Controlled Rest on the Flight Deck

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About the Fatigue Countermeasures Working Group

The Fatigue Countermeasures Working Group is comprised of:

• Fatigue Safety Managers from multiple commercial air transport operators

• Labor representatives from multiple pilot unions

• Researchers and scientists from Clockwork Research, NASA Ames Research Center, and Washington State University

• Various independent fatigue and human performance research organizations

“…Improving operational safety by providing proven performance-enhancing strategies for managing fatigue risk in aviation.”
Why offer the resource guide?

- Fatigue risk management via flight time/duty time limitations alone may not be effective

- Operators who do not have a CR procedure may be lacking a very valuable tool in their fatigue management toolkit

- Operators who do have a CR procedure may not be fully appreciating the benefits available from CR

- Fatigue risk within an operation may be masked by the use of controlled rest when CR is not tracked

- CR may introduce unintended consequences in the form on sleep inertia when not properly mitigated
What is included in the resource document?

• Provide the first overview of the practice of CR

• Provide an up-to-date overview of the scientific research on napping, sleep inertia, and CR

• Assist operators new to CR in deciding whether to introduce a CR procedure

• Assist operators in documenting and implementing an effective CR procedure

• Assist operators with an existing CR procedure in reviewing and improving the procedure

• Provide guidance on how to monitor and continuously improve CR as part of an FRM program
Designing an effective CR procedure

Figure 1
Example of a CR profile within flight

- Controlled rest briefing and preparations should not begin prior to top of climb
- Controlled rest period
- Recovery period should end no less than 30 minutes prior to top of descent

10 minutes | 40 minutes | 20 minutes

CR = controlled rest

Source: Fatigue Countermeasures Working Group
Reports of the use of CR to enable FRM

- At 2 airlines, up to 30% of all fatigue reports cite the use of CR as a fatigue countermeasure

- 53% of pilots (n=253) operating regional and international flights used CR in the prior 12 months (Petrie et al., 2004)

- Case study: 20% of crew took CR on a long-haul daytime flight, which contributed to a decision to add an additional pilot
Conclusion

A formal CR policy and a supporting relevant procedure describing how to undertake CR are necessary to harness the benefits of napping while limiting the potential for uncontrolled microsleeps and napping.

Considering:

- the strength of the science demonstrating the benefits of naps to manage fatigue
- the common occurrence of uncontrolled or unintentional sleep where CR is not allowed
- positive feedback on CR from operators who are already experienced

CR should be considered a beneficial tool to help manage unanticipated fatigue.
Fatigue Management

Controlled Rest Resource

Controlled Rest on the Flight Deck: A resource for operators was developed by the Fatigue Countermeasures Working Group and is presented here as a service to the aviation industry by Flight Safety Foundation to facilitate discussion among industry stakeholders. The Fatigue Countermeasures Working Group is comprised of fatigue safety managers from a number of commercial air transport operators, primarily located in the United States; labor representatives from multiple pilot unions; and researchers and scientists from Clockwork Research, the National Aeronautics and Space Administration (NASA) Ames Research Center, Washington State University and various independent fatigue and human performance research organizations.
Questions?

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