

Publications

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## Fatigue Identification and Management in Flight Training among Collegiate Aviation Pilots

Flavio Mendonca Ph.D.  
*Embry-Riddle Aeronautical University, coimbraf@erau.edu*

Julius Keller Ph.D.  
*Purdue University, keller64@purdue.edu*

Michael Robertson Ph.D.  
*Southern Illinois University, mrobertson@siu.edu*

Matt Romero  
*Southern Illinois University Carbondale*

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## **Fatigue Identification and Management in Flight Training among Collegiate Aviation Pilots**

**Julius Keller - Ph.D., Purdue University**

**Flavio A. C. Mendonca - MBA; Ph.D., Embry-Riddle Aeronautical University**

**Mike Robertson – Ph.D., Southern Illinois University**

**Matt Romero - Southern Illinois University**

The background of the slide is a photograph of a white twin-engine turboprop aircraft, likely a Cessna 441, flying against a dark blue sky. The aircraft is viewed from a low angle, showing its wings and tail. The text is overlaid on this image.

# **OVERVIEW**

**Introduction**

**Recent Studies**

**Advancing FRMS in Collegiate Aviation**

**Discussion & Conclusions**


## INTRODUCTION

- ✈ Pilot's fatigue is a significant hazard in flight operations;
- ✈ Studies have demonstrated a relationship between increasing fatigue and increments of human factors issues!



- ✈ Multidimensional construct – no single mitigation strategy will be effective!

✈ Physical Fatigue; 

✈ Mental Fatigue. 



## INTRODUCTION

### ✈ Causes of Fatigue;

#### ✈ Operational Factors;

- ✈ Short rest periods between shifts;
- ✈ Start times;
- ✈ Duration of commute;
- ✈ Layover sleeps opportunities; and
- ✈ Operations through multiple time zones.

#### ✈ Personal Factors;

- ✈ Inadequate sleep habits;
- ✈ Sleep disorders;
- ✈ Lifestyle.



## INTRODUCTION


- ✈ Causes of Fatigue in a Collegiate Aviation Environment **Include**;
  - ✈ Intensive workload and/or long workday;
  - ✈ Flight(s) rescheduled due to poor weather (or any unexpected) conditions;
  - ✈ Early flights;
  - ✈ Flights following a demanding night preparing for examinations;
  - ✈ Early flights followed by night flights (preparing for an exam?);
  - ✈ Social activities;
  - ✈ Complex maneuvers by inexperienced student pilots; and
  - ✈ Night flights after a long day of academic and/or social activities.











## INTRODUCTION

### Fatigue Countermeasures;

 Sleep → most effective fatigue mitigation strategy;

 Both quantity of sleep and quality sleep are paramount for restoring the waking function of persons!

 Health benefits about a good night's sleep include:

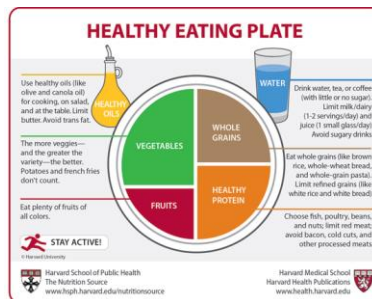
-  Improved memory;
-  Longer lifespan;
-  Better performance;
-  Effective study;
-  Weight control;
-  Better academic performance; and
-  Less depression.



## INTRODUCTION

✈️ Fatigue Countermeasures also Include;

- ✈️ Napping;
- ✈️ Caffeine;
- ✈️ Adequate food and fluid intake;
- ✈️ Physical activities; and
- ✈️ Lifestyle.





# 2020 – UAA Virtual Conference

## FINAL SLIDE

