Heritability Of Arterial Function Fitness And Physical Activity In Youth A Study Of Monozygotic And Dizygotic Twins

#Heritability #Arterial function youth #Twin study genetics #Youth fitness physical activity #Cardiovascular health heritability

This study investigates the heritability of arterial function, physical fitness, and physical activity in young individuals. Utilizing a comprehensive twin study design involving both monozygotic and dizygotic twins, the research aims to disentangle genetic and environmental influences on these crucial health markers. Understanding these genetic predispositions can inform targeted interventions for promoting cardiovascular health from an early age.

Oxford Textbook of Children's Sport and Exercise Medicine 4e

The 4th edition of the Oxford Textbook of Children's Sport and Exercise Medicine is the definitive single-volume reference in the field presented in four sections Exercise Science; Exercise Medicine; Sport Science; and Sport Medicine.

Physical Fitness/sports Medicine

Consists of citations selected from those contained in the National Library of Medicine's Medical Literature Analysis and Retrieval System.

Fitness Measures and Health Outcomes in Youth

Physical fitness affects our ability to function and be active. At poor levels, it is associated with such health outcomes as diabetes and cardiovascular disease. Physical fitness testing in American youth was established on a large scale in the 1950s with an early focus on performance-related fitness that gradually gave way to an emphasis on health-related fitness. Using appropriately selected measures to collected fitness data in youth will advance our understanding of how fitness among youth translates into better health. In Fitness Measures and Health Outcomes in Youth, the IOM assesses the relationship between youth fitness test items and health outcomes, recommends the best fitness test items, provides guidance for interpreting fitness scores, and provides an agenda for needed research. The report concludes that selected cardiorespiratory endurance, musculoskeletal fitness, and body composition measures should be in fitness surveys and in schools. Collecting fitness data nationally

and in schools helps with setting and achieving fitness goals and priorities for public health at an individual and national level.

Genetic Determinants of Habitual Physical Activity

Is there a sufficient evidence base for the U.S. Department of Health and Human Services (HHS) to develop a comprehensive set of physical activity guidelines for Americans? To address this question, the Institute of Medicine (IOM) held a workshop titled "Adequacy of Evidence for Physical Activity Guidelines Development" in Washington, DC on October 23-24, 2006, sponsored by HHS. The workshop summary includes the presentations and discussions of more than 30 experts who were asked to consider the available evidence related to physical activity and the general population, as well as special population subgroups including children and adolescents, pregnant and postpartum women, older adults, and persons with disabilities. The summary provides an overview of the specific issues of relevance in assessing the quality and breadth of the available evidence.

Adequacy of Evidence for Physical Activity Guidelines Development

Physical Activity and Cardiovascular Disease Prevention helps students understand the epidemiology behind the assertion that physical activity is associated with better health and quality of life. This text addresses the principles governing physical activity, the methods for measuring exertion, the cardiovascular and metabolic responses to physical activity, and cardiovascular disease and risk factors.

