INTERACTING BETWEEN HEALTH AND PHYSICAL EXERCISE.
CONTRAINDICATIONS TO PHYSICAL EXERCISE

Teodora DOMINTEANU

Abstract
Exercise science practiced according to individual options have a beneficial influence on
the body at all ages, manifesting the potential decisive physical work capacity, the process
of aging. A good health can not touch or carry out regular practice since childhood,
exercise. Type effort, the volume and intensity of each body must be adjusted according to
age, sex, health, environmental conditions, skills, but never without close supervision and
regular health because, where there are strong organic or functional innate or acquired,
the same exercises that lead to better health for some, may cause worsening of disturbances
to others.

Keywords: health, physical exercise, contraindications

JEL classification: I 10, I 20

Sports medical practice has shown that systolic murmurs often found in children,
with good exercise tolerance may disappear with controlled physical training and
medical surveillance; playing so these children the chance to lead a normal life
without restriction of sports. The possibility of physical education programs
differently in relation to somatic-functional possibilities of the body collapses the
"exemption" to practice physical education.

Effects of exercise on the body
Effects of exercise on the body are reflected in general and on each organ in
particular. There is no area of the body that does not suffer this influence. The
degree and direction of these changes depend on the nature, quantity and intensity
of effort.

Effects of exercise on the body are immediate and delayed (training). Late effects
of exercise training is characterized by a number of structural and functional
changes that ultimately translate a marked increase in body economy. Change the
number and thickness of muscle fibers resulting in muscle hypertrophy through
increased protein in myofibrils assimilation. Improves muscle tone and strength.
Request from the muscle develops blood circulation, increases the capacity of the
fiber recovery and enables intense exercise and longer time. The heart grow in size
cavities expands managed to pump more blood with each beat which supply

1 Teodora Dominteana, Academy of Economic Studies, Department of Physical Education and Sport
teo_dominteana@yahoo.com, 0726.171.150
oxygen for cells operation. Thus, the persons involved, at rest, are few beats per minute required to achieve the same blood flow, compared to a untrained. From here functional aspects of economy.

I have to make some remarks on increasing the size of the heart in athletes. This change, far from being detrimental, are on the contrary, a phenomenon of adaptation and improvement of the economy of the heart, since, by increasing the cavity, and the strength of contraction of the heart involved, the ability of the heart to stress build-up can be sent to movement afoot to bodies increasingly oxygenated blood. The force of contraction of the heart involved is excellent, and this essentially different big heart tonic sports, dilated heart, a hypotonic cardiac patient who is not able, due to low shrinkage force, to meet the demands of peripherals.

It is stated by the medical world that the human heart with sedentary activities and preferences is a heart atrophied due to lack of demand. As you become older man there is a sclerosis of the blood vessels (atherosclerosis), which entails a poor irrigation tissues, especially the brain and heart. Producing an increase in blood vessels of their size and the opening of new collateral vessels, physical training has an important role in preventing atherosclerosis and delay the aging process. Are cited numerous cases of a sustained physical activity, which maintain a relatively younger biological age compared to sedentary individuals, despite chronological age. Beneficial cardiovascular changes favoring optimal biochemical and metabolic changes by improving cellular oxidative processes generating energy, converted into metabolic processes and functional adaptation. If exercise is continued regularly and systematically both average age and old age, these individuals enjoy better health, are more resistant to disease, and coronary artery disease occurs when the symptoms are subjective and objective less severe.

Effects of exercise repeated at regular intervals are given by volume and intensity. Distinguish such exercises that increase muscle strength, joint flexibility others develop other that enhance resistance to prolonged effort. In this way it can work analytically for any poor physical qualities (speed, strength, coordination, endurance). From the wide range of the most beneficial exercises are those exercises that develop body strength because they have a predominant effect on the cardio machine, improving its functions. Also, the desire of young people to speed up performance by an unsupervised exercise regimen can lead to capping or even abandon their sporting life due to the occurrence of initial functional disorders, which may be reversible if it complies with the rigors of a medical specialist or become irreversible if not imposed measures indicated.

