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  Excessive manual force production in hypergravity - possible causes and practical consequences

  We have shown that subjects centrifuged to sustained increased gravitational acceleration (+Gz) produce exaggerated isometric forces. We explored the origin of this phenomena in a few studies, for example the effects of stress, cardio-vascular or vestibular activity.

  But the possible impact on aircraft control remains unclear. Exaggerated force production during aircraft control, e.g. during altitude changes in +Gz, might result in overshooting responses, and thus in a less stable flight path. We currently investigate this view by evaluating subjects' control performance during simulated +Gz flight maneuvers in the Human Centrifuge of the GAF Institute of Aviation Medicine in KÃ¶nigsbrÃ¼ck, which is equipped with a

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