



**Operating For 48
Hours Straight**

WHY?

- **SITUATION EXAMPLES**
 - Emergency Communications
 - Field Day
 - Contests

HOW CAN WE OPERATE FOR 48 HOURS STRAIGHT?

- It is possible to operate quite effectively for almost 48-hours straight
- Requires a bit of preparation beforehand
- Understanding the sleep cycle
- Following a few basic principles

SLEEP CYCLE

- A person's sleep cycle is affected by:
 - Internal bio-rhythm
 - External influences rhythm.
- A complete sleep cycle consists of four stages requiring approximately 90 minutes.

SLEEP STAGE 1

- One-to seven-minute transition from wakefulness to sleep
- Characterized by
 - Slow, rolling eye movements,
 - A decrease in thinking activity (alpha wave)
 - Increased dreaming activity (theta wave)

SLEEP STAGE 2

- Thirty-to sixty-minutes
- Mostly dreamless session
- Without eye movement

SLEEP STAGE 3

- Ten-to-twenty minutes
- Deep slow wave sleep
- Heightened hearing sensitivity to being awakened.

SLEEP STAGE 4

- Ten-to-thirty- minutes
- Deep sleep
- Accompanied by even more sensitivity to being awakened by hearing.

BEFORE DAY ONE

- Try to avoid deep-sleep inducing hard physical activity
- Five hours before
 - Have a full meal
- Four hours before
- Take a nap of about three-hours (two 90-minute sleep cycles).
- About thirty minutes before the beginning of Day One, have coffee.

DAY ONE

- About two hours before the time that you would naturally awaken;
 - Take a short break
 - Sleep for 90 minutes (one full sleep cycle)
- Alternatively; about $3\frac{1}{2}$ hours before the time you would normally awaken
 - Take a brief break and sleep for 180 minutes (two full sleep cycles).
- Upon awakening, have coffee.
- In the mid- to late-afternoon, take a thirty-minute nap.

DAY TWO

- About two hours before the time that you would naturally awaken;
 - Take a short break, then sleep for 90 minutes (one full sleep cycle).
- Alternatively, about $3\frac{1}{2}$ hours before the time you would normally awaken;
 - Take a brief break and sleep for 180 minutes (two full sleep cycles).
- Upon awakening, have coffee.
- In the mid- to late-afternoon, take a thirty-minute nap.

WHAT TO EAT DURING THE ACTUAL 48 HOUR PERIOD

- Snacks only
 - High carbohydrate
 - Low fat
 - High protein
- Avoid large, heavy meals completely.

SNACKS

- *Dry Cereal*
- *Bagels*
- *Fresh fruits*
- *Crackers-Whole wheat, sesame, bran*
- *Yogurt—Low-fat or fat-free*
 - Add dry cereals for crunch or fresh fruit for sweetness
- *Jerky strips*

SNACKS

- *Low-fat cereal or granola bars*
- *Air popped popcorn*
- *Baked tortillas or pretzels*
 - *Shake off salt or try salt free pretzels to lower the sodium*
- *Rice cakes*
- *Low fat muffins*
- *Sweet potatoes*
 - *Hot or cold, microwave it for a quick snack, add a little brown sugar for a sweet taste*

DRINKS

- Plentiful amounts of water
 - Avoid having too much water before scheduled sleep periods.
- Have coffee only upon awakening
- Completely avoid alcohol.

TEMPERATURE

- Sleep is induced by low body temperature
- To help stay awake, keep your body temperature slightly higher by keeping the environment warm
 - 72° - 74°.

LIGHTING

- Light induces wakefulness
 - Keep the operating environment brightly lit
- Dark induces sleep
 - Keep environment sleep environment dark.

TYPICAL CYCLE

BEFORE DAY ONE

- **AVOID HARD PHYSICAL ACTIVITY**
- **5 HOURS BEFORE GOING ON DUTY:**
 - EAT A FULL MEAL
- **4 HOURS BEFORE GOING ON DUTY:**
 - TAKE A 3 HOUR NAP
- **30 MINUTES BEFORE GOING ON DUTY**
 - HAVE COFFEE

DAY ONE

- **OPERATING ENVIRONMENT**
 - 72 TO 74 DEGREES F
 - BRIGHTLY LIT
- **FOOD & DRINK**
 - PLENTY OF WATER
 - NO ALCOHOL
 - NO LARGE ,HEAVY MEALS
- **SNACKS ONLY**
 - HIGH CARBOHYDRATES
 - HIGH PROTEIN
 - LOW FAT
- **2 HOURS BEFORE NORMAL WAKE TIME**
 - SHORT BREAK
 - 90 MINUTE NAP
- **ALT – 3-½ HOURS BEFORE NORMAL WAKE TIME**
 - 180 MINUTE NAP
 - COFFEE UPON AWAKENING
- **MID TO LATE PM**
 - 30 MINUTE NAP
- **SLEEP ENVIRONMENT**
 - COMPLETELY DARK

DAY TWO

- **OPERATING ENVIRONMENT**
 - 72 TO 74 DEGREES F
 - BRIGHTLY LIT
- **FOOD & DRINK**
 - PLENTY OF WATER
 - NO ALCOHOL
 - NO LARGE ,HEAVY MEALS
- **SNACKS ONLY**
 - HIGH CARBOHYDRATES
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