During the period of raising children, especially at puberty, there are a number of neurovegetative disorders which mitigates and even disappear by practicing moderate exercise because it contributes to strengthening and balancing the cortical processes, processes that regulate the entire business function. It is therefore false alarm of parents in the lowest marks dysfunctional children prohibit the practice of
physical education and sport, but it is even worse if the ban comes from the teacher or trainer sports, but especially from the medical profession, which sometimes is not unheard of. Under these conditions, after a thorough investigation of disorders in order to establish their functional nature or organic must recommend physical activity as children varied volume and low or medium intensity, taking into account individual response control tests vegetative or effort.

Even the presence of congenital heart light, requires health professionals to test exercise capacity and only after this result to indicate the practice of physical effort small and medium to facilitate the development of the heart and the emergence of exercise tolerance, through the practice of small efforts, repeated training leading to heart function with signs of functional economy. Only regular medical control for exercise tolerance testing may indicate or contraindicate exercise, nature and its dosage in volume and intensity.

Also, exercise practiced under the guidance of physiotherapist and medical supervision showed that systolic murmurs often found in children, but with good exercise tolerance may disappear with controlled physical training and medical surveillance. Were established health scales, which are operated only in so far as it individual and thus enable the diagnosis of fitness or unfitness to practice physical exercised based on a target substrate, indications, contraindications especially, can be interpreted in relation to medical expertise in the effort. Thus, based on somatic disability or functional incapacity contraindications related exercise can be definitive or temporary total or partial.

**Definitive and total exemption** addresses those subjects whose health or physical development is aggravated by school curricula. Them, depending on the disease are advised physiotherapy programs.

**Final partial exemption** envisaged subjects can participate in physical education classes, but with some restrictions on volume, intensity or complexity of the effort.

**All temporary exemption** is considering those situations that, for the moment do not permit physical exercise (musculoskeletal injuries as: fractures, dislocations, sprains, muscle injuries or those with impaired general state fever).

**Temporary exemption partial** list those situations where subjects can perform some physical activities that do not involve their overuse scheme injured segment. That is, for example, recommended some rest segmental lesions of the musculoskeletal system that allows for the training program, but without involvement of the area affected by the lesion.

We mention that the physiological status of girls not eligible for exemption from physical education, except to the extent the exercise intensity particularly interested in pelvis area can enlarge menstrual flow. If menstrual cycle takes pathological, will reduce both the volume and especially exercise intensity. Medical data statistics show that feminine body is able even sports performance during the
menstrual cycle, and only in case of disorder or disease states, recourse to temporary postponement or scheduling cycle according to the competition schedule of the main objective performance.

**List of proposed disease contraindications for practicing physical education and sport** (grouped by body system) is:

1. **Skin and mucous membranes**: generalized psoriasis, scrofula; generalized eczema rebellious to treatment; scleroderma; systemic dermatomyositis or wounds, multiple sclerosis;

2. **Osteoarticular and muscular system**: bone and osteoarticular TB; advanced coxarthrosis; dupuytren's disease, discopathies phase III, with static or dynamic spinal disorders; Schuermann's disease, stage II (osteochondrosis spine), vertebral failure; malformations and functional disorders or bone dystrophy bone deformities; multiple exostosis or recurrent major functional disorders; acute or chronic osteomyelitis; malignant osteoarticular; scoliosis grades II -III with large vertebral rotation; myopathy; myasthenia;

3. **Respiratory System**: asthma paroxysmal crises; chronic bronchitis; bronchiectasis; active pulmonary TB; lung, respiratory failure (30 %); congenital malformations of the nasal pyramid; nasal atresia; nasal scleroma; sarcoidosis; malignant granuloma, malignancy rhinosinusal; malformations pharyngeal, pharyngeal tumors, laryngeal; specific Laryngitis: scleroma, tuberculosis, sarcoidosis; recurrent laryngeal papillomatosis; tracheobronchial anomalies and malignant tumors;