Physical Activity and Cardiovascular Disease Prevention

Patients with heart failure (HF) suffer from symptoms such as dyspnea, fatigue and reduced quality of life, which affect their physical function and often lead to immobilization and poor survival prognosis. Exercise training in cardiac rehabilitation should be offered to every patient with HF and can be performed both in a hospital-setting and with a home training programme. Exercise, in patients with HF, improves physical function and functional capacity as well as health-related quality of life (HRQoL) and reduces the need for hospital care. There are several barriers against participating in exercise based cardiac rehabilitation despite information about its benefits. The patient may anticipate not being able to exercise, that the exercise would be too hard, lives far away or has not been referred. Aim: The aim of this thesis was to evaluate the effects of exercise in heart failure patients, of a one-year training programme, with hospital-based training followed by a home-based setting or only home-based, with special emphasis on peripheral muscle training (PMT). Furthermore, to study frequently used methods for evaluation of the effects, i.e the 6-minute walk test and instruments for estimating health-related quality of life. Methods and findings: In study I, PMT was evaluated and the PMT programme in a hospital-setting (with equipment) and subsequent homebased training (with elastic bands) was compared with solely home-based training, over 1 year. At follow-up every third month, duplicated six minute walk test (6MWT) and two HRQoL questionnaires were used. The walking distance increased significantly after three months in both groups and was maintained thereafter. Also HRQoL increased but at different time points. In study II, PMT was compared with interval training on an ergometer bike/free walking. Both groups started under supervision of a physiotherapist in a hospital-setting, for three months and thereafter at home for nine months. The same measurements were used as in study I. Neither walking distance nor HRQoL changed over the study period. However, this may be regarded as a positive effect in the light of the known progressive nature of heart failure. In study III, the 6MWTs from study I and II were used to evaluate the necessity of performing duplicated 6MWTs in follow-ups clinically and for research purposes. We found that it is sufficient to perform one 6MWT. In study IV, both 6MWT and HRQoL forms from study I and II were used to investigate the relationship between walking distance and perceived HRQoL in HF patients. Patients with shorter walking distance, than the group median, experienced poorer general HRQoL but not HRQoL related to HF, than the higher performing half of the study group. There were no longitudinal trends in these relationships. Conclusion: PMT can be used as an exercise modality in patients with HF, both in hospital and at home, and may be evaluated with a single 6MWT. Shorter walking distance was related to a lower general HRQoL as judged by the patients but there was no significant relation between short walking distance and the HF-related HRQoL. Individualizing the training programme and methods, and offering the choice of exercise modality and the possibility of exercising at home, might be a way to increase adherence in cardiac rehabilitation. Patienter med hjärtsvikt besväras av andfåddhet och trötthet vilket påverkar deras fysiska funktion och ofta leder till immobilisering, nedsatt livskvalitet och dålig prognos.

Träning inom hjärtrehabilitering bör erbjudas alla patienter med hjärtsvikt och kan utföras såväl på sjukhus som hemma med hemträningsprogram. Träning vid hjärtsvikt förbättrar fysisk funktion och funktionell kapacitet, hälsorelaterad livskvalitet, och minskar behovet av vård på sjukhus. Det finns många barriärer till att delta i hjärtrehabilitering trots information om vinster, t ex att patienten tror sig inte klara av att träna, bor långt ifrån, har inte fått remiss för att nämna några. Syfte: Syftet med avhandlingen var att utvärdera effekterna av ett träningsprogram för patienter med hjärtsvikt under 1 år, träning på sjukhus följt av hemträning eller enbart hemträning. Ett specifikt syfte var att utvärdera perifer muskelträning (PMT) som en möjlig, lämplig träningsmetod för hjärtsviktspatienter. Vidare var syftet att utvärdera effekten av sex minuters gångtest och hälsorelaterad livskvalitet. Metod och resultat: I studie I utvärderades PMT och jämförde träning på sjukhus (med redskap) med efterföljande hemträning (med elastiska band) med enbart hemträning under 1 år. Vid utvärdering var tredje månad användes dubbla sex minuters gångtest och frågeformulär om livskvalitet. Gångsträckan ökade signifikant efter träning och höll i sig hela träningsperioden i båda grupperna. Även livskvaliteten ökade men vid olika tidpunkter. I studie II, jämfördes PMT med intervallträning på ergometercykel/promenader. Båda grupperna tränade under ledning av fysioterapeut i tre månader och därefter hemma upp till 1 år. Samma utvärdering som i studie I. Gångsträcka och livskvaliteten ändrade sig inte under studietiden. Det kan dock ses som en positiv effekt eftersom hjärtsviktspatienter vanligen försämras över tid. I studie III, användes gångtesten från studie I och II för att utvärdera om det är nödvändighet att utföra dubbla sex minuters gångtest vid utvärdering. Ingen kliniskt betydelsefull skillnad sågs mellan gångtest ett och två. I studie IV, användes både gångtest och livskvalitetsformulär, från studie I och II, för att undersöka samband mellan gångsträcka och upplevd livskvalitet och om detta samband ändrades med tiden. Patienter med kortare gångsträcka upplevde sämre allmän hälsorelaterad livskvalitet men inte livskvalitet relaterad till hjärtsvikten, någon kliniskt signifikant förändring över tid kunde inte påvisas. Konklusion: Perifer muskelträning kan användas som en säker träningsform för patienter med hjärtsvikt, både på sjukhus och som hemträning och kan utvärderas med endast ett sex minuters gångtest. Patienter med kortare gångsträcka upplever sämre allmän livskvalitet vilket förefaller relativt oberoende av de olika testtidpunkterna.

