



Fatigue has been recognized as a problem with flight crew for a long time and they have strict maximum hours of work regulations. However, AMTs at this time are only limited to 24 hours in any given day. Some companies, quite wisely, have established a Fatigue Management System (FMS) for their employees that limits their hours of work.

So what are the symptoms and effects of fatigue?

1. A tired lethargic feeling

As one would expect, this symptom is accompanied with an ever stronger desire to sleep or at least rest. You may begin to “nod off.”

2. Constant yawning

This is an involuntary action that indicates that you are tired, bored or copying someone else who is yawning. No one is sure why when one person yawns over 30% present will begin to do the same thing; but they do.

3. Begin consuming more coffee and other fluids, eating more junk food and for some, smoking more

All these are in an effort to combat the feeling of fatigue

4. Mood becomes withdrawn

You may become more irritable and anger more easily. You become less likely to want to converse. You become more stressed by the effort to remain awake.

5. Greater difficulty concentrating on a task.

Your memory becomes diminished. You begin to have inaccurate recall. You begin to forget peripheral tasks. A form of “tunnel vision” causes you to concentrate on only the main task to the exclusion of all others, like reconnecting a pipe disconnected for the main task. You may read a paragraph (excluding FAA publications) and not recall what it was you just read. You begin to revert to “old habits.”

6. Attention span is reduced

You begin to have a degraded problem solving ability and everything becomes more difficult requiring greater concentration. Reaction time slows as the memory diminishes. A greater stimulus may be required for you to respond. By that I mean that a normal 1/8" crack may have to be over 1/2" before you will see it. You will also begin to lessen your visual span.

7. You begin to develop a “don’t care” attitude

This is the **Biggy** as you are unaware of your poor work performance, deterioration in judgment and decision making skills. So what can we do about it?

Safety Nets – At Home



1. Try to keep regular hours

If you can get in the habit of going to sleep and getting up at the same time, it will be easier to get and stay asleep. Also, if you usually get 8 hours sleep per night, aim to get the same number of consecutive hours sleeping during the day after a midnight shift.

2. Exercise regularly

Do the exercise a couple of hours before going to bed so that you burn off the adrenalin etc. produced from the stresses of the day and you'll feel physically tired as well.

3. Don't go to bed stuffed or starved.

Both will make it harder to sleep.

4. Avoid the stimulants; coffee, tea or alcohol

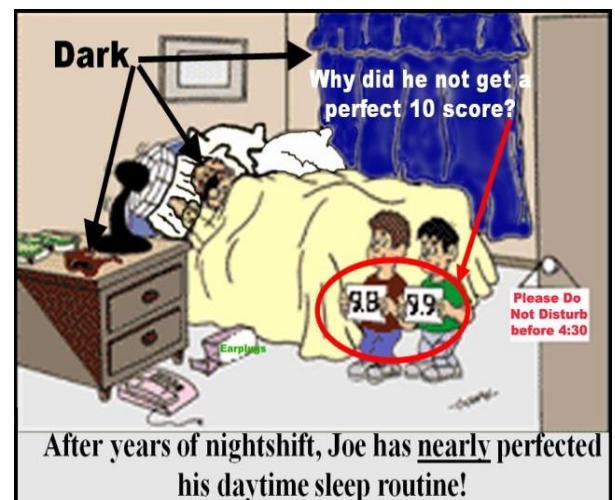
Coffee takes about 30 minutes to kick in and lasts about 4 hours. Alcohol is actually a depressant, but if you take more than 2 to 4 drinks before going to bed, it will interrupt your sleep pattern. More than 4 drinks and you are “passing out”, not going to sleep and you will pay the next day.

5. Invest in a good bed

We often spend thousands of dollars in a great stereo system that you listen to perhaps a few hours per day yet sleep in a bed that your Grandmother gave you in her will. Bed springs “work harden” and sag over time, so spend the money where you spend almost 1/3rd of your life.

6. The bedroom should be dark, cool and quiet

This is important in order to get quality sleep. Use a sleep mask and ear plugs in order to help obtain the dark and quiet. The fan helps with **keeping** the room cool, as well as provide “white noise” to help drown out other sounds. So why didn't Joe. in our picture, not score the perfect 10? Any parent should know the answer to this one: Lock the kids out of the



bedroom and if it doesn't have a lock, put Vaseline on the doorknob and keep your channel locks handy.

