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Unified approach to health and fitness in integrated Europe

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Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

Unified approach to health and fitness in integrated Europe / Zunifikowane podejście do problemów zdrowia i sprawności w zjednoczonej Europie

Key words: sport, fitness, life-style

Though, human health is influenced by biological, ecological and behavioural factors, life-style determines health in 53 percent and appropriate physical activity and good fitness can make a major contribution to it. Therefore, the Committee for the Development of Sport in the European Parliament aimed at accurately assessing physical fitness in children and adults. Thus, the Eurofit has been elaborated, consisting of three major constituents: organic, motor and cultural based on a battery of tests and anthropometrical measurements. The application of the Eurofit has been recommended by the European Parliament with wholehearted support of the Committee of Ministers to all Member States.

According to the concept recently introduced by the World Health Organization health is a positive phenomenon with emphasis on the individual and social potential for a full life and a resource for everyday life, not a goal of life itself. Human health is influenced by a number of factors which are presented in a model of human ecosystem elaborated by Hancock and Perkins named mandala of health [Karski, Pawlak 1995, p. 27].

Factors presented in the paper could be divided into three groups:

- biological factors;
- ecological factors;
- behavioural factors.

Research conducted by the American Institute of Medical Sciences in Massachusetts in 80-ties of XX century proved that life-style determines health in 53 percent, genetic features – 16 percent, ecological conditions in 21 percent and level and accessibility to medical services – only 10 percent [Morris 1994, pp. 135–136]

It is becoming increasingly evident that appropriate physical activity, and hence good fitness, can make a major contribution to public health of developed nations. Large segments of populations exhibit style of life related disease risk factors. From the public health point of view, individuals with a few low to moderate risk factor levels can perhaps benefit most from healthy life-style including physical activity [Rudawska 2003, p. 23].

Furthermore, physical activity is the most prevalent modifiable health risk factor in European populations. Moreover, physical activity has many favourable effects on other risk factors: environmental, behavioural and cultural [Gurfman, pp. 574–576].

This most prevalent risk factor is not unfortunately omnipresent in our society.

According to Wojciech Drygas 70 percent of Poles prefers sedentary style of life to physical activity. We are also very far amongst European countries with the quantity of people who frequently go in for sport [“Newsweek”, 2003, p. 105].

- With regard to lack of physical activity in Polish society in comparison to other western European countries, the Ministry of Education and Sport on the doorstep of our access to European Union elaborated strategy of sports development in Poland up to 2012. “The Strategy” adopted by the government dealt with six areas:
 - physical education and sports at school;
 - sports for all;
 - qualified sport;
 - education and training of physical education teachers, instructors and coaches;
 - sports infrastructure;
 - scientific researches in sport and medical services [Kielak 2003, p. 8–12].

Having in mind physical education and sports for all, it is worth remembering that the Committee for the Development of Sport in the European Parliament in 1987 entrusted several years' coordinated European research into a long-felt need: the identification, or development, if necessary, of effective means of accurately assessing physical fitness in children and later in adults – EUROFIT. The assessment should be appropriate to school and survey use. A number of established tests and test “batteries” existed already. Some of them very good and reliable also in Poland.

Sport, physical education and health cross national boundaries: they use common tools, instruments and language. Physical fitness therefore lends itself to being assessed in the same way across Europe.

Three main reasons have inspired the creation of Eurofit

- physical fitness is an important component of health and physical education: in a relatively short time descriptive information concerning the condition of children can be assessed, and if necessary revised often with implication for society as a whole. For the individual child, the measurement of fitness develops a positive attitude and enables him or her to achieve self-awareness of his physical state. The tests may reveal individual or group deficiencies in health. With regard to sports participation, the tests may discover weaknesses in general preparation.
- The Eurofit could be modified for disabled children;
- assessment of physical fitness is of value to educators and children. Eurofit tests are sensitive, individual and reliable instruments for assessing its various dimensions;
- Eurofit is a contribution to education. Understanding and acquiring;
- physical fitness is only part of physical education. It is not the sole concern or responsibility of physical education teachers. It should be a common concern of children, parents, school interests and, indeed, of all society.

The concept of physical fitness can be divided into three major constituents:

- organic;
- motor;
- cultural.

The organic dimension is closely linked to individual's physique, concerns processes of energy production and work output.

The dimension of fitness is closely related to health, and is represented in Eurofit by a choice of cardio-respiratory endurance tests.

The motor dimension of physical fitness concerns the development of psychomotor capacities required for the control of movement and muscular skills: strength, muscular endurance and speed.

The cultural dimension refers to the influence of such factors as the situation of physical education in the school system or the accessibility of sports clubs or facilities. Somatic factors may also affect the results in certain tests.

Components of fitness in Eurofit are:

- agility;
- power;
- cardio-respiratory endurance;
- strength;
- muscular endurance;
- body composition;
- flexibility;
- speed;
- balance.

