of Natural Medicine, 3rd Ed, pages 2167 and 2168
13. **ANS: B** Textbook of Natural Medicine, 3rd Ed. Pages 1761 and 1762; Modern Nutrition in Health and Disease, 10th Ed, pages 1102 and 1103
14. **ANS: A** Textbook of Natural Medicine, 3rd Ed. Pages 1386
15. **ANS: A** Textbook of Natural Medicine 3rd Ed, page 1520
16. **ANS: B** Principles and Practice of Phytotherapy, page 328
17. **ANS: C** Krause's Food & Nutrition Therapy, 12th Ed, p. 1060, J Rheumatol. 2000;29(5):308-13.
18. **ANS: B** Principles and Practice of Phytotherapy, page 246
19. **ANS: D** Krause's Food & Nutrition Therapy, 12 Ed, page 225-226
20. **ANS: A** Essentials of Radiology, 3rd Ed, page 955
21. **ANS: D** Krause's Food & Nutrition Therapy, 12th Ed, page 1050
22. **ANS: A** Interpretation of Diagnostic Tests, 8th Ed, page 355
23. **ANS: B** Krause's Food & Nutrition Therapy, 12th Ed, page 1053
24. **ANS: D** Modern Nutrition in Health and Disease 10ed, page 1335
25. **ANS: C** Modern Nutrition in Health and Disease 10ed, page 1335-1336

REFERENCE TEXTS AND JOURNALS FOR DIPLOMATE EXAM

The following references are the primary sources currently in use for test questions. Inclusion of specific textbooks or diplomate program course notes and test questions does not constitute an endorsement by the CBCN of their entire content or imply a guarantee that candidates will be successful in passing the certification examination. The Board may add or delete texts at its sole discretion from time to time.

Hershoff, **HOMEOPATHIC REMEDIES**, 2000 ISBN: 089529950x

Lord & Bralley, **LABORATORY EVALUATIONS FOR INTEGRATIVE AND FUNCTIONAL MEDICINE**, 2ND Ed, 2009 ISBN: 0967394945

Krinsky, et al **NATURAL THERAPEUTICS POCKET GUIDE**, 2nd Ed. Lexi-Comp, Inc, 2003 ISBN : 101930598998

Mahan & Escott-Stump, **KRAUSE'S FOOD & NUTRITION THERAPY**, 12th Ed, 2007 ISBN:13 9781416034018

Mills & Bone, **PRINCIPLES AND PRACTICE OF PHYTOTHERAPY**, 1st Ed, 2000, ISBN: 0443060169

Murray & Pizzorno, **TEXTBOOK OF NATURAL MEDICINE**, 3rd Ed,2006 ISBN: 9780443069413

Shils, Olson & Shike, **MODERN NUTRITION IN HEALTH AND DISEASE**, 10th Ed, 2005 ISBN: 100781741335

Yokum & Rowe, **ESSENTIALS OF RADIOLOGY**, 3rd Ed, 2004 ISBN: 0781739462

Wallach, **INTERPRETATION OF DIAGNOSTIC TESTS**, 8th Ed, 2007 ISBN: 139780781730556

JOURNALS (CBCN examination questions may come from the last 5 years prior to the examination of following journals)

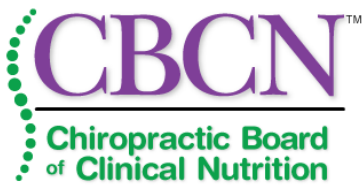
Nutritional Perspectives - The Journal of the Council on Nutrition ISBN: 978-90-66056-29-9

American Journal of Clinical Nutrition ISSN: 0002-9165

Integrative Medicine: A Clinician's Journal ISSN 1543-953X

Journal of Complementary and Integrative Medicine ISSN: 1553-3840

Journal of Nutrition ISSN: 0022-3166



CBCN CASE HISTORY GRADING FORM

Dr's Name _____ Date _____
Case History # _____ Patient Initials _____ Grade _____
Grader's Name _____ 75 is minimum passing grade

1. Chief Complaint _____ /4
 - a. Duration
 - b. Severity
 - c. Aggravating factors
 - d. Alleviating factors

2. Other Complaint(s) and Nutrient-drug/nutrient interactions _____ /3
 - a. Duration
 - b. Severity
 - c. Aggravating factors
 - d. Alleviating factors
 - e. Nutrient-drug, nutrient-nutrient interactions

3. Family and Social History _____ /3
 - a. Family history including health problems and cause of death
 - b. Personal history including vital statistics, education, employment
 - c. Personal history including surgery, drugs, medications and supplements
 - d. Personal lifestyle including smoking, exercise, and alcohol use
 - e. Personal history including stressors, recreational activities, psychological

4. Diet Diary and History _____ /7
 - a. Diet diary 7 day 1-3 days 24 hour recall Other _____
 - b. Food preferences
 - c. Food avoidances and allergies
 - d. Number of meals eaten daily and weekends
 - e. Liquid consumption
 - f. Special diets and dietary programs
 - g. Food preparation

5. Consultation Findings _____ /5
 - a. Significant consultation information
 - b. Show line of questioning and rationale during consult
 - c. Exercise: type, like /dislike
 - d. Exercise: X per week, minutes per day

6. **Physical Examination Findings** _____ /8
- a. Review of body systems
 - b. Physical signs of nutrient insufficiency or excess
 - c. Anthropometric measurements
 - Bioimpedance BMI Other _____
 - Height / weight including present, maximum, preferred
7. **Appropriate radiologic studies, laboratory and functional tests ordered** _____ /6
- a. Radiographic or imaging studies
 - b. Biochemical assessment including macro and micronutrient status
 - c. Scientifically valid special or functional tests
 - d. Results of test(s) used correctly in forming diagnosis and treatment plan
 - e. Interpretation of results
8. **Diagnosis** _____ /6
- a. Appropriate primary diagnosis consistent with findings
 - b. Secondary diagnoses
 - c. Differential diagnoses
9. **Treatment Plan** _____ /25
- a. Is the plan appropriate for the diagnosis (with appropriate referral if indicated)?
 - b. Does the plan show thought for the patient in terms of compliance and cost?
 - c. Does the plan include diet and lifestyle modifications as appropriate?
 - d. Can the plan be supported by scientific data and/or clinical judgment of peers?
 - e. **Is there is clear, concise explanation for each recommendation?**
10. **Case progress and outcome** _____ /8
- a. Was follow-up recommended and carried out appropriately?
 - b. Changes in sign and symptoms addressed by additional investigation as indicated
 - c. Treatment plan modified based on changes in signs and symptoms
 - d. Case was documented and recorded
 - e. Outcome was as expected or complete explanation given if different
11. **Publishable Case History** _____ /25
- a. Is this a publishable narrative in the proper format?
 - b. Must include: Title, Abstract, Key words, Body of paper, Conclusion, References

Comments by grading doctor:
