



Miraclare

Goodeeps

AI-based Adaptive Sleep
Bruxism Preventative Care Solution



Sleep Bruxism Smart Device

- Goodeeps is a health care product that relieves sleep bruxism and clenching of the teeth.
- When you are ready for bed, place the device on either side of your temple. The device will accurately sense your muscle movements and prevent potential grinding and clenching by initiating a sublestimulation (vibration).
- The device collects information on the frequency and intensity of your muscle movements in the form of Electromyography (EMG) signals. This data is used to further optimize the device settings via AI processing and can be used to develop a treatment plan with your dentist.

Good for patients with bruxism experiencing the following:



Extreme jaw pain



uncomfortable splint



sleep disorder



facial asymmetry

AI-based Bruxism Detection Process

AI analysis enables goodeeps to precisely detect potential grinding and clenching and ignore natural muscle movements during your sleep.

Small Form Factor and Lightweight Design

Integrated circuit design and miniaturization of components allows convenience and comfort

Charged by handy USB-C port

Device charged through the USB-C port can be used wirelessly for up to 12 hours, and the functions work even when communication with the smartphone is lost

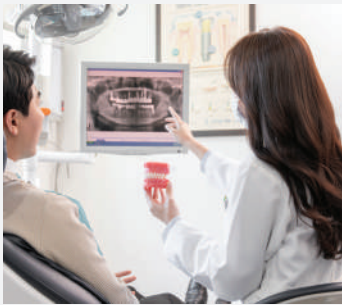


Biofeedback using subtle Vibration

Vibration is used to safely stimulate your body to subconsciously react and prevent potential grinding and clenching

Goodeeps Value

Dentist



Providing an alternative treatment solution

Many patients using splint are displeased with the experience due to discomfort

Drug-free and non-invasive treatment solution that does not require special prescription

Patient & Public



Reduce sleep bruxism treatment cost

Low cost compared to traditional treatment solutions (Splint, Botox, etc.)

Self-check your bruxism pattern

Safe and easy-to-use device features suitable for youths and teens

Goodeeps in CES2023

"I want to buy it right away. Where can I buy it?" - Yuichi / Japan

"My son is highly resistant to botox. A groundbreaking Product." - Romain J. / Canada

"I want to participate even as a tester. Please contact me" - John H. / USA



Product included

1. Device design



Black

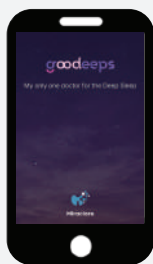


Pink



Smile

2. Apps



(iOS & Android)

3. Accessories



(Device Wearing Eye-mask)



(Skin plate)



(Charging Cable)

Specification

Parts	Detail	Specification
Device	Connector	USB Port Type C
	Size	Width 48 mm, height 29 mm, Thickness 9 mm
	Weight	10.4g
	Attachment	Direct contact by double-sided gel pad
EMG	Measurement	Two Electrode inputs for measurement
Operation	Vibration	Electric motor
	Communication	Bluetooth
Power	Type	lithium polymer battery
Data	EMG	Facial electrode data collection during sleep

Comparison with existing methods

	Digital Device (Goodeeps)	Splint	Botox
			
Applicable age	Youth & adults	Adults(only)	Adults(only)
Ease of use	Easy & Comfortable	bite and sleep discomfort	Convenient but resistant
Cost	Competitive price	700 USD	400USD per shot
Monitoring	○	×	×
Visit dental clinic	1	3 times(at least)	Every 4 months



purpose	Sleep grinding, teeth clenching relief
Cost	Competitive price
Recognize bruxism	AI based corrections
Biofeedback	Vibration (personalized)
Customized	Use of AI learning
Advantages	Functional design, application of AI/big data

Low cost
(Compared to competitors)

