Title: DIABETES MELLITUS: AN AVIATION MEDICINE POINT OF VIEW

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Introduction: Diabetes epidemiology, progression, physiopathology, clinical features, complications are summarized. In order to fitness for flying assessment, diagnostic criteria, classification, medical examination requirement, different ways of treatment are described as well.

Methods: Diabetes Type 1 is a genetically associated disease. Type 2 is related to obesity and familial tendency. Glucose intolerance evolves to diabetes, to complications, disability, and possibly, death. Insulin resistance and β-cells dysfunction result in Type 2 diabetes. Hyperglycemia leads to vasculature damage and platelets disorder both related to macro- and micro-angiopathy. We can consider Type 2 diabetes as a worldwide pandemic. On 2025 over 300,000 millions of involved people are expected. At present time diabetes is the sixth leading cause of death. However, nevertheless diabetes were is a serious, common and costly condition, it’s fortunately controllable.

Results: Diagnostic criteria according to WHO recommendation are presented. A description is given about Type 1 assessment, Type 2 assessment, complete requirements for periodic medical examination and careful review in Type 2 applicants. Aeromedical aspects of Impaired Glucose Tolerance and Glycosuria with low renal threshold are presented as well.

Conclusion: An overview about Type 2 treatment and certification is given. Regulatory topics related to use of drugs are presented by identifying the drug class therapy and the subsequent fitness for flight assessment: Increase Insulin Sensitivity (Biguanides, Thiazolidinediones, Peroxisome proliferators-activated receptor) – Increase Circulating Insulin ( Sulphonylureas, Glinides, Glucagon-like peptide-1, Gastric inhibitory peptide, Dipeptidase IV inhibitors) – Alpha-glucosidase inhibitors.

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