REFERENCE SCALES

In order to establish national or regional reference scales and profile charts the subject's age and sex should appear on the Eurofit score-sheet. Such reference scales and profile charts can only be established when a representative group of people have performed the tests under strictly

controlled and standardised conditions. Any individual's raw scores can be referred to the distribution of the scores of representative sample in order to find his or her position.

Reference scales have been already elaborated for representative population samples in Great Britain, Netherlands, Sweden, France and Belgium and that has allowed the formation of distribution percentile categories. The raw score is described as eg. "at the 50th percentile", "within the top or bottom percentile" and so on.

There are obvious limitations arising from this approach viz:

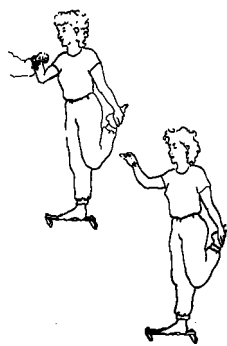
- the borders of each category are subject to confidence intervals related to the sample size and do not constitute precise divisions;
- within a population the fitness levels may fluctuate and thus a spurious indication may be given of the change of stability of the individual score;
- the reference scales are specific with regard to geographical region and sociocultural factors.

All the tests from Eurofit battery have been checked for validity, reliability, feasibility and usefulness [Sikorski 1990, pp. 61-67].

BATTERY OF EUROFIT TESTS

Endurance shuttle run test (ESR).

A test of cardio-respiratory fitness, which begins at walking pace ends running fast, whereby the subjects move from one line to another 20 meters distant, reversing direction, and in accordance with a pace dictated by a sound signal, which gets progressively faster.



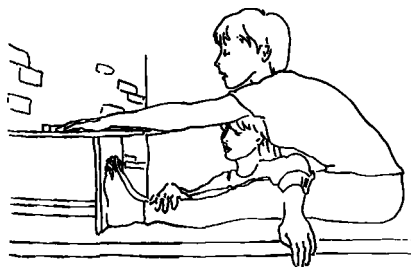
Flamingo balance test (FLB).

Balancing on one leg as on a beam of 50 cm long, 4 cm high and 3 cm wide for 1 min.



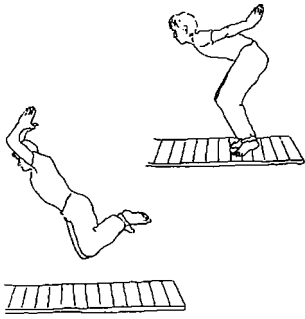
Plate tapping (PLT).

Rapid tapping of 2 plates alternately with the preferred hand -25 cycles as quickly as possible.

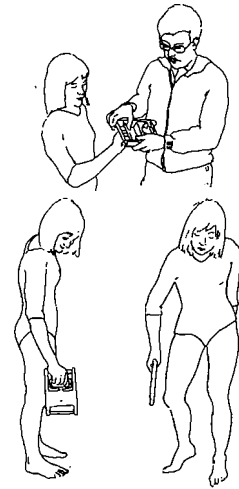
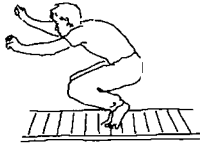


Sit and reach (SAR).

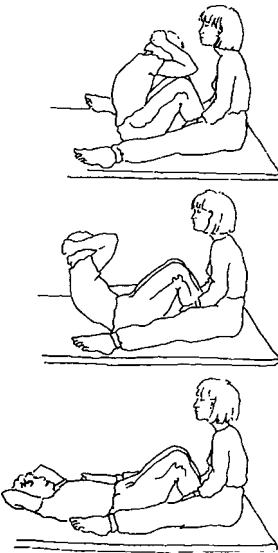
Reaching forward as far as possible from a sited position.



Standing broad jump (SBJ).
Jumping for a distance from a standing position.



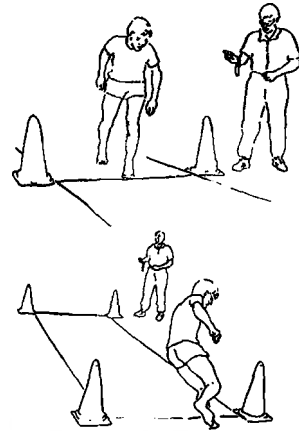
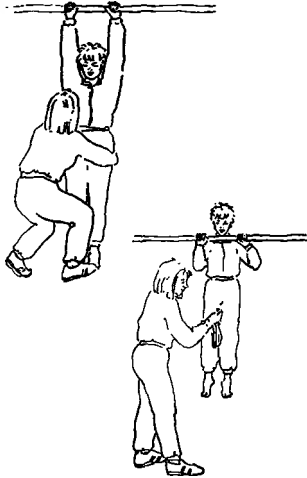
Hand grip (HGR).
A calibrated hand dynamometer with adjustable grip.



Sit-ups (SUP).
Maximum number of sit-ups achievable in 30 s.

Bent arm hang (BAH).

Maintaining a bent arm position while hanging from a bar.



Shuttle run: 10 x 5 m (SHR).

