

# HOSPITAL PHYSICIAN®

## FAMILY PRACTICE BOARD REVIEW MANUAL

### PUBLISHING STAFF

**PRESIDENT, GROUP PUBLISHER**

Bruce M. White

**EXECUTIVE EDITOR**

Debra Dreger

**SENIOR EDITOR**

Becky Krumm, ELS

**EDITOR**

Ellen M. McDonald, PhD

**ASSISTANT EDITOR**

Jennifer M. Vander Bush

**EDITORIAL ASSISTANT**

Renee Autumn Ray

**EXECUTIVE VICE PRESIDENT**

Barbara T. White, MBA

**PRODUCTION DIRECTOR**

Suzanne S. Banish

**PRODUCTION ASSOCIATES**

Tish Berchtold Klus

Christie Grams

Mary Beth Cunney

**ADVERTISING/PROJECT MANAGER**

Patricia Payne Castle

**NOTE FROM THE PUBLISHER:**

This publication has been developed without involvement of or review by the American Board of Family Practice.



**Endorsed by the  
Association for Hospital  
Medical Education**

The Association for Hospital Medical Education endorses HOSPITAL PHYSICIAN for the purpose of presenting the latest developments in medical education as they affect residency programs and clinical hospital practice.

## Osteoarthritis

**Series Editor and Contributing Author:****Miriam T. Vincent, MD**

*Associate Professor, Interim Chair, Department of Family Practice, State University of New York, Health Science Center at Brooklyn, Brooklyn, NY*

**Contributing Author:****Ertha A. Nanton, MD**

*Clinical Assistant Instructor, Department of Family Practice, State University of New York, Health Science Center at Brooklyn, Brooklyn, NY*

## Table of Contents

Introduction . . . . .	2
Case Presentation . . . . .	3
Definition, Etiology, and Epidemiology . . . . .	3
Pathogenesis . . . . .	4
Clinical Evaluation . . . . .	4
Management of Osteoarthritis . . . . .	5
Follow-up Discussion of Case Patient . . . . .	9
Prevention of Osteoarthritis . . . . .	9
Summary . . . . .	10
Board Review Questions . . . . .	10
Answers . . . . .	10
References . . . . .	10

Cover Illustration by Christie Grams

Copyright 2001, Turner White Communications, Inc., 125 Stafford Avenue, Suite 220, Wayne, PA 19087-3391, www.turner-white.com. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, electronic, photocopying, recording, or otherwise, without the prior written permission of Turner White Communications, Inc. The editors are solely responsible for selecting content. Although the editors take great care to ensure accuracy, Turner White Communications, Inc., will not be liable for any errors of omission or inaccuracies in this publication. Opinions expressed are those of the authors and do not necessarily reflect those of Turner White Communications, Inc.

# HOSPITAL PHYSICIAN®

## FAMILY PRACTICE BOARD REVIEW MANUAL

### Osteoarthritis

**Series Editor and Contributing Author:**

**Miriam T. Vincent, MD**

*Associate Professor*

*Interim Chair*

*Department of Family Practice*

*State University of New York*

*Health Science Center at Brooklyn*

*Brooklyn, NY*

**Contributing Author:**

**Ertha A. Nanton, MD**

*Clinical Assistant Instructor*

*Department of Family Practice*

*State University of New York*

*Health Science Center at Brooklyn*

*Brooklyn, NY*

---

#### INTRODUCTION

---

Osteoarthritis (OA), more commonly known as degenerative joint disease, is a chronic arthropathy affecting more than 21 million Americans today,<sup>1</sup> most of them adults age 60 and older. In the United States, OA is the most common type of arthritis; the prevalence of arthritis in the United States by the year 2020 will be, according to estimates, approximately 60 million cases.<sup>2</sup> The incidence of OA varies from 1% to 4% per year.<sup>3</sup> Among older adults, it is the most prevalent articular disease. By age 60 years, more than 80% of the population has radiographic evidence of OA, approximately 40% is symptomatic, and approximately 10% has limitation of daily activities.<sup>4</sup>

The underlying disease process of OA involves the progressive deterioration and loss of articular cartilage

accompanied by bone remodeling and new bone formation, leading to the loss of normal bone structure and function. Often more generalized in women than in men, OA is a leading cause of functional impairment and disability in the United States.<sup>5</sup> Not surprisingly, the disease has a profound economic impact. In 1994, the estimated direct and indirect costs related to OA were \$15.5 billion dollars, with more than half of this amount resulting from loss of work.<sup>6</sup>

This manual will review briefly the definition, etiology, and epidemiology of OA, highlighting some specific risk factors. The pathogenesis of OA also will be examined, as will its most common clinical manifestations and its diagnosis. In discussing the management options available for patients with OA, the manual will consider the relative effectiveness of both nonpharmacologic modalities, including patient education and physical and occupational therapy, and pharmacologic therapy; surgical