Exercise training and testing in patients with heart failure

Exercise Genomics encompasses the translation of exercise genomics into preventive medicine by presenting a broad overview of the rapidly expanding research examining the role of genetics and genomics within the areas of exercise performance and health-related physical activity. Leading researchers from a number of the key exercise genomics research groups around the world have been brought together to provide updates and analysis on the key discoveries of the past decade, as well as lend insights and opinion about the future of exercise genomics, especially within the contexts of translational and personalized medicine. Clinicians, researchers and health/fitness professionals will gain up-to-date background on the key findings and critical unanswered questions across several areas of exercise genomics, including performance, body composition, metabolism, and cardiovascular disease risk factors. Importantly, basic information on genomics, research methods, and statistics are presented within the context of exercise science to provide students and professionals with the foundation from which to fully engage with the more detailed chapters covering specific traits. Exercise Genomics will be of great value to health/fitness professionals and graduate students in kinesiology, public health and sports medicine desiring to learn more about the translation of exercise genomics into preventive medicine.

Exercise Genomics

This comprehensive new volume in the Encyclopaedia of SportsMedicine series, published under the auspices of the InternationalOlympic Committee, delivers an up-to-date, state of the artpresentation of the medical conditions that athletes may sufferfrom during training and competition. Presented in a clear style and format, The Olympic Textbookof Medicine in Sport, covers not only the basic approach totraining, monitoring training and the clinical implications ofexcessive training, but also deals with all the major systems inthe body, and focuses on medical conditions that athletes maysuffer from in each system. Medical conditions in athletes withdisabilities, genetics and exercise and emergency sports medicineare also uniquely examined. The Olympic Textbook of Medicine in Sport draws on theexpertise of an international collection of contributors who arerecognized as leaders in their respective fields. The systematic approach followed in the book will make itinvaluable to all medical doctors and other health personnel whoserve athletes and sports teams. Sports practitioners are providedwith a clinical

approach to the prevention, diagnosis and treatmentof common and less common medical problems encountered by athletes.This volume should be kept close at hand for frequentconsultation.

Physical Activity and Aging

This report considers the biological and behavioral mechanisms that may underlie the pathogenicity of tobacco smoke. Many Surgeon General's reports have considered research findings on mechanisms in assessing the biological plausibility of associations observed in epidemiologic studies. Mechanisms of disease are important because they may provide plausibility, which is one of the guideline criteria for assessing evidence on causation. This report specifically reviews the evidence on the potential mechanisms by which smoking causes diseases and considers whether a mechanism is likely to be operative in the production of human disease by tobacco smoke. This evidence is relevant to understanding how smoking causes disease, to identifying those who may be particularly susceptible, and to assessing the potential risks of tobacco products.

The Olympic Textbook of Medicine in Sport

Now thoroughly updated with current, evidence-based material, Cardiac Nursing is recognized as "The Red Reference Book" for nurses caring for patients who have, or are at risk for developing, cardiac diseases. Organized within the framework of the nursing process, this comprehensive clinical reference provides complete information on the assessment, pathophysiology, management, and prevention of heart diseases and details the rationale and evidence for interventions. This edition has seven brand-new chapters on inflammation, atherosclerosis, genetics, heart rate variability, complementary and alternative medicine, disease management models, and nuclear and other scans. Boxes of evidence-based content have been added within chapters where appropriate.