4. **Cardiovascular system**: essential or secondary hypertension, stages II -III, with impaired vascular bed (neurogenic hypertension, oscillating) early stages requires careful observation time and expertise; valvulopathies defects and won, mitral valve prolapse or mitral insufficiency associated with paroxysmal rhythm disorders; chronic infarction (ischemic heart disease of all kinds, cardiomyopathy, chronic postinfectious myocarditis; chronic pericardial; arrhythmias or management that affect cardiac performance or risk factor is vital (sudden death) such as atrial fibrillation, ventricular arrhythmias; extrasystoles multiple early politoze, ventricular tachycardia, ventricular fibrillation, pre-excitation syndrome WPW or LGL paroxysmal rhythm disturbances, sick sinus syndrome with paroxysmal rhythm disorders or management, nodal rhythm disturbances generating paroxiatice, sinoatrial block, atrioventricular block total, branch blocks (blocks cardiac defects affecting performance have surveyed and approved individually); abnormalities of the great vessels (aneurysms) or coronary vessels; marfan syndrome; peripheral arterial disease; varicose syndrome accompanied by thromboembolism or thrombophlebitis;

5. **Digestive System**: ulcer disease (flare); chronic hepatitis aggressive, malignant tumors; ulcerative colitis, chronic pancreatitis; tracheobronchial stenosis and communications;vascular diseases of the esophagus, esophageal stenosis; specific chronic esophagitis;
6. **Urogenital system**: chronic glomerulonephritis; nephrotic syndrome; chronic renal failure; congenital or surgical kidney; unilateral or bilateral hypoplastic kidneys; polycystic kidney disease; hydronephrosis congenital syndrome perclau through; horseshoe kidney; malignant kidney stones (nephrocalcinosis); abnormalities of renal vessels (stenosis); ectopic kidney or mobile (grade II -III); extrofia vesicular; testicular Ectopia unilateral or bilateral; urogenital tuberculosis; urogenital malignancies; urinary incontinence, enuresis; genital malignancies; pregnancy after the third month;

7. **Endocrine system**: endocrine neoplasia; diabetes insipidus; enocrinopati acute; pituitary adenoma; pituitary dwarfism; pituitary insufficiency; acromegaly; thyrotoxicosis; myxedema, Graves-Basedow disease; hyperthyroidism (Pecklinghausen disease); severe osteoporosis and osteomalacia; severe hypoparathyroidism; pseudohyperparatiroidism; pheochromocytoma; endocrine hypertension; adiposo-genital syndrome; Addison's disease; cushing's syndrome; secondary adrenal insufficiency (central); gonadal dysgenesis (Barr negative sides); precocious puberty by intracranial lesions; transsexualism; hermaphroditism and pseudohermaphroditism; organic hypoglycemic syndrome;

8. **Nervous system**: sequelae severe encephalitis with functional disorders; extrapyramidal syndromes (Parkinson, ataxias, athetosis, chorea hereditary degeneration hepatolenticular); cerebellar syndromes and cerebelomedulary; permanent paresis of the sciatic nerve; permanent paralysis of the nerve roots; final cranial nerve palsy; neurasthenia with prolonged or severe development; personality disorders; psychosis (schizophrenia, psychosis discordant, melancholy, maniacodepressive syndrome, toxicity, chronic alcoholism);

9. **Sense organs**: stenosis of the ear canal; ear malformations; serious injury with impaired hearing and balance; acoustic nerve injuries; myopia greater than 5 diopters; I- II ptosis; stibism convergent cross angle greater than 5°; advanced pterygium; advanced Ectropion; keratoconus; glaucoma; cataract congenital or acquired; entropion; siblefaron;

10. **Autoimmune diseases**: lupus erythematosus; periartery nodosa; reitter syndrome; ankylosing spondylitis; chronic Rheumatoid arthritis.

Only regular medical control for exercise tolerance testing may indicate or contraindicate exercise, nature and its dosage in volume and intensity. There are health scales, which are operated only to the extent that is individualized, and thus enable the diagnosis of fitness or unfitness to practice physical exercised based on a target substrate. Regarding sports performance specialists with rich experience sports medical scales developed for each sport, which become mandatory and strict application especially during the initial medical examination.

Circumvent these scales harm children's health, but also a waste of time for them and coaches because of deviations from health or harmonious physical development may be limiting factors for performance. Judgment to establish effort and duration failure lies sports doctor and the teachers and coaches are required to comply with medical instructions to avoid complications or worsen.
REFERENCES


5. Rusu, L., Rinderu, E., T., Ortănescu, D. *The result of kinetic Rehabilitation programs of knee injuries*, 2nd Congress of the European Federation of Sports Medicine, 2001;
