

## **PILOT REACTIONS TO UNUSUAL AIRCRAFT ATTITUDES: A PHYSIOLOGICAL, BIO-CHEMICAL AND PSYCHOLOGY ASSESSMENT.**

### **Summary**

The goal of this project is to research the effects of anxiety in airline pilots who have never experienced extreme maneuvering in an aircraft. Specifically, we will analyze and compare the manifestation of anxiety and fear symptoms during upsets for two groups of pilot trainees; those that undergo NASTAR Non-Motion Upset Recovery Training and those that train in a full-fidelity sustained G flight simulator completing the NASTAR GL-2000 Full Motion Upset Recovery Training program. Physiological data, bio-chemical hormone levels (salivary cortisol levels), and subjective psychological questionnaires will be recorded and compared.

### **Objectives**

- To determine if training in a realistic physiologically stressing simulated flight environment is superior to traditional classroom and non-motion based training at reducing anxiety, fear and startle during a real in-aircraft upset.
- This experiment will put the ETC slogan, “flight training without physiological stress is not flight training,” to the test. The resultant physiological, psychological and bio-chemical data will provide objective evidence to back or refute this claim as applied to UPRT.
- Additionally, this experiment will determine the effectiveness of sustained-G UPRT compared to traditional methods.

### **Customer/Partner**

Embry-Riddle Aeronautical University partnered with ETC

### **Status**

Postponed due to complications with ERAU IRB

### **Future Publications**

Aviation Space and Environmental Medicine