Exercise in Cardiovascular Health and Disease

Introduction: It is reported that regular physical activity (PA) is linked to increased neuro-cognitive function (NCF) in children, with moderate-vigorous physical activity (MVPA) showing the most benefits (Syvaoja et al. 2015). What remains unclear is i) which elements of cognition, are affected by exercise intensities in healthy youth and ii) what model could demonstrate the importance of a holistic approach to the development and education of an individual. Purpose: The aim of the study was to examine the association between NCF with PA, Cardiovascular Fitness (CVF), and psychological determinants in Irish youth mean age 12.25 years, at a crucial time point in their development. Specific attention was given to identifying whether a specific level of PA contributes to efficient NCF, while also investigating a potential model to demonstrate the importance of a holistic approach to the development and education of an individual. Methods: Information was gathered on participants (n = 262) levels of PA (Actigraph Accelerometer GT1M, GT3X, or GT3X+), CV (20m progressive shuttle run test), NCF (Reaction time (RTI) Attention (AST), Working Memory (SWM), Cognitive Flexibility (RVP) and Executive Functioning), health and wellbeing (KIDSCREEN 27) and academic achievement (AA). Results: This study reported that Light PA, Moderate PA, MVPA, Vigorous PA and CVF associated with NCF. A model of all variables was developed to demonstrate the importance of a holistic approach to child development. Path analysis (AMOS 21) demonstrated a good fit for this proposed model (NFI = .863, TLI = .998, CFI = .996 and RMSEA = .007). Conclusion: Preliminary findings suggest that performance in NCF tasks are associated with specific PA intensity levels and CVF. The statistical significance of the proposed model highlights the importance of a holistic approach in the development and education of an individual. Future Recommendations: A longitudinal study is warranted to monitor and evaluate the development of NCF and the proposed model in preadolescence as they progress through to adolescence years. Adolescence is a time where a lot of change occurs with potential effects on NCF development. Research is needed on the effect of pre-and- post PA on NCF. This thesis along with previous research has demonstrated that there is a relationship between PA intensity levels, CVF and NCF.

Cumulated Index Medicus

Few would dispute the truth of the statement `People are Different', but there is much controversy over why. This book authoritatively explains the methods used to understand human variation, and extends them far beyond the primary `nature or nurture' question. After chapters on basic statistics, biometrical genetics, matrix algebra and path analysis, there is a state-of-the-art account of how to fit genetic models using the LISREL package. The authors explain not only the assumptions of the twin method, but how to test them. The elementary model is expanded to cover sex limitation, sibling interaction,

multivariate and longitudinal data, observer ratings, and twin-family studies. Throughout, the methods are illustrated by applications to diverse areas such as obesity, major depression, alcohol comsumption, delinquency, allergies, and common fears.

Adult Fitness and Cardiac Rehabilitation

This book examines the health/fitness interaction in an historical context. Beginning in primitive hunter-gatherer communities, where survival required adequate physical activity, it goes on to consider changes in health and physical activity at subsequent stages in the evolution of “civilization.” It focuses on the health impacts of a growing understanding of medicine and physiology, and the emergence of a middle-class with the time and money to choose between active and passive leisure pursuits. The book reflects on urbanization and industrialization in relation to the need for public health measures, and the ever-diminishing physical demands of the work-place. It then evaluates the attitudes of prelates, politicians, philosophers and teachers at each stage of the process. Finally, the book explores professional and governmental initiatives to increase public involvement in active leisure through various school, worksite, recreational and sports programmes.

How Tobacco Smoke Causes Disease

This book examines the links between physical activity (PA), cardiorespiratory fitness (CRF), and cardiovascular and metabolic diseases. It presents an overview of the role of PA and CRF in the prevention and management of risk factors associated with cardiometabolic diseases such as hypertension, peripheral vascular disease, stroke, type 2 diabetes, metabolic syndrome, dyslipidemia, obesity, and atherosclerosis. In addition, it explores how these risks vary with different populations such as the elderly and people of various racial backgrounds. The book also highlights risks associated with exercise and presents a prescription for appropriate and efficacious exercise to minimize risk and maximize health benefits for the heart. Cardiorespiratory Fitness in Prevention and Management of Cardiometabolic Disease is an essential resource for physicians, exercise physiologists, medical students, residents, fellows, nurses, and researchers in cardiology, cardiorespiratory fitness, exercise science, health promotion and disease prevention, public health, and epidemiology.

Cardiac Nursing

Diet and Health examines the many complex issues concerning diet and its role in increasing or decreasing the risk of chronic disease. It proposes dietary recommendations for reducing the risk of the major diseases and causes of death today: atherosclerotic cardiovascular diseases (including heart attack and stroke), cancer, high blood pressure, obesity, osteoporosis, diabetes mellitus, liver disease, and dental caries.

