

Physical Examination of the Hand

Raymond J. Kenney, MD, Warren C. Hammert, MD



CME INFORMATION AND DISCLOSURES

The Review Section of JHS will contain at least 3 clinically relevant articles selected by the editor to be offered for CME in each issue. For CME credit, the participant must read the articles in print or online and correctly answer all related questions through an online examination. The questions on the test are designed to make the reader think and will occasionally require the reader to go back and scrutinize the article for details.

The JHS CME Activity fee of \$30.00 includes the exam questions/answers only and does not include access to the JHS articles referenced.

Statement of Need: This CME activity was developed by the JHS review section editors and review article authors as a convenient education tool to help increase or affirm reader's knowledge. The overall goal of the activity is for participants to evaluate the appropriateness of clinical data and apply it to their practice and the provision of patient care.

Accreditation: The ASSH is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA PRA Credit Designation: The American Society for Surgery of the Hand designates this Journal-Based CME activity for a maximum of 2.00 "AMA PRA Category 1 Credits™". Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ASSH Disclaimer: The material presented in this CME activity is made available by the ASSH for educational purposes only. This material is not intended to represent the only methods or the best procedures appropriate for the medical situation(s) discussed, but rather it is intended to present an approach, view, statement, or opinion of the authors that may be helpful, or of interest, to other practitioners. Examinees agree to participate in this medical education activity, sponsored by the ASSH, with full knowledge and awareness that they waive any claim they may have against the ASSH for reliance on any information presented. The approval of the US Food and Drug Administration is required for procedures and drugs that are considered experimental. Instrumentation systems discussed or reviewed during this educational activity may not yet have received FDA approval.

Provider Information can be found at <http://www.assh.org/Pages/ContactUs.aspx>.

Technical Requirements for the Online Examination can be found at <http://jhandsurg.org/cme/home>.

Privacy Policy can be found at <http://www.assh.org/pages/ASSHPrivacyPolicy.aspx>.

ASSH Disclosure Policy: As a provider accredited by the ACCME, the ASSH must ensure balance, independence, objectivity, and scientific rigor in all its activities.

Disclosures for this Article

Editors

Ghazi M. Rayan, MD, has no relevant conflicts of interest to disclose.

Authors

All authors of this journal-based CME activity have no relevant conflicts of interest to disclose. In the printed or PDF version of this article, author affiliations can be found at the bottom of the first page.

Planners

Ghazi M. Rayan, MD, has no relevant conflicts of interest to disclose. The editorial and education staff involved with this journal-based CME activity has no relevant conflicts of interest to disclose.

Learning Objectives

- Discuss obtaining careful history during hand examination.
- List the different diagnostic tools used for examination of the hand.
- Describe the diagnostic tests for assessing different hand pathologies.
- Detail the clinical assessment of sensory and motor functions of the hand.
- Outline methods of assessing musculotendinous and skeletal systems in the hand.

Deadline: Each examination purchased in 2014 must be completed by January 31, 2015, to be eligible for CME. A certificate will be issued upon completion of the activity. Estimated time to complete each month's JHS CME activity is up to 2 hours.

Copyright © 2014 by the American Society for Surgery of the Hand. All rights reserved.

Examination of the hand is an essential piece of a hand surgeon's skill set. This current concepts review presents a systematic process of performing a comprehensive physical examination of the hand including vascular, sensory, and motor assessments. Evaluations focused on specific hand diseases and injuries are also discussed. This information can be useful for any health care provider treating patients with hand conditions. (*J Hand Surg Am.* 2014;39(11):2324–2334. Copyright © 2014 by the American Society for Surgery of the Hand. All rights reserved.)

Key words Digits, finger, hand, physical examination.

From the Department of Orthopaedics and Rehabilitation, School of Medicine and Dentistry, University of Rochester Medical Center, Rochester, NY.

Received for publication January 14, 2014; accepted in revised form April 15, 2014.

No benefits in any form have been received or will be received related directly or indirectly to the subject of this article.

Corresponding author: Warren C. Hammert, MD, Department of Orthopaedics and Rehabilitation, School of Medicine and Dentistry, University of Rochester Medical Center, 601 Elmwood Avenue, Box 665, Rochester, NY 14642; e-mail: warren_hammert@urmc.rochester.edu.

