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**SELECTED ISSUES CONCERNING PHYSICAL EDUCATION
AND HEALTH PROMOTION OF PROFESSIONAL SOLDIERS
IN POLISH ARMED FORCES**

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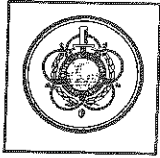
In Polish Armed Forces, the Physical Education and Sport Department of the General Staff of the Polish Armed Forces together with the Department of Prophylactics and Medical Care of Primary Health Service, are responsible for promoting a healthy life among professional soldiers. Such activities are coordinated by the national specialist of sports medicine in military health service. The physical education and health service departments of the Polish Armed Forces has specific assignments and appointed areas of cooperation for the cause of improving health status and physical fitness of professional military personnel.

The prophylactic diagnostic and scientific activities are conducted by Military Academy, Air Force Institute of Aviation Medicine and Military Institute of Hygiene and Epidemiology. Air Forces are the only proprietor of autonomic Sports Units of Polish Air Force for pilots, which organize educational classes in sports and recreation, and prophylactic medicine, for 3 weeks in a year cycle. The Units are responsible for performing aerobic fitness evaluation and physical fitness tests. Using the above as an example, a detailed discussion of optimal activities for creating a high level of psycho-physical fitness and health status among military pilots, will be presented.



**DIAGRAM OF ORGANIZED COOPERATION ON ORDER TO IMPROVE
 THE PHYSICAL FITNESS AND HEALTH STATUS OF
 PROFESSIONAL SOLDIERS IN POLISH ARMED FORCES**

		HEALTH CARE SECTION	PHYSICAL EDUCATION SECTION		
Y E A R L Y M E D I C A L C A R E	I	A. Annual examinations	A. Maintaining acquired physical fitness	I	Y E A R L Y P H Y S I C A L A C T I V I T Y
	II			II	
	III			III	
	IV			IV	
	V	B. Aerobic endurance tests (including 12-minute Cooper test)		V	
	VI	C. Supervision and professional guidance for PE officers and soldiers	C. Formation of motor and physical abilities	VI	
	VII			VII	
	VIII			VIII	
	IX	D. Participation in the annual PF test for officer staff	D. Realisation of annual physical fitness test for officer staff	IX	
	X	E. Analysis and conclusions		X	
		1. incidence of disease 2. incidence of injuries 3. physical status capacity	1. physical fitness status 2. acquired abilities		
		F. Evaluation of health status, physical fitness and status - registered in professional soldiers consultative card			
XI	G. Evaluation of activities and cooperation between health care and physical education sections		XI		
XII	H. Results of annual examination - discussion		XII		

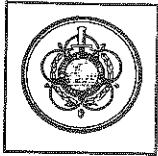


Activities of physical education section

1. Physical education
 - a) developing more abilities which ensure physical fitness and adaptation skills;
 - b) physical capacity evaluation;
 - c) exercise and workload differentiation according to doctor's recommendation, age, physical fitness and type of duty;
 - d) improvement and development of general physical fitness;
 - e) physical fitness and aerobic endurance test;
 - f) including acquired physical fitness abilities in the annual opinion of professional soldiers;
 - g) directing officers to organized conditional training.
2. General sport
 - a) creating habits of systematic exercising;
 - b) initiating individual training into the system/including life sports;
 - c) encouraging the need of sports competition and the ability of self-control;
 - d) integrating through participation in team sports and sports competition.
3. High performance sports
 - a) creating conditions for practising sport in sports clubs, by professional soldiers;
 - b) representing the national and army colours.
4. Tourism and recreation
 - a) propagating all forms of tourism;
 - b) creating an atmosphere of active family recreation;
 - c) organizing and participating in individual local and nation wide mass sports.
5. Cooperation with the health care
 - a) physical fitness evaluation of soldiers under charge;
 - b) initiating doctor's recommendations order in individualize training;
 - c) educating self-control and self-evaluation;
 - d) practising kinetic rehabilitation;
 - e) introducing new training methods useful for the army's needs.