An Examination of Neuro-cognitive Functioning and Its Relationship with Physical Activity Intensity Levels and Cardiovascular Fitness, and the Importance of a Holistic Approach to the Development and Education of a Child

The understanding of how to reduce risk factors for mental disorders has expanded remarkably as a result of recent scientific advances. This study, mandated by Congress, reviews those advances in the context of current research and provides a targeted definition of prevention and a conceptual framework that emphasizes risk reduction. Highlighting opportunities for and barriers to interventions, the book draws on successful models for the prevention of cardiovascular disease, injuries, and smoking. In addition, it reviews the risk factors associated with Alzheimer's disease, schizophrenia, alcohol abuse and dependence, depressive disorders, and conduct disorders and evaluates current illustrative prevention programs. The models and examination provide a framework for the design, application, and evaluation of interventions intended to prevent mental disorders and the transfer of knowledge about prevention from research to clinical practice. The book presents a focused research agenda, with recommendations on how to develop effective intervention programs, create a cadre of prevention researchers, and improve coordination among federal agencies.

Methodology for Genetic Studies of Twins and Families

The 2008 Physical Activity Guidelines for Americans provides science-based guidance to help Americans aged 6 and older improve their health through appropriate physical activity. The primary audiences for the Physical Activity Guidelines are policymakers and health professionals.

An Illustrated History of Health and Fitness, from Pre-History to our Post-Modern World

The Exercise Effect on Mental Health contains the most recent and thorough overview of the links between exercise and mental health, and the underlying mechanisms of the brain. The text will enhance interested clinicians' and researchers' understanding of the neurobiological effect of exercise on mental health. Editors Budde and Wegner have compiled a comprehensive review of the ways in which physical activity impacts the neurobiological mechanisms of the most common psychological and psychiatric disorders, including depression, anxiety, bipolar disorder, and schizophrenia. This text presents a rigorously evidence-based case for exercise as an inexpensive, time-saving, and highly effective treatment for those suffering from mental illness and distress.

Cardiorespiratory Fitness in Cardiometabolic Diseases

Twin and family data have traditionally been used to quantify the genetic and environmental contribution to disease. Through the application of new analytical approaches, these designs can also provide powerful models in which the search for specific genes underlying non-Mendelian diseases can be optimised. This book discusses the state-of-the-art in twin and sib-pairs analysis of complex diseases both from the perspective of epidemiology (study design, subject selection, sampling strategies) and biostatistics (path analysis, survival analysis, linkage analysis, association studies). Novel ways are discussed in which twins and sib-pairs can be used to meet the challenge of identifying the location and function of genes underlying complex traits. This book will appeal to a wide range of biomedical scientists interested in the genetic basis of disease, epidemiologists, molecular biologists, human geneticists and students.

Physical Activity, Exercise and Ageing

Stroke is a major cause of death and the major cause of adult neurological disability in most of the world. Despite its importance on a population basis, research into the genetics of stroke has lagged behind that of many other disorders. However, the situation is now changing. Anincreasing number of single gene disorders causing stroke are being described, and there is growing evidence that polygenic factors are important in the risk of apparently "sporadic" stroke.Stroke Genetics provides an up-to-date review of the area, suitable for clinicians treating stroke patients, and both clinical and non-clinical researchers in the field of cerebrovascular disease. The full range of monogenic stroke disorders causing cerebrovascular disease, including ischaemicstroke, intracerebral haemorrhage, aneurysms and arteriovenous malformations, are covered. For each, clinical features, diagnosis, and genetics are described. Increasing evidence suggest that genetic factors are also important for the much more common multifactorial stroke; this evidence isreviewed along with the results of genetic studies in this area. Optimal and novel strategies for investigating multifactorial stroke, including the use of intermediate phenotypes such as intima-media thickness and MRI detected small vessel disease are reviewed. The book concludes by describing apractical approach to investigating patients with stroke for underlying genetic disorders. Also included is a list of useful websites.

Diet and Health

The psychology of eating is regulated by neural mechanisms. When not well controlled, eating may result in disorders and health hazards such as obesity, type 2 diabetes mellitus, and vascular diseases. Lifestyles and cultures influence eating habits, thus there are differences in the prevalence of health problems depending upon living environments. This book examines the psychology and the pathophysiological outcomes of eating. Chapters address such topics as the influence of lifestyle, circadian rhythm, sleep, and fragrant odors on appetite and weight regulation; the impact of glucose, sucrose, lactate, and ketone bodies on the brain; the consequences of glycation stress on the skeletal muscle; and much more.

