# STOP-BANG Score for Obstructive Sleep Apnea

## INPUTS

|  |  |
| --- | --- |
| Do you snore loudly?  *Louder than talking or loud enough to be heard through closed doors* | **Options:**   * No (0) * Yes (1) |
| Do you often feel tired, fatigued, or sleepy during the daytime? | **Options:**   * No (0) * Yes (1) |
| Has anyone observed you stop breathing during sleep? | **Options:**   * No (0) * Yes (1) |
| Do you have (or are you being treated for) high blood pressure? | **Options:**   * No (0) * Yes (1) |
| BMI | **Options:**   * ≤35 kg/m² (0) * >35 kg/m² (1) |
| Age | **Options:**   * ≤50 years (0) * >50 years (1) |
| Neck circumference | **Options:**   * ≤40 cm (0) * >40 cm (1) |
| Gender | **Options:**   * Female (0) * Male (1) |

## FORMULA

Addition of the selected points (for the first four, ask the patient):

|  |  |  |
| --- | --- | --- |
|  | **0 points** | **1 point** |
| Do you snore loudly? (Louder than talking or loud enough to be heard through closed doors) | No | Yes |
| Do you often feel tired, fatigued, or sleepy during the daytime? | No | Yes |
| Has anyone observed you stop breathing during sleep? | No | Yes |
| Do you have (or are you being treated for) high blood pressure? | No | Yes |
| BMI | ≤35 kg/m2 | >35 kg/m2 |
| Age | ≤50 years | >50 years |
| Neck circumference | ≤40 cm | >40 cm |
| Gender | Female | Male |

## FACTS & FIGURES

Interpretation:

|  |  |
| --- | --- |
| **STOP-BANG** | **Risk** |
| 0-2 | Low risk for moderate to severe OSA |
| 3-4 | Intermediate risk for moderate to severe OSA |
| 5-8 | High risk for moderate to severe OSA |

## EVIDENCE APPRAISAL

The STOP-BANG questionnaire was originally developed by [Chung et al in 2008](https://www.ncbi.nlm.nih.gov/pubmed/18431116). The focus of this seminal paper is on the STOP questions in preoperative patients. However, appendix two is the STOP-BANG questionnaire which includes four objective assessments alongside of the four STOP questions. By including the BANG assessments with the STOP questions, the authors increased the sensitivity and negative predictive value of the screening test.

STOP-BANG has been studied and validated in multiple settings:

[Xará 2015](https://www.ncbi.nlm.nih.gov/pubmed/26323734): High-risk OSA patients (>3 on STOP-BANG) have a greater incidence of postoperative respiratory complications including inability to breathe deeply and episodes of desaturation.

[Uchôa 2015](https://www.ncbi.nlm.nih.gov/pubmed/25612013): OSA is independently associated with an increase in major adverse cardiac and cardiovascular events following coronary bypass graft surgery.

[Tan 2016](https://www.ncbi.nlm.nih.gov/pubmed/27938922), [Nagappa 2015](https://www.ncbi.nlm.nih.gov/pubmed/26658438): While initially developed for preoperative patients, STOP-BANG is an effective screen for the general population.

The STOP-BANG questionnaire has been translated to and validated in multiple languages including [Arabic](https://www.ncbi.nlm.nih.gov/pubmed/25758298), [Portuguese](https://www.ncbi.nlm.nih.gov/pubmed/27832234), [Chinese](https://www.ncbi.nlm.nih.gov/pubmed/25182345), and [Danish](https://www.ncbi.nlm.nih.gov/pubmed/26621392).