7. Establish a sleep routine

If you always watch the 10 pm news before going to bed then you have a routine. Although, they say to, never have a TV in the bedroom, so the bedroom is reserved for sleep and the odd extracurricular activity only.

8. Practice some relaxation techniques

If you have trouble falling asleep, to count imaginary sheep jumping over a fence until you have bored yourself to sleep. Now they suggest that you concentrate on your breathing by counting three second breaths in and six second breaths out. If that doesn't work after $\frac{1}{2}$ hours, get up and read a FAA publication until sleepy.

9. Leave the stress out of sleep time.

Now that is easier said than done, but they suggest writing down your feelings about the stressor and say you are leaving it until tomorrow. If the stressor happens to be your spouse, make sure what you wrote your feelings on has a very good lock.

10. Learn the secret of the “Power Nap”

If you are carrying a “sleep debt” it can be made up with interest by a “power nap” of 15 to 25 minutes only. This short nap pays off about an hour of sleep dept. Do not sleep longer or you may wake up feeling like crap due to “sleep inertia. Sleep inertia will occur if you wake up from stage 3 or 4 deep sleep. Thus, from about 30 minutes to $1 \frac{1}{2}$ hours you run the risk of sleep inertia which can take up to 30 minutes before your brain is fully back in gear.

11. Always tired – consult a doctor

Read about sleep apnea in last month's (Oct/Nov 2016) issue

12. Discuss shift work with your family

You need your sleep just as they do and should not be expected to take someone to a hockey game or the like after only a few hours of sleep.

Safety Nets – At Work



Here the goal is to stay awake and alert.

1. Awareness

I hope that you now have a greater awareness of the importance of obtaining your usual sleep no matter what shift you are on.

2. Exercise

If you are beginning to feel sleepy, run around and get your heart rate up. It works for a short while.

3. Get some fresh air and deep breathe

4. Watch what you eat

Avoid the carbs, remember the last article!

5. Drinks lots of fluids

6. Use the coffee, tea or a caffeinated drink

But they say that more than 4 to 5 cups will cause you to become hyper so limit the intake.

7. Use bright lights

Try to simulate daylight

8. Engage in conversation

Talking helps stimulate the brain

9. Watch the circadian rhythm low.

Reread Part 1 of last month's article

10. Cold water

Water splashed and drank can help keep you alert for a short time

11. Take the Power nap

When I worked the midnight shift, I'd drink my coffee at my breaks and take a 15 minute power nap. Coffee takes 30 minutes to take effect and 15 minutes kept me from the sleep inertia

12. Decide if it is worth what it does to your life

After six years, at the age of 38, I reluctantly left the airlines as I just couldn't see myself working two weeks of midnight shifts every six weeks. For some it is not a problem while for others it is hell. You decide.

Safety Nets – For the drive home



- 1. Remember the power nap before the head snap.**
- 2. Stop, get out and run around – but not on the highway**

3. Talk to someone

4. Eat an apple

This helps and many swear by it. I guess the brain decides to stay awake as long as food is coming its way.

5. Others – Sing along with some upbeat music. Open the window and stick your head out, etc. All are short term, so don't bet your life on them.

Fatigue is a fact of life and we must deal with it by realizing our limitations

Now the quiz that I hope we now know the answers to.

1. We can tell when we are about to fall asleep. **False**
2. Coffee will overcome the effects of exhaustion. **False**
3. We can get by with 4 or 5 hours of sleep in the day for a week. **False**
4. A few drinks (3 or 4) of alcohol help us to sleep better. **False**
5. As we get older it gets easier to sleep. **False**
6. We can usually train ourselves to wake up at a given time. **True**
7. We will wake up refreshed after an hour of sleep. **False**
8. A 20 minute nap is a waste of time. **False**
9. Being awake in excess of 18 hours is the equivalent of working with a blood/alcohol level of .08 (legally drunk) **True**

The New Year's article will be one we often face and are required to make what can be a tough judgment call.

May you all have a very Merry Christmas and a happy, healthy and Safe 2017.