
7th Bomb Wing

Fatigue Management



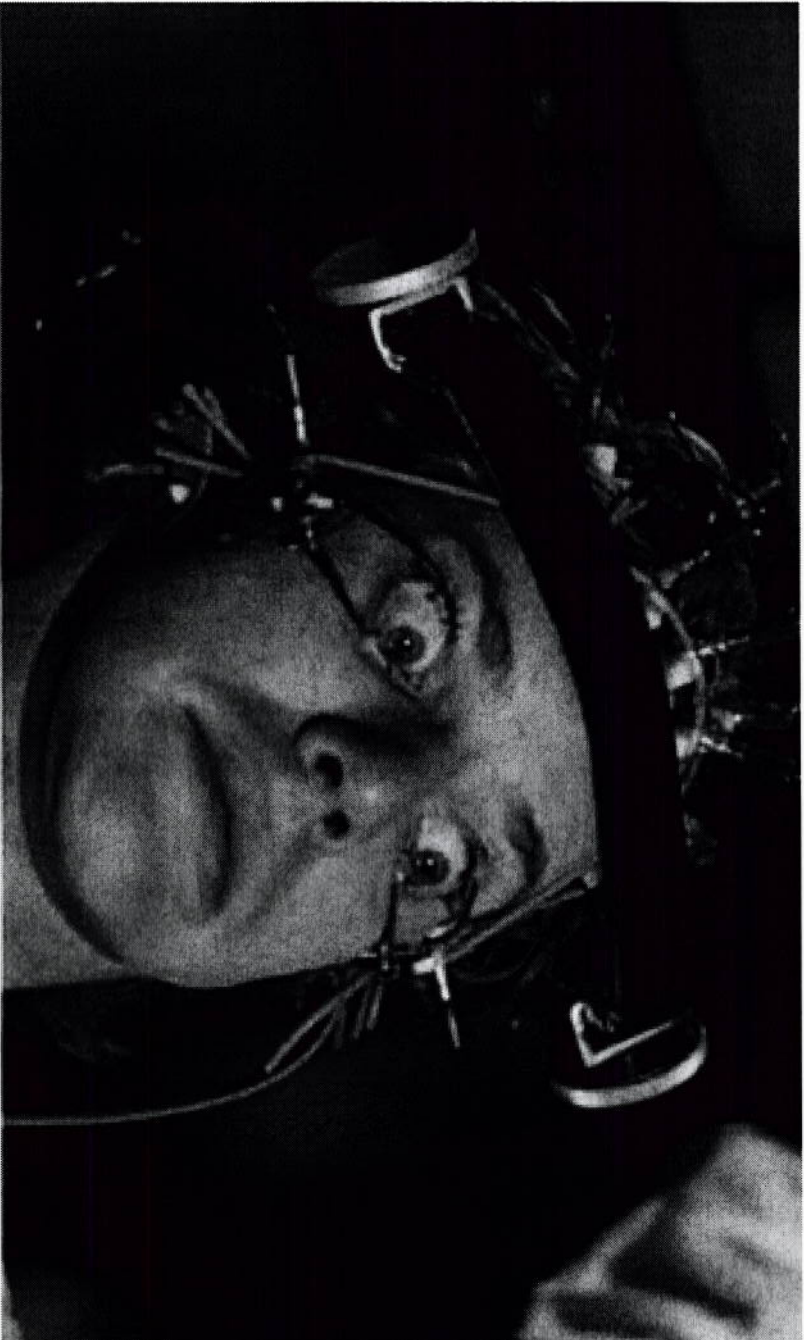
**LtCol David "Aces" Rogers
7AMDS/CC
26 Jul 2010**

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Try to stay awake



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Overview

- Circadian rhythms
- Review Types of Fatigue
- Manifestations of Fatigue
- Impact of Fatigue
- Methods to Combat Fatigue
- Pharmacologic Fatigue Countermeasures.

