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Preface: Physical Medicine and Rehabilitation: An Update for Internists xvii
David A. Lenrow

Therapeutic Exercise 189
Kim Barker and Sarah Eickmeyer

Physicians often overlook exercise as a treatment or prophylactic measure for many common diseases and ailments. It can be used to treat comorbidities including obesity, cardiovascular disease, chronic obstructive pulmonary disease, diabetes mellitus, osteoporosis, osteoarthritis, cancer, and low back pain. Education on the general physical activity guidelines as well as easy exercise prescription methods can improve the ability of physicians to prescribe exercise as a therapeutic option. In addition, identifying barriers to compliance with exercise and ways to overcome these barriers is also necessary in order to use therapeutic exercise effectively.

Updated Approach to Stroke Rehabilitation 199
Leroy R. Lindsay, Diane A. Thompson, and Michael W. O’Dell

This article summarizes stroke rehabilitation, with a particular focus on rehabilitation from acute diagnosis to chronic impairments of stroke. The emphasis is on both pharmacologic and nonpharmacologic intervention and interdisciplinary collaboration.

Traumatic Brain Injury: An Overview of Epidemiology, Pathophysiology, and Medical Management 213
Allison Capizzi, Jean Woo, and Monica Verduzco-Gutierrez

Traumatic brain injury (TBI) is an acquired insult to the brain from an external mechanical force that may result in temporary or permanent impairment. The goal of this article is to provide a general review of the epidemiology, pathophysiology and medical management of adult patients with TBI for providers practicing outside the field of physical medicine and rehabilitation. The medical and rehabilitation management of moderate to severe TBI is the focus of this article, with a brief discussion of the management of mild injuries.

Cancer Rehabilitation: Acute and Chronic Issues, Nerve Injury, Radiation Sequelae, Surgical and Chemo-Related, Part 1 239
Cristina Kline-Quiroz, Phalgun Nori, and Michael D. Stubblefield

Individuals with cancer commonly experience functional impairments. Symptoms may present immediately or years to decades following their
treatment. These impairments may include fatigue, pain, neuropathy, lym-
phedema, or radiation fibrosis syndrome and have the potential to deleteri-
ously impact their function and quality of life. Cancer rehabilitation is a
comprehensive resource that facilitates maximizing and maintaining can-
cer survivors’ physical, social, psychological, and vocational functioning.
This article covers the common functional impairments experienced by
cancer survivors and the treatment strategies used in cancer rehabilitation.
Application of these services can enhance the ongoing care for cancer
survivors.

Cancer Rehabilitation: Acute and Chronic Issues, Nerve Injury, Radiation Sequelae,
Surgical and Chemo-Related, Part 2 251
Phalgun Nori, Cristina Kline-Quiroz, and Michael D. Stubblefield
Cancer affects millions of individuals, and approximately half will develop
functional impairments. Cancers that commonly, either from direct effects
or from its treatments, result in functional impairments include breast,
head and neck, brain, and spinal cord tumors. There is a plethora of poten-
tial impairments including pain, spasticity, dystonia, weakness, and neuro-
genic bowel or bladder. This article reviews the functional impairments
frequently encountered in breast, head and neck, brain, and spinal cord tu-
mors. The authors also discuss management and treatment options incor-
porated in comprehensive cancer rehabilitation to address these
impairments to maximize and maintain function and quality of life.

Management of the Patient with Chronic Spinal Cord Injury 263
Binnan Ong, James R. Wilson, and M. Kristi Henzel
Individuals with spinal cord injuries or disorders (SCI/D), whether of trau-
matic or nontraumatic cause, require multidisciplinary management by
their care team to achieve optimal health outcomes. SCI/D is relatively
rare in the general population and primary care providers (PCPs) may
not have extensive experience managing people with these disorders. Spi-
nal cord injuries, impair the body’s autonomic and biomechanical perfor-
mance by interrupting the communications to and from major bodily
systems. This article provides a framework to help PCPs understand
how these changes impact their patient’s physiologic function and subse-
quent risks for health complications with guidance for initial treatment
approaches.

Neck Pain and Lower Back Pain 279
Adrian Popescu and Haewon Lee
Neck pain is the fourth leading cause of disability. Acute neck pain largely
resolves within 2 months. History and physical examination play a key role
in ruling out some of the more serious causes for neck pain. The evidence
for pharmacologic interventions for acute and chronic musculoskeletal
neck pain is limited. Lower back pain is the leading cause of disability
and productivity loss. Consultation with a physical medicine and rehabili-
tation spine specialist within 48 hours for acute pain and within 10 days for
all patients with lower back pain may significantly decrease rate of surgical
interventions and increase patient satisfaction.
Osteoarthritis: Pathology, Diagnosis, and Treatment Options 293
Benjamin Abramoff and Franklin E. Caldera

Osteoarthritis (OA) is a worldwide endemic and debilitating disease. Previously thought to simply be damaged from “wear and tear,” OA is now understood to be a complex interaction of local and systemic factors. This article reviews the pathology, symptoms, diagnosis, and various conservative, surgical, and novel treatments of OA.

Common Injuries of the Weekend Athlete 313
Mark I. Ellen and Christina Lin

Each year increasing numbers of people participate in a wider variety of athletic endeavors. Unlike previous generations, many patients remain in these activities later into their lives, some well beyond retirement. As the population ages and their activities continue, they are subject to injury of various forms affecting all aspects of their bodies.

Geriatric Rehabilitation: Gait in the Elderly, Fall Prevention and Parkinson Disease 327
Randel Swanson and Keith M. Robinson

Aging-associated anatomic and physiologic decline begins during the fourth decade of life and progresses over the ensuing decades sometimes to a state of frailty, with the decline amplified when there is deconditioning. Aging-related gait and balance disorders leading to an increased risk of falling can be compensated for with the use of exercise interventions, durable medical equipment, and environmental modifications. Caregiver training is an essential component of geriatric rehabilitation.

Determination of Postacute Hospitalization Level of Care 345
Robert Samuel Mayer, Amira Noles, and Dominique Vinh

In the United States, we are blessed with many options for postacute care: inpatient rehabilitation facilities, long-term acute care hospitals, skilled nursing facilities, home health agencies, and outpatient rehabilitation. However, choosing the appropriate level of care can be a daunting task. It requires interdisciplinary input and involvement of all stakeholders. The decision should be informed by outcomes data specific to the patient’s diagnosis, impairments, and psychosocial supports.