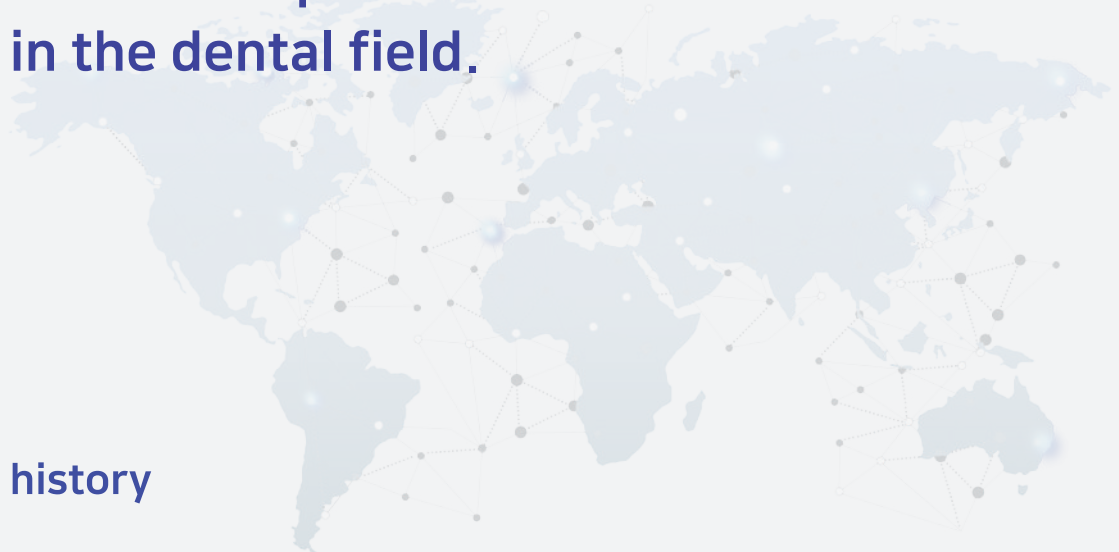
Safety
Elec. Pulse < Vibration

Scalability
Use of sleep data



Miraclare

Miraclare is a company specializing in digital-based home care products in the dental field.

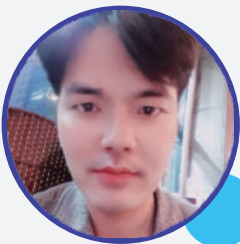


history

2021	12	Device for relieving sleep bruxism, 'Dr. Deeps' : Silver prize in the national start-up competition
2022	02	Established Miraclare Co., Ltd.
	03	Established Miraclare research institute
	09	1st Changwon Technology Startup Academy IR Evaluation Grand Prize
2023	01	Participated in the 2023 CES Las Vegas Consumer Electronics Show (Dr. Deeps: wearable device to relieve sleep grinding)
	05	Awarded the first prize in the AI Novatus Contest (Title: Personal intraoral camera-based implant site gum inflammation)
2023	10	Seed investment attraction completed (140,000 USD)

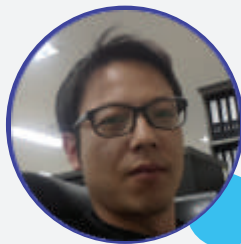
Team members

		
Miraclare Co., Ltd.	Hallym Univ. Hospital	Inje Univ. Biomedical Engineering
CEO, PM	Dentist, Medical advisor	Professor, Biomedical engineering
Jung-hwan Byun / CEO Ph.D in MIS, Korea MSc in University of Manchester, UK	Jin-hyuk Hwang / Professor Master's degree in Dentistry, University of Ulsan	Chi-Woong Mun Ph. D in Electricity and Electronics, KAIST



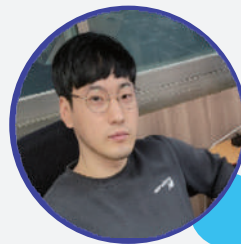
DH KIM / Data

Manager
Ph.D, Data mining & analysis



JH KIM / Electric

Senior Engineer
Electronic engineering master



JS SEO / AI

Engineer
MSc. AI engineering



Aria / Apps

Engineer
MSc, Information and
Communication Engineering

Business areas

Dental Homecare (Sleep Bruxism)	Dental Homecare (Implant care)	Sleep-care Solutions	Digital Dentistry
 		 Electric Eye mask  Sleep mask	 Dental Suction robot



WEARABLE **HEALTHCARE DEVICE** FOR YOUR DEEP SLEEP

Contact

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