0363-5023/14/3911-0037\$36.00/0
<http://dx.doi.org/10.1016/j.jhsa.2014.04.026>

EXAMINATION OF THE HAND is essential when caring for patients with both acute and chronic hand conditions because an accurate diagnosis is necessary for appropriate treatment and providing the patient the opportunity for the best outcome. A consistent, systematic approach of hand assessment should be used to minimize the chance of missing important findings. As the examiner becomes more comfortable with the process, a focused history and thorough examination can be performed, which also enable the diagnosis of other important conditions that may not be the presenting problem. Evaluation of the patient with an acute injury can be more challenging because the patient may have anxiety regarding the injury and may have more difficulty describing the details of the injury. This will often necessitate a more focused examination because many of the provocative maneuvers used for evaluation of chronic conditions are not essential.

If the patient is examined in the office, the patient is seated across from the examiner with the arm resting on a hand table. The examination can be more challenging in the emergency department because the patient is often on a stretcher. If the patient can sit up, a bedside table can often be used in a manner similar to the office. If the patient cannot sit up, owing to possible spine or other trunk or extremities injuries, the examination must be performed with the patient lying down, either by holding the hands over the abdomen or at the patient's side.

Before the widespread use of electronic medical records, documentation with diagrams and charts were helpful in documenting physical findings. Now we have adopted documenting strictly with writing. A consistent method for documentation is recommended, such as beginning with appearance, followed by motion and strength, circulation, and sensation. The final aspect includes special findings such as cords associated with Dupuytren disease, lesions, and so forth.

GENERAL HAND EVALUATION

History

The history portion of the hand examination should include general information such as age, sex, hand dominance, occupation, previous hand injury, and preexisting impairment or conditions that may affect function. The history of the present problem differs for acute and chronic conditions.

The history should begin with open-ended questions, letting patients tell their story. After listening to the history, it will be necessary to ask more specific questions to hone in on more pertinent symptoms.

Pertinent questions for obtaining a history of an acute condition include: When and where did the injury occur? What was the mechanism and energy of the injury? If a wound is present, was the environment clean or dirty? Is there a limitation of movement and if so, is this because of pain? If there is pain, can it be localized to a specific area? Is there associated numbness and if so, what is the distribution? Did these occur immediately after the injury or at a point between the injury and examination?

For chronic hand conditions, the questioning is broader: When did the presenting problem begin and what has the course been like? What are the pain characteristics and duration—constant or intermittent? Can this be localized to 1 specific location? Is there associated paresthesia, stiffness, or weakness? If so, are these always present or do they fluctuate? Are there temperature changes—warmth or cold? Are there specific actions or movements that aggravate the condition? Does anything alleviate the symptom? How does this affect daily activities, vocation, and avocations?

Physical examination

The examiner should be positioned across from patient, ideally with the patient's hands resting on a hand table. The arms should be exposed to allow visualization and palpation from the elbow distally. Both extremities should be evaluated because this will provide a comparison of an asymptomatic hand and may enable the examiner to diagnose secondary conditions.

Basic items necessary for complete examination of the hand include a goniometer and instrument to assess 2-point discrimination. Additional specialized instruments include Semmes-Weinstein monofilaments, a tuning fork, a dynamometer, a surface thermometer, and Doppler (Fig. 1).

Inspection/palpation: Observations include how patients position or use their hands and the digital cascade or resting posture of the hand. Skin color and localized or generalized swelling should be noted and compared with the opposite extremity.

Acute injury to the hand often presents with visible signs of trauma including laceration, puncture, injection, burn, ecchymosis, and erythema. Scars can be clues to prior trauma or surgical interventions. Chronic skin lesions, ulcerations, nonhealing wounds, or swelling could indicate tumors or cysts.

Inspection of the nail complex or perionychium can reveal pitting, spots, or brittle nail plates. These findings may indicate systemic disease, nutritional deficiencies, or chronic nail infections.

Download English Version:

<https://daneshyari.com/en/article/4067420>

Download Persian Version:

<https://daneshyari.com/article/4067420>

[Daneshyari.com](https://daneshyari.com)