

BiteStrip®


[Introduction](#)
[Technical Info](#)
[Instructions](#)
[Clinical Info](#)
[Contact Us](#)
[Back To Distar UK](#)

Clinical Information

Shochat T,¹ Gavish A,² Hadas N,¹ Molotsky A¹ and Lavie P.³

1-Scientific Laboratory Products, Ltd., Tel Aviv,

2-School of Dental Medicine, Tel Aviv University, Tel Aviv

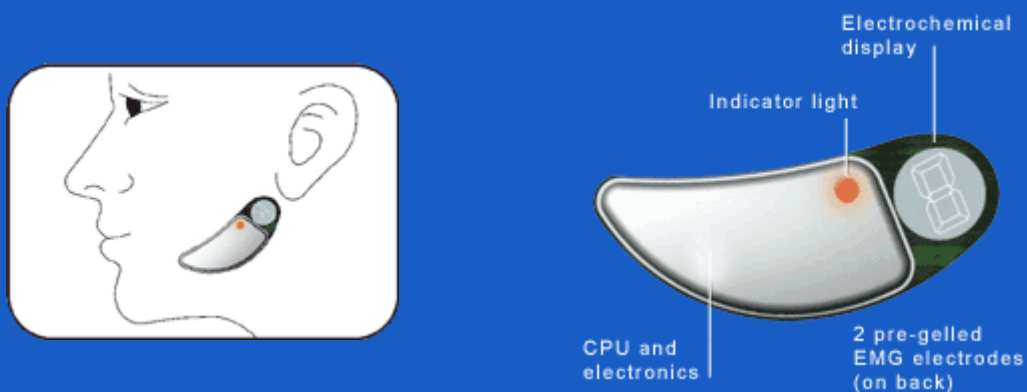
3-Sleep Medicine Center, Rambam Medical Center, Haifa.

Presented at the APSS meeting, 2003

Introduction: The Bitestrip is a miniature single-use electronic screener for sleep bruxism (SB). It is comprised of EMG electrodes and an amplifier to acquire masticatory muscle signals, a CPU with real time software, which detects and analyses EMG patterns, a permanent chemical display which presents the outcome in the morning, a light emitting diode (LED) and a lithium battery. All elements are integrated on a single flexible substrate. At bedtime, it is attached to the cheek over the mandible. Patients are instructed to perform 4-5 maximum voluntary clenches (MVCs) in order to establish an individual threshold for bruxing events. In the morning, after removal of the device, the total number of bruxing events throughout the night is displayed. A good correlation between BiteStrip results and traditional EMG scoring of polysomnographic recordings has been reported previously. In the present study, performance of the BiteStrip is evaluated in unattended home studies.

Methods: Eleven adult subjects with a history of SB based on clinical evaluation participated in the study (BRUX). Six adult subjects with no history of SB based on subjective reports alone participated as controls (NBRUX). All subjects used the BiteStrip for one to three nights. BiteStrips were collected and final scores were averaged across nights per subject. As the BiteStrip final score represents not a single number but rather a range (e.g., 100-124), each subject had 2 scores: an averaged minimum (MINAVG) and an averaged maximum (MAXAVG). Non-parametric Mann-Whitney tests for 2 independent samples were performed between groups for MINAVG and MAXAVG scores.

Results: Altogether, 46 nights were completed. Eight nights were excluded due to battery failure (3), premature removal of the device (3) or unclear display (2). Mean (+/-SD) minimum scores were 130.53(+/-130.41) and 7.67(+/-13.46) and mean maximum scores were 178.30(+/-177.22) and 31.67(+/-13.46) for the BRUX and NBRUX groups respectively. Mann-Whitney U statistics were 2.5 for MINAVG ($p=0.001$, one tailed) and 3.5 for MAXAVG ($p=0.002$, one tailed).



Conclusions: The BiteStrip is a useful tool for distinguishing between bruxers and non-bruxers. It is reliable enough to use in unattended home studies with a low failure rate.

[Back to top](#)

For further information e-mail: info@distaruk.com
All site content is © Distar UK Limited | Website design is © Ambrow Limited