Activities of health care

1. Health-promoting education/promoting healthy life-style/
 - a) healthy diet;
 - b) physical activity;
 - c) fighting addictions;
 - d) personal hygiene;
 - e) sportswear hygiene.
2. Medical prophylaxis
 - a) periodic examinations;
 - b) physical capacity examinations;
 - c) circumstantial examinations;
 - d) specialistic counselling;
 - e) parent counselling.
3. Kinetic treatment and rehabilitation
 - a) general treatment;



- b) treatment of sports injuries;
 - c) kinetic rehabilitation of sports injuries;
 - d) rehabilitation of social diseases of cardiovascular, respiratory and nervous systems.
4. Sports medicine in the Armed Forces
- a) utilizing research results concerning sports medicine, in the army;
 - b) educating military doctors/medical staff/in the field of sports medicine.

Health promoting program in Military Health-Training Centres

1. Initial assumptions

- 1.1. Flight safety depends on pilot's biological potential (physical, psychic and social-state);
- 1.2. There is a constant need for adapting equipment to human abilities and vice versa developing these abilities to adjust the equipment's requirements, in order to achieve a compromise at a higher level;
- 1.3. It is possible to determine and control a satisfactory level of positive health composing a specific, pilot's physical state characterized by a body mass index (BMI), maximal oxygen consumption index (VO_2), blood lipids profile (cholesterol, HDL - cholesterol, triglycerides) statistical and dynamic muscle force (especially stabilizing, spinal muscles);
- 1.4. The results of creating a special pilot's physical form are derived in high life style, including systematic exercises ("health-improving" and rehabilitation);
- 1.5. Knowledge concerning the rationalization of a life style and individually chosen programs of physical education should be acquired at military base verified in WOSzK (Military Health-Training Centres).

2. Main goals acquired at WOSzK

- 2.1. Stabilization of pilot's motor abilities within the range of oxygen efficiency and basic plus specific muscle power together with complementary coordination exercises;
- 2.2. learning individually useful "health-improving" and rehabilitation exercises together with their initiation into systematic practice;
- 2.3. Learning to use simple methods of rest intensification (i.e. biological revival);
- 2.4. Creating the abilities for rational, health-promoting behaviours, composing a life style;
 - 2.4.1. rest methods, including its intensification;
 - 2.4.2. Diet selection;
 - 2.4.3. Self-estimation of positive health-measures interpretation;
 - 2.4.4. Effort tolerance estimation together with the principle of health training.
 - 2.4.5. A view concerning the destructiveness of addictions (alcohol, nicotine, drugs, narcotics);
 - 2.4.6. The role of risk factors for diseases which are the most common cause of disablement for professional flying;
- 2.5. Information about contemporary tendencies in aviation medicine which are useful for professional pilots;
- 2.6. Obtaining motives for pro-healthy life style's modification by creating habits and fashion for specific behaviours.

3. Basic program

- A. Exercises directed on stabilizing motor features in field conditions;
- B. Coordination and rehabilitation exercises, methods of biological restoration including education on their proper use at the base;
- C. Creating pilots pro-healthy abilities - "Pilots health school";
- D. Supplementary course concerning contemporary achievements in aviation medicine (pro-healthy



behaviours and technic for healthy life style).

4. Objectivization of results achieved at WOSzK

4.1. Initial measurement (at the base or at the beginning of stay at WOSzK)

4.1.1. Positive health

- rest pulse
- blood pressure
- body mass index
- oxygen efficiency index
- static muscle power index
- dynamic muscle power index
- blood lipids profile

4.1.2. Negative health

- opinion of WIML (Air Force Institute of Aviation Medicine) or a doctor from the military base concerning a disease or a specific pre-pathological states.
- anamnesis of possible restrictions of exercising at the beginning of stay at WOSzK reported by the participant;
- medical verification of reported restrictions.

4.2. Effort tolerance

- self estimation of effort tolerance
- effort heart rate
- blood pressure reaction to effort
- calculation of "double product" at rest during standard exercises
- estimating threshold values of lactic acid's concentration, in blood

4.3. Test of abilities acquired at "Health School"

- practical (thesis)
- theoretical

5. Necessary measuring equipment

- cycle ergometers
- one-channel electrocardiographs
- heart-rate and blood pressure tests
- equipment for measuring lactic and level in blood

The above listed tasks are conducted and realized by Polish Air Force in 2 Health -Training Centres:
WOSzK - Zakopane, (mountains) and WOSzK -Mragowo (lake region).
