

1. Record Nr.	UNINA9910957205203321
Titolo	Reducing stress fracture in physically active military women // Subcommittee on Body Composition, Nutrition, and Health of Military Women, Committee on Military Nutrition Research, Food and Nutrition Board, Institute of Medicine
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1998
ISBN	9786610186846 9780309173636 0309173639 9781280186844 1280186844 9780309591898 0309591899 9780585037240 0585037248
Edizione	[1st ed.]
Descrizione fisica	1 online resource (xii, 117 pages) : illustrations
Disciplina	617.15052
Soggetti	Stress fractures (Orthopedics) Women soldiers - Health and hygiene - United States Women soldiers - Nutrition - United States Physical education and training, Military
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references (p. 59-67).
Nota di contenuto	Reducing Stress Fracture in Physically Active Military Women -- Copyright -- Preface -- HISTORY OF THE SUBCOMMITTEE -- COMMITTEE TASKS AND PROCEDURES -- ORGANIZATION OF THE REPORT -- ACKNOWLEDGMENTS -- Contents -- Executive Summary -- CHARGE TO THE COMMITTEE -- METHODS -- ORGANIZATION OF THE REPORT -- RESPONSE TO TASK QUESTIONS -- Conclusions -- Recommendations -- Conclusions -- Recommendations -- Conclusions -- Recommendations -- Conclusions -- Recommendations -- Conclusions -- Recommendations --

RECOMMENDATIONS FOR FUTURE RESEARCH BY THE MILITARY -- 1  
Pathophysiology and Epidemiology of Stress Fractures in Military  
Women -- ESSENTIAL CONCEPTS -- HORMONAL REGULATION OF BONE  
METABOLISM AND REMODELING -- PATHOPHYSIOLOGY OF STRESS  
FRACTURES -- Bone Loading -- Accelerated Remodeling --  
Microdamage -- DIAGNOSIS -- EPIDEMIOLOGY -- Military Training  
Programs -- Army -- Navy and Marine Corps -- Air Force -- Fitness  
Levels of Recruits -- SUMMARY -- 2 Bone Health and Risk Factors --  
BONE MINERAL DENSITY -- TECHNICAL MEASUREMENTS -- Bone  
Markers -- Bone Mass -- Genetic Markers -- Diet -- BODY  
COMPOSITION -- PHYSICAL ACTIVITY AND FITNESS -- ORAL  
CONTRACEPTIVES -- OTHER LIFESTYLE FACTORS -- SUMMARY -- 3  
Effects of Caloric Intake, Physical Activity and Hormonal Factors on  
Bone Health -- CALORIC/HORMONAL FACTORS -- Effects of Low  
Energy Intake on Hormonal Levels and Bone Health -- Effect of Dieting  
and Weight Loss on Bone Health -- Incidence of Caloric Restriction and  
Disordered Eating Patterns in Military Women -- Hypothalamic  
Amenorrhea and Bone Health -- Possible Effects of Excessive Exercise  
on Bone Health -- SUMMARY -- 4 Conclusions and Recommendations  
-- RESPONSE TO TASK QUESTIONS -- CONCLUSIONS --  
RECOMMENDATIONS -- Bone Mass and Bone Health -- Fitness and  
Training -- Reproductive Health and Bone Health -- Energy Intake and  
Bone Health.

RECOMMENDATIONS FOR FUTURE RESEARCH -- Bibliography -- A  
Workshop Agenda and Abstracts -- WORKSHOP AGENDA -- Agenda --  
WORKSHOP ABSTRACTS -- STRESS FRACTURE AMONG PHYSICALLY  
ACTIVE WOMEN IN THE GENERAL POPULATION -- PHYSICAL TRAINING  
INTERVENTIONS TO REDUCE STRESS FRACTURE INCIDENCE IN NAVY  
AND MARINE CORPS RECRUIT TRAINING -- Introduction -- Ongoing  
Research -- Conclusions -- STRESS FRACTURE EXPERIENCE AT FORT  
JACKSON -- Introduction -- Physical Training and Rehabilitation  
Program -- Experience and Interesting Observations -- Interventions  
-- IS THERE A GENETIC BASIS FOR STRESS FRACTURES? -- STRUCTURAL  
INDICES OF STRESS FRACTURE SUSCEPTIBILITY IN FEMALE MILITARY  
RECRUITS -- Introduction -- Materials and Methods -- Results --  
Discussion and Conclusions -- References -- QUANTITATIVE  
ULTRASOUND AND OTHER RISK FACTORS FOR STRESS FRACTURE  
DURING BASIC TRAINING IN FEMALE U ... -- CALCIUM INTAKE AND  
EXERCISE LEVEL: SYNERGISTIC EFFECTS ON BONE -- CALCIUM AND  
IRON: FOOD VERSUS SUPPLEMENTS -- Mineral Requirements --  
Bioavailability -- Nutrient-Nutrient Interactions -- Foods Versus  
Supplements -- DIETARY CALCIUM AND RELATED NUTRIENT INTAKES  
IN MILITARY MEN AND WOMEN -- References -- EFFECTS OF  
PROLONGED INACTIVITY ON THE MUSCULOSKELETAL SYSTEM WITH  
EVALUATION OF COUNTER MEASURES -- Introduction -- Review --  
Conclusions -- EFFECT OF MODULATORS OF BONE TURNOVER ON  
CHANGES IN MARKERS OF BONE TURNOVER -- IGF-1, MUSCLE MASS,  
AND BONE DENSITY -- DIETARY ENERGY REQUIREMENTS IN PHYSICALLY  
ACTIVE MEN AND WOMEN: THRESHOLD EFFECTS ON REPRODUCTIVE  
FUNCTION -- EFFECT OF PREGNANCY ON THE FITNESS AND HEALTH OF  
POSTPARTUM SOLDIERS -- Results -- Conclusions -- THE ART AND  
SCIENCE OF LONGITUDINAL STUDIES OF HEALTHY YOUNG PEOPLE -- B  
Military Recommended Dietary Allowances(AR 40-25, 1985: Chapters 1  
and 2) -- CONTENTS -- CHAPTER 1 INTRODUCTION -- 1-1. Purpose --  
1-2. References.  
1-3. Explanation of abbreviations and terms -- 1-4. Responsibilities --  
CHAPTER 2 NUTRITIONAL ALLOWANCES AND STANDARDS -- 2-1.  
Military recommended dietary allowances -- 2-2. Estimated safe and

adequate daily dietary intakes -- 2-3. Nutrient standards for operational and restricted rations -- 2-4. Energy requirements -- 2-5. Nutrient discussion -- C Dietary Reference Intakes for Calcium and Related Nutrients (IOM, 1997) -- D Biographical Sketches -- E Abbreviations.

---

#### Sommario/riassunto

The incidence of stress fractures of the lower extremities during U.S. military basic training is significantly higher among female military recruits than among male recruits. The prevalence of this injury has a marked impact on the health of service personnel and imposes a significant financial burden on the military by delaying completion of the training of new recruits. In addition to lengthening training time, increasing program costs, and delaying military readiness, stress fractures may share their etiology with the longer-term risk of osteoporosis. As part of the Defense Women's Health Research Program, this book evaluates the impact of diet, genetic predisposition, and physical activity on bone mineral and calcium status in young servicewomen. It makes recommendations for reducing stress fractures and improving overall bone health through nutrition education and monitored physical training programs. The book also makes recommendations for future research to evaluate more fully the effects of fitness levels, physical activities, and other factors on stress fracture risk and bone health.

---