

# *SAFER Evaluation*

Because SAFER is an educational intervention, the expectation is that it will primarily affect knowledge and attitudes of the target audience (residents, faculty, hospital administrators, etc) regarding alertness management. Therefore, the primary emphasis should be on evaluation of these parameters. In addition, specific feedback regarding the SAFER program should be obtained. The following evaluation package includes a pre and post-test, consisting of several components:

---

## **Pre-Test:**

- Basic demographic information about the respondent
- Assessment of respondent's sleepiness level (Epworth Sleepiness Scale with additional resident-specific items; 12 items)
- Assessment of respondent's current sleep-related behaviors (Sleep Behavior; 8 items)
- Assessment of respondent's current attitudes regarding the impact of sleep loss and fatigue (Sleep Attitudes; 12 items)
- Evaluation of respondent's knowledge regarding basic concepts of sleep and circadian rhythms covered in the SAFER curriculum (Sleep Knowledge; 15 items)

*The pre-test evaluation package takes about 10 minutes to complete.*

---

## **Post-Test:**

- Assessment of respondent's feedback regarding SAFER program content, format, and success in meeting stated objectives (Overall Program Evaluation; 10 items)
- Specific suggestions for improving the SAFER program
- Assessment of respondent's intended behavioral changes regarding personal sleep habits in response to the SAFER program
- Assessment of changes in respondent's knowledge regarding basic concepts of sleep and circadian rhythms as a result of the SAFER program (Sleep Knowledge post-test)
- Sleep Knowledge Answer Key

*The post-test evaluation takes about 5 minutes to complete.*

# Pre-test

## Demographic Information

Please fill out the following information. All surveys are confidential.

Date of SAFER presentation: \_\_\_\_\_

Age: \_\_\_\_\_ Gender: \_\_\_\_\_

### Professional Status (check one):

Medical Student\_\_ (year)\_\_\_\_

Resident\_\_ (year/specialty)\_\_\_\_\_

Faculty\_\_ (year of medical school graduation/specialty)\_\_\_\_\_

Community-based\_\_ Hospital-based\_\_ Full-time\_\_ Part-time\_\_

Residency Program Director\_\_ (specialty)\_\_\_\_\_

Hospital Administrator\_\_ (position)\_\_\_\_\_

Other (please specify)\_\_\_\_\_

## Sleepiness Scale

How likely are you to doze off or fall asleep in the following situations? (in contrast to just feeling tired). Please refer to your **usual** way of life in **recent** times. Even if you have not done some of these things recently, try to work out how they would have affected you.

Situation	Would <i>never</i> doze dozing	<i>Slight</i> chance of dozing	<i>High</i> chance of dozing	<i>Moderate</i> chance of dozing
1. Sitting and reading	0	1	2	3
2. Watching TV	0	1	2	3
3. Sitting and inactive in a public place (theater or meeting)	0	1	2	3
4. As a passenger in a car for an hour without a break	0	1	2	3
5. Lying down to rest in the afternoon when circumstances permit	0	1	2	3
6. Sitting and talking to someone	0	1	2	3
7. Sitting quietly after lunch (without alcohol)	0	1	2	3
8. In a car, while stopped for a few minutes in the traffic	0	1	2	3
Add up your numbers to 1-8 and put sum here (range 0 to 25)				
9. Grand rounds or noon conferences	0	1	2	3
10. Writing up a patient history and physical	0	1	2	3
11. Talking on the telephone	0	1	2	3
12. Preparing for a presentation	0	1	2	3
Add up your numbers to 9-11 and put the sum here (range 0 to 12)				

### **Sleep Behavior**

Please select the answer which best describes your sleep/wake behavior:

1. The average number of hours of sleep I get on non-call **weeknights** is:  
 < 4 hrs  4-6 hrs.  6-7.5 hrs  7.5-9 hrs  > 9 hrs.
2. The average number of hours of sleep I get on non-call **weekends** is:  
 < 4 hrs  4-6 hrs  6-7.5 hrs  7.5-9 hrs  > 9 hrs.
3. The average number of hours of sleep I get on **call nights** is:  
 < 4 hrs  4-6 hrs  6-7.5 hrs  7.5-9 hrs  > 9 hrs.
4. The average number of hours of sleep I get on **post-call nights** is:  
 < 4 hrs  4-6 hrs  6-7.5 hrs  7.5-9 hrs  > 9 hrs.
5. The average number of hours of sleep I need to **feel rested** is:  
 < 4 hrs  4-6 hrs  6-7.5 hrs  7.5-9 hrs  > 9 hrs.
6. I need an alarm clock to wake up:  
 never  1-2 days/wk  3-4 days/wk  5-6 days/wk  everyday.
7. I use caffeinated products (i.e., coffee, tea, chocolate, soda) to help maintain alertness at work:  
 never  1-2 cups/day  3-4 cups/day  5-6 cups/day  > 6 cups/day.
8. I use napping as a way of making up sleep loss:  
 never  rarely  occasionally  often  always.

### **Sleep Attitudes**

How strongly do you agree/disagree with the following statements pertaining to sleep in residency training?