A running and turning at maximal speed.

ANTHROPOMETRIC MEASUREMENTS

- Height;
- Weight;
- Triceps skinfold;
- Biceps skinfold;
- Subscapular skinfold;
- Anterior suprailiac skinfold.

SUMMARY

At present human health is recognized as a positive phenomenon with emphasis on wellness from social and individual viewpoint. Researches conducted at the United States proved that life-style determines health in 53 percent, genetic features -16 percent, ecological conditions in 21 percent and accessibility for medical services only in 10 percent. Physical activity and fitness play a very important role in an individual life-style. Unfortunately, Poles are at the top of the European countries, who prefer sedentary style of life to physical activity. Committee of Experts on Sports Research have come to conclusion that because fitness is an important component of health, it is worthwhile to elaborate a tool appropriate for assessing fitness in children and adults – Eurofit, which will be applied in all Member States of European Union. The battery of tests adopted consists of: cardio-respiratory endurance, static strength and explosive power, functional and trunk strength, running speed, speed of limb movement, flexibility and total body balance. Anthropometric measures: height, weight, body fat and identification data have been also included in the Eurofit. Reference scales and profile charts have been and are being elaborated for representative groups of people with regard to sex and age. The Committee of Ministers under the terms of Article 15b of the Statue of the Council of Europe recommends the governments of member states to apply the Eurofit particularly in school aged children from 6 to 18 years old.

RECOMMENDATION No. R (87) 9 of the Committee of Ministers to Member States in the Eurofit Tests of Physical Fitness:

“The Committee of the Ministers, under the terms of Article 15, b of the Statute of the Council of Europe recommends the governments of member states:

1. to adopt or take steps leading to the adoption of the EUROFIT tests of physical fitness as set out in Appendix to this recommendation, for the purpose of measuring and assessing the physical fitness of school-aged children (in the range of 6–7 to 16–18 years old);
2. to take whatever steps may prove to be appropriate in the light of the obtained from the application of EUROFIT in order to:
 - maintain or improve the basic standard of physical fitness amongst children, paying particular attention to those children or groups of children who are shown to have a low average level of physical fitness,
 - obtain data which may be used for a better co-ordination of policies concerning physical education, sport, health and health education,
 - alert others besides physical education teachers, including the children themselves, parents, schools, sports clubs, etc, to their mutual responsibilities in maintaining a reasonable standard of physical fitness amongst those committed to their charge;
3. to ensure proper co-ordination between all the bodies which may be concerned with the implementation of EUROFIT at national, regional or local levels (e.g. ministries responsible for education and sport, school health authorities), and to encourage sports organisations to be associated with the implementation of EUROFIT;
4. to enable the appropriate authorities and schools to obtain the material required for the EUROFIT tests;
5. to arrange, where appropriate, in conjunction with other member states, for the initial training of physical education teachers to include physical fitness testing, and for an adequate in-service training of those persons who may carry out the EUROFIT test;
6. to set up a sufficient number of research units capable of carrying out the entire range of tests for national survey purposes in order to obtain objective data and to establish national reference for use at national level;
7. to make arrangements for the collection and interpretation of the data resulting from EUROFIT tests and for their dissemination, so that appropriate national reference values may be established and used for follow-up purposes;
8. to aim for each child in school to be assessed regularly, and preferably at least once a year, through the EUROFIT test, and to consider increasing the allocation of time given to the physical education curriculum in order to achieve this;
9. to take appropriate steps for the translation and distribution of the handbook describing the EUROFIT tests and their administration amongst the appropriate authorities, physical educationists and sports organisations.”

**COUNCIL OF EUROPE, COMMITTEE FOR THE DEVELOPMENT OF SPORT
COMMITTEE OF EXPERTS ON SPORTS RESEARCH**

**“Handbook for the EUROFIT tests of Physical Fitness”
Strasbourg, 1993**

It is worth mentioning that despite twelve years lapse of time, Eurofit in Poland has not been applied in schools, as it has been recommended by the Council of Europe Contributors to the “EUROFIT” Project,

Poland

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Słowa kluczowe: sport, fitness, styl życia

STRESZCZENIE

Chociaż na ludzkie zdrowie mają wpływ czynniki biologiczne, ekologiczne i behawioralne, to zdrowie jest zdeterminowane aż w 53 procentach stylem życia, a odpowiednia aktywność ruchowa oraz kondycja fizyczna może w znacznym stopniu przyczynić się do jego polepszenia. Dlatego Komitet Rozwoju Sportu w Parlamencie Europejskim postanowił opracować narzędzia dokładnie oceniające sprawność fizyczną dzieci i młodzieży. Opracowano więc Eurofit uwzględniający trzy ważne obszary: motoryczny, morfologiczny i kulturowy w oparciu o baterię testów i pomiarów antropometrycznych. Wdrożenie Eurofitu zarekomendował państwu członkowskim przy gorącym Poparciu Komitetu Ministrów, Parlament Europejski.