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## Z VĚDECKÉ ČINNOSTI

# **TYPOLOGICAL DESCRIPTION OF FIRST-YEAR MEN STUDENTS AT WYŻSZA SZKOŁA PEDAGOGICZNA OF RZESZÓW – USING HEATH-CARTER METHOD**

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## **Abstract**

This paper's goal is to present a typological description of first-year men students at 'Wyższa Szkoła Pedagogiczna' of Rzeszów.

Using the results of the somatometric measurements, made on 43 men students during the academic year of 1999/2000, the shares of mesomorphism, endomorphism and ectomorphism in their body build were calculated.

The authors' results were compared with those of the studies on men students at 'Politechnika Warszawska' and Zielona Góra's 'Pedagogical University'/WSP/.

The analysis of the findings leads to the following conclusions:

1. Men students at Rzeszów's 'WSP', compared with their counterparts in Warszawa and Zielona Góra, are characterised by a lower level of physical development. Statistically significant differences were found between the populations in: height, weight, breadths of elbow and knee epiphyses, fat layers on arm and iliac crest.
2. Men students at Rzeszów's 'WSP' were found to have bigger LBM and lower fat content, the differences being statistically significant.
3. First-year men students at Rzeszów's 'WSP', compared with the controls (Politechnika Warszawska), are characterised by smaller shares of endomorphism, mesomorphism (a statistically significant difference) and ectomorphism in their body build.

**Key words:** *students, body build, typology.*

# **VISUALISATION TRAINING (THE „DOUBLE“ METHOD) IN THE DEVELOPMENT OF ACCURACY OF TENNIS SERVE IN DISABLED VOLLEYBALL PLAYERS**

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## **Abstract**

The aim of our experiment was to establish to what degree the „double“ method may be effective in developing the tech-

nique and accuracy of a tennis serve in disabled volleyball players. This is one of the most important elements of play in volleyball, in particular for the disabled. This is so called standing volleyball, where the total of points (which describe the level of disability) of six players (a team) during a game in the court must be established at minimum 26 points. The study was carried out in a volleyball team of Zrzeszenie Sportowo-Rehabilitacyjne „Start“ (Sport and Rehabilitation Association) in Zielona Góra in which two players from the Polish national team played. The age of players ranged from 16 to 40 years. Training took place once a week. Sixteen players divided into two groups of similar abilities took part in the experiment. The division was determined by test ( $s_1$ ) carried out before the experiment. It involved performing ten tennis serves into a 1 m area from the end line of the court. One point was awarded for each good serve. After the text the players in the group using „the double“ followed a special procedure. The double method was introduced in the following way: an accurate and technically perfect tennis serve presented by one of the members of the national team from outside the centre was recorded on DVD (a fragment of film from a competition). Then the players in the group using the double method watched this film for one week, playing it about 100 times a day and tried to remember as many details as possible. For the following week they had to „play“ the film from memory, and in the following weeks (until test  $s_2$ ) they had to remember the film trying to see themselves in the place of the player in the film. Finally, for over a month they visualised the tennis serve at home (for 10 minutes before sleep) and during each training before practising a tennis serve (both groups practised the serve for half an hour). The other group practised the serve at each training using only the traditional method. After two-month training we carried out another test ( $s_2$ ).

The results make it possible – in our opinion – to formulate the following conclusions:

1. Visualisation complete with basic training results in significant increases in results, as the differences in results between groups 1 and 2 have a statistically significant value in test  $t$  for 0.01.
2. Visualisation complete with basic training allows in relation to basic training itself for a very significant increase in accuracy of serve and thus, technical abilities (16.2 %).

„The double“ demonstrated that visualisation as a technique of reinforcing sports performance has a simple mechanism, it involves activating ideomotoric power which is within each of us. All three stages of transformation aim for this: the first one, perceptive development of movement is creating its perceptive picture ready to be immediately retrieved from memory in similar conditions, the second one is the notional model of movement, that is transferring the movement to the world characteristic for ideomotoric phenomena, and the third one – using the existing model for the change into ideomotoric movement, which takes place by giving self-subjectivity to the image.

**Key words:** *visualisation, mental support, disabled volleyball.*

## HODNOCENÍ MÍRY SKLEROTIZACE DENTINOVÝCH TUBULŮ KOŘENOVÉHO DENTINU VE VTAHU K ODHADU CHRONOLOGICKÉHO VĚKU JEDINCE

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### Abstract

A study based on evaluation of root dentine tubules sclerotization according to human chronological age estimation was performed. 46 teeth of adults (both sexes) were used in this study. Applied method was based on dental root cross sections that were perfused by toluidine blue stain for opened tubules visualisation. Results approved according to previous premise that dentine tubules sclerotization has high correlation to human chronological age.

**Key words:** *forensic anthropology, dentine sclerosis, age estimation.*

## ECONOMIC AND SOCIAL ENVIRONMENT AS THE FACTOR DIVERSIFYING THE DEVELOPMENT LEVEL OF CHOSEN COORDINATING MOTRICITY ABILITIES OF COUNTRY BOYS FROM PODKARPACIE REGION (SOUTHERN POLAND)

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### Abstract

The main aim of this report is an attempt to define the influence of social and economic status on the results of chosen coordinative motricity abilities. The report material is constituted of the results of chosen coordinative motricity abilities of 1096 country boys from Southern Poland aged 7–15. The research scope includes: time of simple reaction, movement frequency, balance, spatial orientation. The collected material has been prepared using the basic statistic methods, with calculation of:  $\bar{x}$ , SD. In order to verify the researched features depending on the social and economic status, absolute and normalized intergroup differences have been calculated. Normalization was made referring to aberration of standard material. Generally the social and economic status has little influence on the level of analyzed coordinative motricity abilities. It can be supposed that the observed regularities are connected with the civilization progress of Polish countryside, which took place after the economic transformation.