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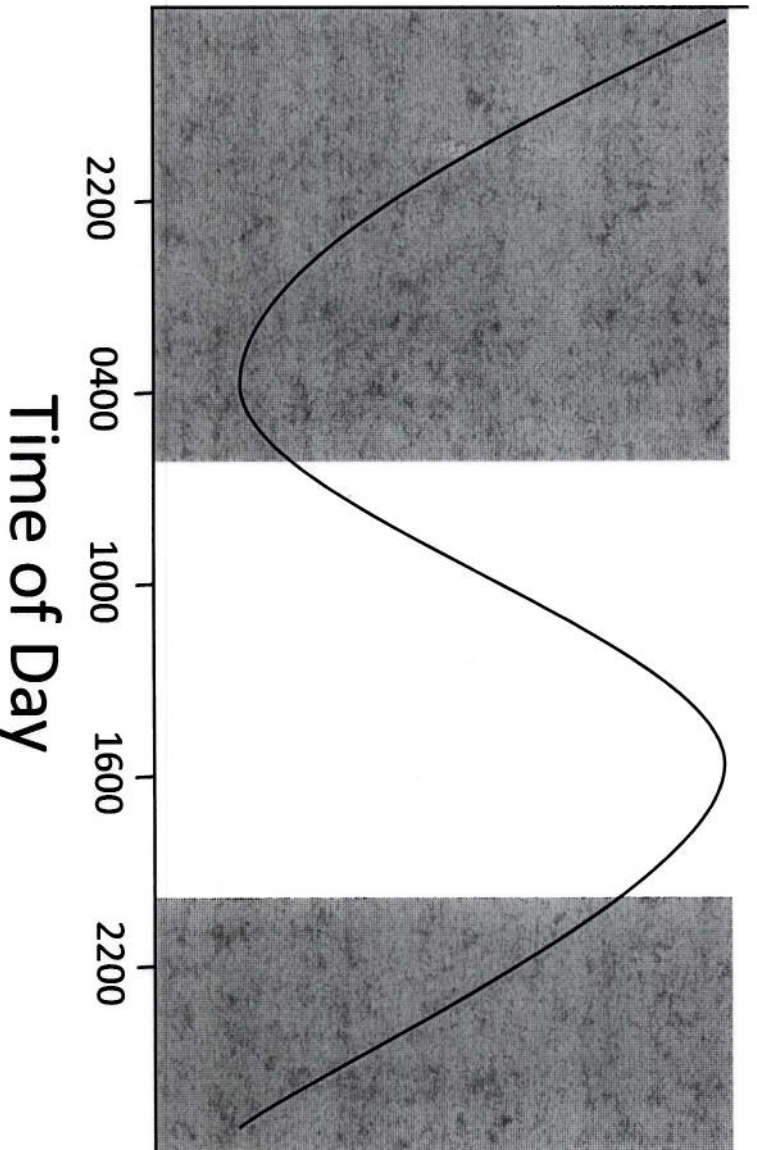
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Typical Circadian Rhythm





Fatigue

- Definition ...
 - Difficult to define
 - In general, when mind cannot command body to act as desired

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Causes of Fatigue

- Intense Physical Work
- Sleep Loss
- Noisy or Hot Environments
- Inadequate Nutrition and Fluids
- Hypoxia
- Poor Physical Conditioning
- Sudden Changes in Work/Rest Schedules

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Mental Fatigue

- Caused or worsened by...
- Anxiety
- Apprehension
- Stress
- Physical fatigue

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Manifestations of Fatigue

- Difficulty focusing
- Slower reactions
- Missed radio calls
- Unclear speech
- Foolish mistakes
- Reversed radio frequencies
- Unintentional nodding off
- A quiet flight deck/control room
- Easily annoyed/change in humor

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Manifestation Pearls

- Change in Sense of Humor
 - Noted as being the earliest sign that fatigue is adversely impacting performance
- Impaired Communications
 - E.g., checklist errors, lack of attention over the comm, lack of listening/talking
- Increased irritability

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Fatigue and Sobriety : How Drunk Are You?

- 18 hours without sleep equals how many beers?
- About 3 – BAL 0.05%
- 24 hours without sleep?
 - About 6 – BAL 0.10%
 - This meets the requirement for DUI – 0.08%
 - note: medical interns are limited to a 30 hour shift when on call

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Methods to Combat Fatigue

- Preload
- Sleep Hygeine
- Inflight Practices
- Drugs
- Scheduling

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Preload

- Sleep Habits
 - 7-8h/night
 - Preparation for local/overseas desynch
 - Fitness
 - Nutrition
 - Protein vs carb
 - Hydration
 - Napping
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Sleep Hygiene

Promote Vigilance

- Bright lights
- Power Naps
- Exercise /hygiene
- Nutrition

Promote Sleep

- Relaxation techniques
- Consistent sleep-wake schedules
- Nutrition

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Sleep Hygiene

- Avoid stimulants (caffeine/nicotine) 6-8 hours prior to bed time
- Use bed for sleep and for sex – no reading or TV
 - Your body should know when it is time to sleep.
- Do not use alcohol as a sedative- poor sleep quality
- Maintain a consistent schedule
- Eliminate as many stresses as possible

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Inflight Practices

- The Combat Nap
 - 20-30 minute nap → 4-6 hours of alertness
 - 3-4 nap → 12+ hours of alertness
 - Beware sleep latency
- Communication
 - Talking promotes alertness
- Hydration

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Drugs

- Sleep Promoting – No-Go
 - Restoril – 12 Hour DNIF
 - Ambien – 8 Hour DNIF
 - Alertness Enhancing – Go
 - Caffeine
 - Modafinil
 - Dexedrine
 - All drugs must be ground tested prior to use.
-

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No-go pills

- **Sleep Promoting – No-Go**
 - **Drugs will be signed for.**
 - **Unused pills will be returned.**
 - **To prevent potential for catastrophic mix up, pill bottles should be packed in luggage, not carried in flight suit.**
 - **Due to normal step time, No-go pills are not authorized prior to tomorrow's sortie.**

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Go pills

-
- Alertness Enhancing – Go
 - Authorized for sorties >12 hour duration in multi-place aircraft.
 - Drugs will be dispensed tomorrow at the desk prior to the brief.
 - Unused pills will be returned. Please arrange for AC to collect and return.
 - Notify nearest FS of adverse reactions.