Reducing Risks for Mental Disorders

Fully revised and expanded, the second edition of Molecular Exercise Physiology offers a student-friendly introduction. It introduces a history documenting the emergence of molecular biology techniques to investigate exercise physiology, the methodology used, exercise genetics and epigenetics, and the molecular mechanisms that lead to adaptation after different types of exercise, with explicit links to outcomes in sport performance, nutrition, physical activity and clinical exercise. Structured around key topics in sport and exercise science and featuring contributions from pioneering scientists, such as Nobel Prize winners, this edition includes new chapters based on cutting-edge research in epigenetics and muscle memory, satellite cells, exercise in cancer, at altitude, and in hot and cold climates. Chapters

include learning objectives, structured guides to further reading, review questions, overviews of work by key researchers and box discussions from important pioneers in the field, making it a complete resource for any molecular exercise physiology course. The book includes cell and molecular biology laboratory methods for dissertation and research projects in molecular exercise physiology and muscle physiology. This book is essential reading for upper-level undergraduate or postgraduate courses in cellular and molecular exercise physiology and muscle physiology. It is a valuable resource for any student with an advanced interest in exercise physiology in both sport performance and clinical settings.

Movement and Circulation

In the past, ‘traditional’ moderate-intensity continuous training (60-75% peak heart rate) was the type of physical activity most frequently recommended for both athletes and clinical populations (cf. American College of Sports Medicine guidelines). However, growing evidence indicates that high-intensity interval training (80-100% peak heart rate) could actually be associated with larger cardiorespiratory fitness and metabolic function benefits and, thereby, physical performance gains for athletes. Similarly, recent data in obese and hypertensive individuals indicate that various mechanisms – further improvement in endothelial function, reductions in sympathetic neural activity, or in arterial stiffness – might be involved in the larger cardiovascular protective effects associated with training at high exercise intensities. Concerning hypoxic training, similar trends have been observed from ‘traditional’ prolonged altitude sojourns (‘Live High Train High’ or ‘Live High Train Low’), which result in increased hemoglobin mass and blood carrying capacity. Recent innovative ‘Live Low Train High’ methods (‘Resistance Training in Hypoxia’ or ‘Repeated Sprint Training in Hypoxia’) have resulted in peripheral adaptations, such as hypertrophy or delay in muscle fatigue. Other interventions inducing peripheral hypoxia, such as vascular occlusion during endurance/resistance training or remote ischemic preconditioning (i.e. succession of ischemia/reperfusion episodes), have been proposed as methods for improving subsequent exercise performance or altitude tolerance (e.g. reduced severity of acute-mountain sickness symptoms). Postulated mechanisms behind these metabolic, neuro-humoral, hemodynamics, and systemic adaptations include stimulation of nitric oxide synthase, increase in anti-oxidant enzymes, and down-regulation of pro-inflammatory cytokines, although the amount of evidence is not yet significant enough. Improved O2 delivery/utilization conferred by hypoxic training interventions might also be effective in preventing and treating cardiovascular diseases, as well as contributing to improve exercise tolerance and health status of patients. For example, in obese subjects, combining exercise with hypoxic exposure enhances the negative energy balance, which further reduces weight and improves cardio-metabolic health. In hypertensive patients, the larger lowering of blood pressure through the endothelial nitric oxide synthase pathway and the associated compensatory vasodilation is taken to reflect the superiority of exercising in hypoxia compared to normoxia. A hypoxic stimulus, in addition to exercise at high vs. moderate intensity, has the potential to further ameliorate various aspects of the vascular function, as observed in healthy populations. This may have clinical implications for the reduction of cardiovascular risks. Key open questions are therefore of interest for patients suffering from chronic vascular or cellular hypoxia (e.g. work-rest or ischemia/reperfusion intermittent pattern; exercise intensity; hypoxic severity and exposure duration; type of hypoxia (normobaric vs. hypobaric); health risks; magnitude and maintenance of the benefits). Outside any potential beneficial effects of exercising in O2-deprived environments, there may also be long-term adverse consequences of chronic intermittent severe hypoxia. Sleep apnea syndrome, for instance, leads to oxidative stress and the production of reactive oxygen species, and ultimately systemic inflammation. Postulated pathophysiological changes associated with intermittent hypoxic exposure include alteration in baroreflex activity, increase in pulmonary arterial pressure and hematocrit, changes in heart structure and function, and an alteration in endothelial-dependent vasodilation in cerebral and muscular arteries. There is a need to explore the combination of exercising in hypoxia and association of hypertension, developmental defects, neuro-pathological and neuro-cognitive deficits, enhanced susceptibility to oxidative injury, and possibly increased myocardial and cerebral infarction in individuals sensitive to hypoxic stress. The aim of this Research Topic is to shed more light on the transcriptional, vascular, hemodynamics, neuro-humoral, and systemic consequences of training at high intensities under various hypoxic conditions.