	Strongly Disagree				Strongly Agree
1. Sleep loss and fatigue have a major impact on my <i>personal life</i> .	1	2	3	4	5
2. My body has adapted to less sleep during residency training.	1	2	3	4	5
3. Sleep loss and fatigue affect my medical decisions.	1	2	3	4	5
4. My family understands my demanding job and sleep needs.	1	2	3	4	5
5. Sleep loss and fatigue have a major impact on my <i>work</i> .	1	2	3	4	5
6. I sometimes look forward to sleeping at grand rounds.	1	2	3	4	5
7. I chose my medical field, in part, because I function well on little sleep.	1	2	3	4	5
8. I have made medical errors because of sleep loss and fatigue.	1	2	3	4	5
9. I have effective countermeasures to sleep loss.	1	2	3	4	5
10. I have heard about others making medical errors due to sleep loss and fatigue.	1	2	3	4	5
11. I can tell when I am too tired to drive home.	1	2	3	4	5
12. I have worried about having a car accident driving home post-call.	1	2	3	4	5

### **Sleep Knowledge (Pre-Test)**

This is a survey of your knowledge about some basic concepts of sleep and circadian rhythms. For the following questions, please indicate your response by filling in the best answer: T=true; F=false; DK=don't know

1. Performance begins to deteriorate after being up for more than 16 consecutive hours.	
2. A good time to take a nap is in the evening (between 7 and 10pm).	
3. Most adults need at least 8 hours of sleep a night to function well.	
4. Recovery from sleep loss usually takes about 2 days.	
5. Good strategies to use when falling asleep at the wheel include opening the car window and turning up the radio.	
6. Consumption of alcohol near bedtime decreases the time to sleep onset, but disrupts sleep later in the night.	
7. Most individuals are able to gauge when they are too sleepy to drive safely.	
8. A boring lecture or a dark room can cause sleepiness.	
9. Adults can generally adapt to getting less sleep over time.	
10. The stimulant effects of caffeine last about three to five hours.	
11. Bright light exposure while driving home after a night shift helps to reset the circadian clock and facilitates sleep.	
12. Individuals who are "night owls" have more difficulty adapting to working night shifts.	
13. The optimal duration of a brief nap is about 45 minutes.	
14. It is possible to fall asleep briefly and not be aware of it.	
15. It takes about 3 days to adapt to working night shifts.	

# Post-test

## **Overall Program Evaluation**

Please answer the following questions regarding the SAFER educational module presentation. Your feedback is valuable in refining the program.

	Strongly Disagree				Strongly Agree
1. The learning objectives were clear.	1	2	3	4	5
2. The program met its learning objectives.	1	2	3	4	5
3. Teaching methods were appropriate for the content covered.	1	2	3	4	5
4. The material was presented in an organized, logical manner that enhanced learning.	1	2	3	4	5
5. This program made an important contribution to my understanding of sleep and fatigue issues in residency.	1	2	3	4	5
6. This program could be presented by non-sleep medicine faculty.	1	2	3	4	5
7. All the material covered in the presentation was pertinent to the topic and learning objectives.	1	2	3	4	5
8. This program provides a useful tool for educating residents about sleep loss and fatigue.	1	2	3	4	5
9. The information in this program was new to me.	1	2	3	4	5
10. This program provides a useful tool for educating faculty and program directors about sleep loss and fatigue.	1	2	3	4	5

Please describe any changes or additions you would suggest to improve the SAFER program:

---

---

Please describe what you will do differently in relation to your sleep habits as a result of this program:

---

---

### **Sleep Knowledge (Post-Test)**

This is a survey of your knowledge about some basic concepts of sleep and circadian rhythms. For the following questions, please indicate your response by filling in the best answer: T=true; F=false; DK=don't know

1. Performance begins to deteriorate after being up for more than 16 consecutive hours.	
2. A good time to take a nap is in the evening (between 7 and 10pm).	
3. Most adults need at least 8 hours of sleep a night to function well.	
4. Recovery from sleep loss usually takes about 2 days.	
5. Good strategies to use when falling asleep at the wheel include opening the car window and turning up the radio.	
6. Consumption of alcohol near bedtime decreases the time to sleep onset, but disrupts sleep later in the night.	
7. Most individuals are able to gauge when they are too sleepy to drive safely.	
8. A boring lecture or a dark room can cause sleepiness.	
9. Adults can generally adapt to getting less sleep over time.	
10. The stimulant effects of caffeine last about three to five hours.	
11. Bright light exposure while driving home after a night shift helps to reset the circadian clock and facilitates sleep.	
12. Individuals who are "night owls" have more difficulty adapting to working night shifts.	
13. The optimal duration of a brief nap is about 45 minutes.	
14. It is possible to fall asleep briefly and not be aware of it.	
15. It takes about 3 days to adapt to working night shifts.	

**Thank you for your time!**

### **Sleep Knowledge (Answer Key)**

This is a survey of your knowledge about some basic concepts of sleep and circadian rhythms. For the following questions, please indicate your response by filling in the best answer: T=true; F=false; DK=don't know

1. Performance begins to deteriorate after being up for more than 16 consecutive hours. (T)
2. A good time to take a nap is in the evening (between 7 and 10pm). (F)
3. Most adults need at least 8 hours of sleep a night to function well. (T)
4. Recovery from sleep loss usually takes about 2 days. (T)
5. Good strategies to use when falling asleep at the wheel include opening the car window and turning up the radio. (F)
6. Consumption of alcohol near bedtime decreases the time to sleep onset, but disrupts sleep later in the night. (T)
7. Most individuals are able to gauge when they are too sleepy to drive safely. (F)
8. A boring lecture or a dark room can cause sleepiness. (F)
9. Adults can generally adapt to getting less sleep over time. (F)
10. The stimulant effects of caffeine last about three to five hours. (T)
11. Bright light exposure while driving home after a night shift helps to reset the circadian clock and facilitates sleep. (F)
12. Individuals who are "night owls" have more difficulty adapting to working night shifts. (F)
13. The optimal duration of a brief nap is about 45 minutes. (F)
14. It is possible to fall asleep briefly and not be aware of it. (T)
15. It takes about 3 days to adapt to working night shifts. (F)