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Principle Responsibility  
The study 'Growth, Health and Fitness of Teenagers' is a multiple longitudinal study, carried out in Amsterdam at the University of Amsterdam in The Netherlands.  
The study is a joint research project of the Coronel Laboratory for occupational and environmental health (Prof. Dr. R.L. Zielhuis), Laboratory of Psychophysiology (Prof. Dr. P. Visser), and the Working Group of Exercise Physiology and Health (Prof. Dr. H. C. G. Kemper).  

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Preface

This volume in the series Medicine and Sport Sciences is devoted to the research of growth, health and fitness of teenagers, the generation that will bring forth the top athletes of the eighties. Longitudinal studies of young people between the ages of 12 and 18 are rarely found in the literature. The current longitudinal study was initiated after a series of experiments to measure the influence of school physical education since 1968 carried out at the University of Amsterdam. In general, no clear effects of intensified [Kemper et al., 1971] or additional [Kemper, 1973; Kemper et al., 1976; Snel et al., 1976] physical education upon the physical and psychological development of secondary schoolboys could be proved. The results, however, were restricted to a specific sample: only boys in the age range 12-13 years. There were also indications that differences in biological development and in habitual physical activity of the pupils could have masked any effects [Kemper et al., 1975]. The relatively good physical performance capacity of these boys may have caused the absence of positive training effects. At the same time, health authorities complain about the level of physical fitness of youngsters only a few years older in their late teens. This illustrates that the teenage period is important. In growing towards independence their life-style may change considerably (such as food and activity habits) and thus change their health perspective. Individual changes in growth and development can be most precisely described by studying the same subjects over a longer period of time. In view of the confounding effects inevitably connected to longitudinal measurements, we designed a multiple longitudinal study so that these effects (time of
measurement, cohort effects and testing effects) can be estimated separately.

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The study presented in this volume has been designed to describe the course of the physical and psychosocial development of teenagers in The Netherlands and to find out whether there is a change of health status of this population in growth.

In part I of this volume a survey is given of longitudinal research carried out since 1900 which is multidisciplinary to the same extent as the present study, and covers the same adolescent period from 12 to 18 years of age.

In part II the set-up of the present study - Growth, Health and Fitness of Teenagers - is described with chapters devoted to purpose and design (chapter 2), subjects and procedures (chapter 3).

Part III describes all the methods used in the multidisciplinary study: physical (chapter 4) and psychosocial (chapter 5) measurements, eating and smoking habits (chapter 6) and habitual physical activity (chapter 7).

In part IV the results are given concerning growth changes of height and weight, including height velocity (chapter 8), biological development (chapter 9), body build and composition (chapter 10). Also functional measurements about motor performances (chapter 11) and maximal aerobic power (chapter 12) are discussed and compared with data from other studies. Cardiovascular risk indicators such as blood pressure, serum cholesterol and also complaints about backache were investigated (chapter 13). In chapters 14 and 15, developmental changes in some personality traits and sociometric status in the class are given. Chapters 16 and 17 deal with the results of energy intake (eating practices) and energy output (pattern of daily activity) respectively. Chapter 18 summarizes the conclusions about the growth, health and fitness of Dutch teenagers.

Prof. Dr. Han C. G. Kemper

References


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