Physical Activity and Cardiovascular Health

Vols. for 1963- include as pt. 2 of the Jan. issue: Medical subject headings.

2008 Physical Activity Guidelines for Americans

Explores the discovery, nature, and role of genes in evolution and development.

The Exercise Effect on Mental Health

The Oxford Handbook of Parenting and Moral Development provides a collection of state-of-the-art theories and research on the role that parents play in moral development. Contributors who are leaders in their fields take a comprehensive, yet nuanced approach to considering the complex links between parenting and moral development. The volume begins by providing an overview of traditional and contemporary perspectives on parenting and moral development, including perspectives related to parenting styles, domain theory, attachment theory, and evolutionary theory. In addition, there are several chapters that explore the genetic and biological influences related to parenting and moral development. The second section of the volume explores cultural and religious approaches to parenting and moral development and contributes examples of contemporary research with diverse populations such as Muslim cultures and US Latino/as. The last major section of the volume examines recent developments and approaches to parenting, including chapters on topics such as helicopter parenting, proactive parenting, parent-child conversations and disclosure, parental discipline, and other parenting practices designed to inhibit children's antisocial and aggressive behaviors. The volume draws together the most important work in the field; it is essential reading for anyone interested in parenting and moral development.

Advances in Twin and Sib-pair Analysis

This book explains the relationships between physical activity, health and disease, and examines the benefits of exercise in the prevention and treatment of various important conditions. This book offers an examination of the evidence linking levels of physical activity with disease and mortality.

Stroke Genetics

This Surgeon General's report details the causes and the consequences of tobacco use among youth and young adults by focusing on the social, environmental, advertising, and marketing influences that encourage youth and young adults to initiate and sustain tobacco use. This is the first time tobacco data on young adults as a discrete population have been explored in detail. The report also highlights successful strategies to prevent young people from using tobacco

Psychology and Pathophysiological Outcomes of Eating

The tender period between childhood and adolescence is full of changes for young children. They are approaching the onset of sexual maturation, and because they are beginning their school careers, the possibilities for voluntary play and movement rapidly decrease while mental stress rapidly increases. It is very important that young children have a basic knowledge about correct running, jumping, throwing, and swimming as well as knowledge of how to play different sports and games. However, there are no criteria for acceptable levels of motor skills or how to correctly measure those motor skills. Focusing on a traditionally less studied age group, Growth, Physical Activity, and Motor Development in Prepubertal Children presents concentrated and selected information about the relationships among health and anthropometry, physical activity, motor ability, and motor development in children between the ages of eight and twelve. Extensively referenced, this book features the results of comprehensive studies of development during the prepubertal years as they relate to environmental conditions. It devotes special attention to body composition and health-related physical fitness. The book discusses recommended testing methods, including their validity, objectivity, and reliability. The health of children depends on their levels of physical activity, their motor abilities, and their motor skills. With the tools and guidelines provided in Growth, Physical Activity, and Motor Development in Prepubertal Children, you will be able to easily evaluate physical activity, then confidently guide children toward optimum growth and development.

Molecular Exercise Physiology

This is a major international textbook for psychiatrists and other professionals working in the field of mental healthcare. With contributions from opinion-leaders from around the globe, this book will appeal to those in training as well as to those further along the career path seeking a comprehensive and up-to-date overview of effective clinical practice backed by research evidence. The book is divided into cohesive sections moving from coverage of the tools and skills of the trade, through descriptions

of the major psychiatric disorders and on to consider special topics and issues surrounding service organization. The final important section provides a comprehensive review of treatments covering all of the major modalities. Previously established as the Essentials of Postgraduate Psychiatry, this new and completely revised edition is the only book to provide this depth and breadth of coverage in an accessible, yet authoritative manner.

High-Intensity Exercise in Hypoxia - Beneficial Aspects and Potential Drawbacks

The 3 volumes of which this reference work is comprised cover the development and philosophy behind public health, its ways of dealing with health problems, and the applications of public health science at national and international levels.

Index Medicus

Genes