

## AGING REIMAGINED? COGNITIVE AND PSYCHOMOTOR FACTORS IN AGING PILOTS

*LE VIEILLISSEMENT REDÉFINI? FACTEUR COGNITIF ET PSYCHOMOTEUR DANS LE VIEILLISSEMENT DES PILOTES*

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**Introduction:** The detrimental effect of aging leads to a concern about older pilots and safety on flights in the commercial and in the general aviation. There are many stressors inherent to aviation environment that are detrimental to pilot performance. These stressors coupled with an increased age of pilots present a particular challenge; however, individuals working in such demanding environments also benefit from advantageous effect of prior experience and specialized expertise of older adults.

**Background:** On one side, physiological decline occurs with advancing age, however these changes can be attenuated, e.g. by exercise, lifestyle, diet etc., which makes aging a very individual process. On the other side, pilots are highly selected group with above average cognitive abilities and the question is: how long can these abilities be retained? This creates a paradox that is highly apparent in Aerospace Medicine, creating diagnostic dilemmas and challenging the fixed age limit imposed by the regulator. The degenerative effects of aging are a fact, but there are no data to justify a specific cut off point.

**Summary:** The non-linear relationship between age and safety, raises questions whether the cognitive abilities of experienced pilots are sufficient to counteract the chronological age-related decline, or is there a necessity of operation-specific risk assessments for medical examinations? What is acceptable aeromedical risk and operational risk? Does an older pilot pose a risk on flight and if at what age? These questions will be posed and answered during the presentation based on meta-analysis of several studies conducted in the recent years on the subject of pilot age and performance.