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# **Abstract Book**

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## General Information

### **Congress Dates**

May 12-15, 2016

### **Congress Venue**

Convention Centre, Medical University of Warsaw

2A Księcia Trojdena St., 02-109 Warsaw, Poland

GPS: N 52° 12' 21.19"; E 20° 59' 07.12"

Distance to airport: 3 km

Distance to the city centre: 1.5 km

### **Official Language**

English

### **Congress Internet Service**

Website: [www.wimc.wum.edu.pl](http://www.wimc.wum.edu.pl)

Facebook: Warsaw International Medical Congress

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### **Contact**

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[86]

### EFFECT OF WATER AND SALINE OVERLOAD ON THE CONTENT OF GLYCOGEN IN THE LIVER OF STREPTOZOTOCIN DIABETIC RATS

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**Introduction:** Diabetes mellitus is a common but serious metabolic disorder associated with many functional and structural complications. Glucose metabolism is disturbed due to an absolute or relative insulin deficiency.

Salt plays an important role in the control of blood pressure in obesity and diabetes mellitus.

**Aim of the study:** The aim of the present study was to evaluate the effect of water and saline overload on concentration of glycogen in the liver of streptozotocin (STZ) diabetic rats.

**Material and methods:** Material and methods. Male Wistar rats weighing 180 +/- 50 g were made diabetic by injection with a single intraperitoneally (i.p.) dose of STZ (65 mg/kg b. w.). After 5 and 12 days was carried out to determine the level of glucose in vivo. Blood was taken from the tail vein evaluate the basal glycemia level with the use of One Touch Ultra (Life Scan, USA). Water stress was carried out by introducing the animals water at the rate of 5% of body weight. Saline loading diabetic rats was performed by introducing a 0,1% NaCl at a rate of 5% of the body weight of rats. Liver samples were collected at day 12 post STZ injection (from diabetic group serum glucose level significantly elevated  $\leq 300$  mg%,  $p \leq 0.05$ ). The animals were divided into subgroups: 1) intact rats (the control group); 2) STZ- diabetic rats with overt (basal glycemia  $>150$  mg%) diabetes; 3) animals with overt diabetes undergoing water stress; 4) animals with overt diabetes undergoing saline stress. Determinations of glycogen content in the liver made by standard methods.

**Results:** Our results showed decrease of glycogen content in groups of diabetic rats and diabetic rats with water overload by an average of 20% respectively compared with the same indexes of control rats. According to the results obtained in the blood of rats with STZ diabetes, which had saline stress, content of glycogen decreased by 32% compared with the same indexes of control rats. So, diabetes in rat liver is accompanied by increase phosphorolysis of glycogen. These changes are more pronounced in the group of diabetic rats undergoing saline load. It is known that, the main neurohumoral mechanisms of salt-induced cardiovascular changes in STZ-diabetes are increased sodium and vascular sensitivity to adrenergic stimuli, which act in combination to produce a final result of higher arterial pressure levels.

**Conclusions:** Conclusion. Salt load accelerates the process using glycogen in diabetic rats.

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[87]

### Knowledge of diabetes among Polish mountain guides

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**Trustee of the paper:** Janusz Gumprecht prof., PhD., M.D., Nabrdalik Katarzyna PhD, M.D.

**Introduction:** It is estimated that currently 387 million people worldwide suffer from diabetes and by 2035 the number of sick people will rise up to 592 million. More and more people with diabetes are involved in various forms of intense physical activities, including those activities taking place in the mountains, hiking and alpine trekking. In Poland, at an altitude of over 1,000 meters above the sea level, mountain guides often take care of organized groups, in particular regarding their safety on the trail and providing the first aid.

**Aim of the study:** The aim of this work is to verify the knowledge of mountain guides about diabetes using standardized questionnaire adapted form by Lee et al.

**Material and methods:** The questionnaire of the knowledge about diabetes was sent in January 2016 electronically to 500 Polish authorized, active mountain guides. Basic demographic data of respondents was collected. Standardized questionnaire was used, consisting of 41 questions, with 5 main sections relating respectively to: general knowledge about diabetes, risk factors, symptoms and complications, treatment and monitoring of diabetes and questions from the unclassified category. For the correct answer YES or NO 1 point was to receive, the incorrect response or "DO NOT KNOW" 0 point was given. The maximum, possible number of points was 41.