**Key words:** *environmental diversity, motor efficiency, coordination motor abilities, rural population.*

## PHYSICAL ACTIVITY AND SELECTED POSITIVE HEALTH INDEXES IN YOUNG PEOPLE FROM TWO DIFFERENT MILIEUS

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### Abstract

The aim of this work is the evaluation of milieu-related (city-countryside) social distances in physical activity, anthropometric features and physical efficiency of university students. The study encompassed 1554 students, 1192 women and 362 men, enrolled in full-time courses at the Świętokrzyska Academy in Kielce. BMI was calculated on the basis of somatometric examination of body height and mass. General physical efficiency was evaluated based on the PWC<sub>170</sub> test and VO<sub>2</sub>max values. Social data on the subjects' families and physical activity were collated. Somatic features and physical efficiency results were normalised and transformed into mean values ( $\bar{x}$ ) and standard deviation (s) of all studied men and women.

The obtained results show clear differences in the level of physical activity of young people depending on their place of living. There were differences in physical efficiency to the benefit of students living in the countryside. No statistically significant differences were observed in anthropometric values depending on the place of living, with the exception of BMI in women ( $p < 0.05$ ). This is a manifestation of the process of assimilation of the countryside to the city with regard to young people's dietary habits and lifestyle.

**Key words:** *milieu, environmental differences, physical activity, physical efficiency.*

## RACE: SELECTED PROBLEMS OF THE PRESENT DAY

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Academic discussions of the topic of the race have long been present in anthropology. The early, pre-scientific attempts at classifying human races originated in the sons of the biblical Noah: the white man was supposed to have descended from Japheth, the yellow man – from Shem, and the black man – from Ham. Polyphyleticism derived races from various prehumanoids. Since its very beginning, the problem of race has been a battlefield for ideologies, politics, and propaganda. Racism has always cast a sinister shadow on the issues relative to the race.

However, the study of the race-related problems, based on morphology – chiefly of the head – and also on the details of somatic build has shed new light on the geographical variations of human morphology. The knowledge gathered through the study of heredity and of the environment's effects gave rise to the development of anthropogenetics and man's ecology (ecology-based explanation of the differences between human types). Etc...

## DIACHRONNÍ SROVNÁNÍ NÁLEZŮ ZHOUBNÝCH NÁDORŮ V MINULOSTI EVROPY A EGYPTA

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### Abstract

For the first time in palaeopathology, we decided to attempt a diachronic elaboration of finds of malignant tumours of past people. We used our till now largest database of 188 sufficiently documented finds of malignant tumours from the Old World. It contains cases of tumours with 12 different diagnoses which we have joint into 5 diagnostic groups. The finds originate in archaeological sites of 26 countries or regions, in which they are unevenly represented. Diachronic growth of finds of tumours could be recorded in regions with their greatest representation, in Europe (113 cases) and Ancient Egypt with Nubia (52 cases). Comparison of their diagrams revealed outstanding differences. In Europe, finds of tumours were rare in prehistoric times since the Neolithic Period and their number stagnated. After the beginning of our era, they started to grow fast with a culmination in the High Middle Age. On the other hand, finds of tumours started in Egypt and Nubia at the Predynastic Period with a following trend of mild increase with peaks and declines up the culmination in Late and Ptolemaic Periods. After 1500 years AD in Europe and with the beginning of our era in Egypt and Nubia, a decrease in finds of tumours set in, caused by an insufficient number of investigated cemeteries.

**Key words:** malignant tumours, Europe, Egypt with Nubia, diagnostic groups, diachronic comparison.

## KINETICS, DYNAMICS OF DEVELOPMENT AND DIMORPHIC DIVERSIFICATION OF CHOSEN STRENGTH ABILITIES OF COUNTRY CHILDREN FROM PODKARPACIE REGION (SOUTHERN POLAND)

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### Abstract

The material of this report includes the results of 1096 boys and 1160 girls from the countryside of Southern Poland, aged 7-15. The scope of the research included: static force, strength in the relative perspective and MPA. The main aim of this work is an attempt to define kinetics and dynamics development of the analyzed abilities and the size of sex dimorphism. The collected material has been prepared using the basic statistic methods, with calculation of:  $\bar{x}$ , SD. In order to test the range of diversification between male and female, normalized indicators of sex dimorphism (ISD) have been calculated. Generally, in the tested population a typical development process of strength abilities have been noticed. As both sexes grow older, the improvement of strength abilities is observed. It should be also noticed that the girls reach their maximum possibilities earlier, and the boys further develop their strength abilities. In the whole of the tested period, boys get better results, and the highest ISD indicators have been received in their 14<sup>th</sup> and 15<sup>th</sup> year of age.

**Key words:** motor efficiency, static strength, sexual dimorphism, rural population.