

Epworth Sleepiness Scale (ESS)

(Johns MW. A new method for measuring daytime sleepiness: the Epworth sleepiness scale. Sleep, 1991,14(6):540-545.)

Each situation receives a score of 0–3:

0 = would never doze

1 = slight chance of dozing

2 = moderate chance of dozing

3 = high chance of dozing

Situation	Chance of dozing or sleeping
Sitting and reading	
Watching TV	
Sitting inactive in a public place	
Being a passenger in a motor vehicle for an hour or more	
Lying down in the afternoon	
Sitting and talking to someone	
Sitting quietly after lunch (no alcohol)	
Stopped for a few minutes in traffic	
Total score	

High risk of excessive daytime sleepiness ESS score ≥ 11

Low risk of excessive daytime sleepiness ESS score < 11

Sleep Apnea Clinical Score (SACS)

(Flemons WW, et al. Likelihood ratios for a sleep apnea clinical prediction rule. Am J Respir Crit Care Med, 1994, 150(5 Pt 1):1279-1285.)

Prediction of OSA						
(Circle the patient's score.)						
Sleep Apnea Clinical Score						
	Not Hypertensive			Hypertensive		
	Historical Features*			Historical Features*		
Neck Circ (cm)	None	One	Both	None	One	Both
<30	0	0	1	0	1	2
30/31	0	0	1	1	2	4
32/33	0	1	2	1	3	5
34/35	1	2	3	2	4	8
36/37	1	3	5	4	6	11
38/39	2	4	7	5	9	16
40/41	3	6	10	8	13	22
42/43	5	8	14	11	18	30
44/45	7	12	20	15	25	42
46/47	10	16	28	21	35	58
48/49	14	23	38	29	48	80
>49	19	32	53	40	66	110

*Historical Features: 1. Habitual snoring
2. Partner reports of gasping, choking, or snorting

Probability of Sleep Apnea

	Low - Sleep Apnea Clinical Score <15
	High - Sleep Apnea Clinical Score ≥15

TOTAL SLEEP APNEA CLINICAL SCORE: _____

Berlin Questionnaire (BQ)

(Netzer NC, et al. Using the Berlin Questionnaire to identify patients at risk for the sleep apnea syndrome. Ann Intern Med, 1999, 131(7):485-491.)

Category 1

Q1. Do you snore?

Yes (1)

No (0)

Do not know/refused

Q2. If you snore, your snoring is:

Slightly louder than breathing (0)

As loud as talking (0)

Louder than talking (1)

Very loud; can be heard in adjacent rooms (1)

Do not know/refused (0)

Q3. How often do you snore?

Nearly every day (1)

3 to 4 nights per week (1)

1 to 2 nights per week (0)

1 to 2 nights per month (0)

Never or nearly never/do not know (0)

Q4. Has your snoring ever bothered other people?

Yes (1)

No (0)

Do not know/refused (0)

Q5. Has anyone noticed that you quit breathing during your sleep?

Nearly every day (2)

3 to 4 times a week (2)

1 to 2 times a week (0)

1 to 2 times a month (0)

Never or nearly never/do not know/refused (0)

Category 2

Q6. How often do you feel tired or fatigued after your sleep?

Nearly every day (1)

3 to 4 times a week (1)

1 to 2 times a week (0)

1 to 2 times a month (0)

Never or nearly never/do not know/refused (0)

Q7. During your wake time, do you feel tired, fatigued, or not up to par?

Nearly every day (1)

3 to 4 times a week (1)

1 to 2 times a week (0)

1 to 2 times a month (0)

Never or nearly never/do not know/refused (0)

Q8. Have you ever nodded off or fallen asleep while driving a vehicle?

Yes (1)

No (0)

Do not know/refused (0)

Q9. If yes, how often does it occur?

Nearly every day (1)

3 to 4 times a week (1)

1 to 2 times a week (0)

1 to 2 times a month (0)

Never or nearly never/don't know/refused (0)

Category 3

Q10. Do you have high BP?

Yes (1)

No (0)

Do not know/refused (0)

Q11. BMI, kg/m²

>30 (1)

≤30 (0)

Scoring

Category 1 is positive with ≥ 2 positive responses to questions 1–5.

Category 2 is positive with ≥ 2 positive responses to questions 6–9.

Category 3 is positive with a self-report of high blood pressure and/or a BMI of >30 kg/m².

High risk of OSA Two or more categories scored as positive.

Low risk of OSA Less than two categories scored as positive.

STOP-Bang Questionnaire (SBQ)

(STOP-Bang, an Alternative Scoring Model Combining BMI, Age, Neck Circumference, and Gender with the STOP Questionnaire). In: Chung F, et al. STOP questionnaire: a tool to screen patients for obstructive sleep apnea. *Anesthesiology*, 2008, 108(5):812-821.

STOP-Bang Questionnaire

1. **Snoring:** Do you snore loudly (loud enough to be heard through closed doors)?
Yes No
2. **Tired:** Do you often feel tired, fatigued, or sleepy during daytime?
Yes No
3. **Observed:** Has anyone observed you stop breathing during your sleep?
Yes No
4. **Blood Pressure:** Do you have or are you being treated for high blood pressure?
Yes No
5. **BMI:** BMI more than 35 kg/m²?
Yes No
6. **Age:** Age over 50 years old?
Yes No
7. **Neck circumference:** Neck circumference greater than 40 cm?
Yes No
8. **Gender:** Male?
Yes No

High risk of OSA: Yes to 3 or more questions

Low risk of OSA: Yes to less than 3 questions

Chung F et al. *Anesthesiology* 2008;108:812-21.