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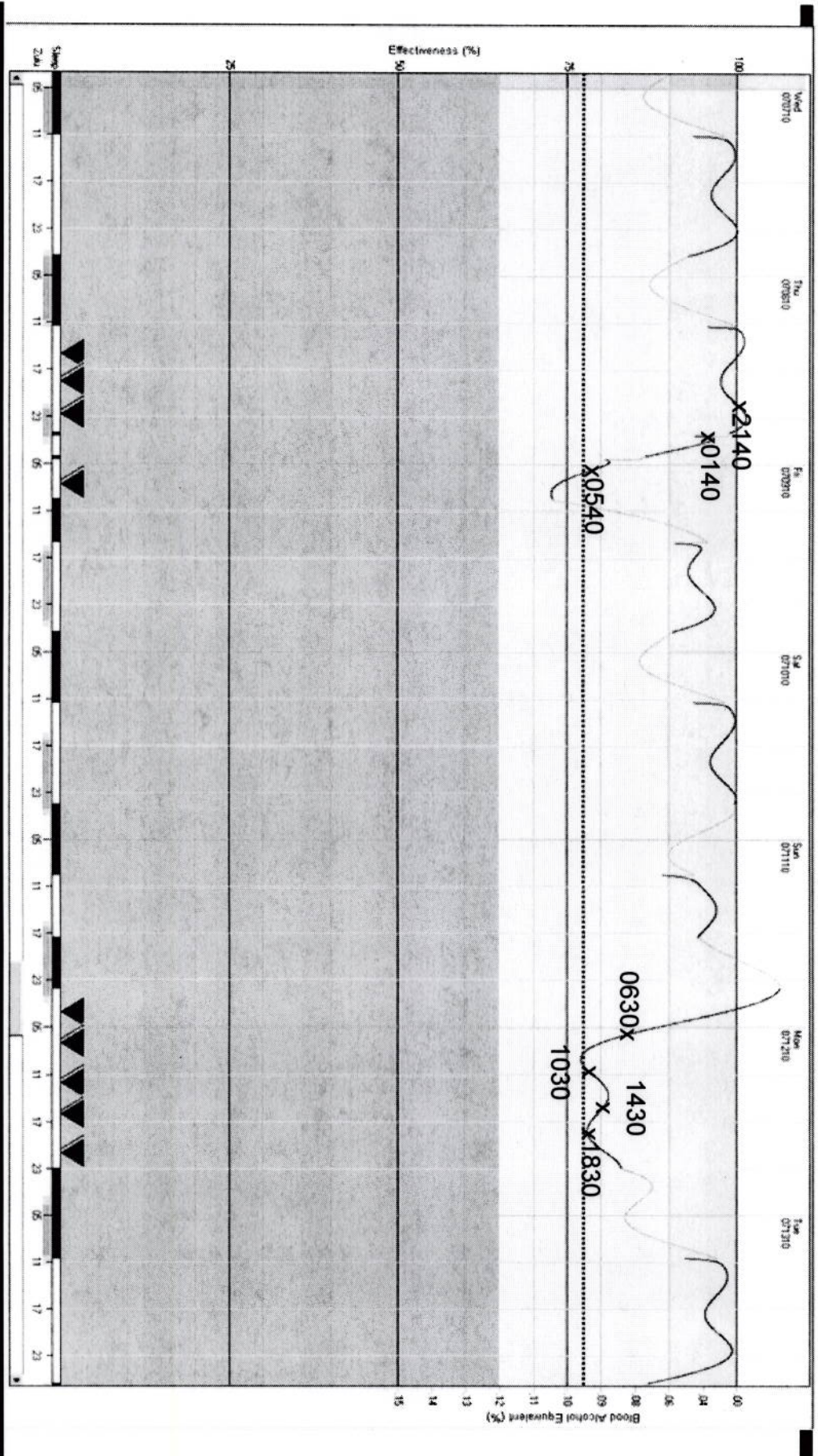
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Scheduling



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Summary

- Fatigue is ubiquitous, pervasive and insidious
- Preload is important
- Recognizing Early Manifestations
- Managing is critical

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