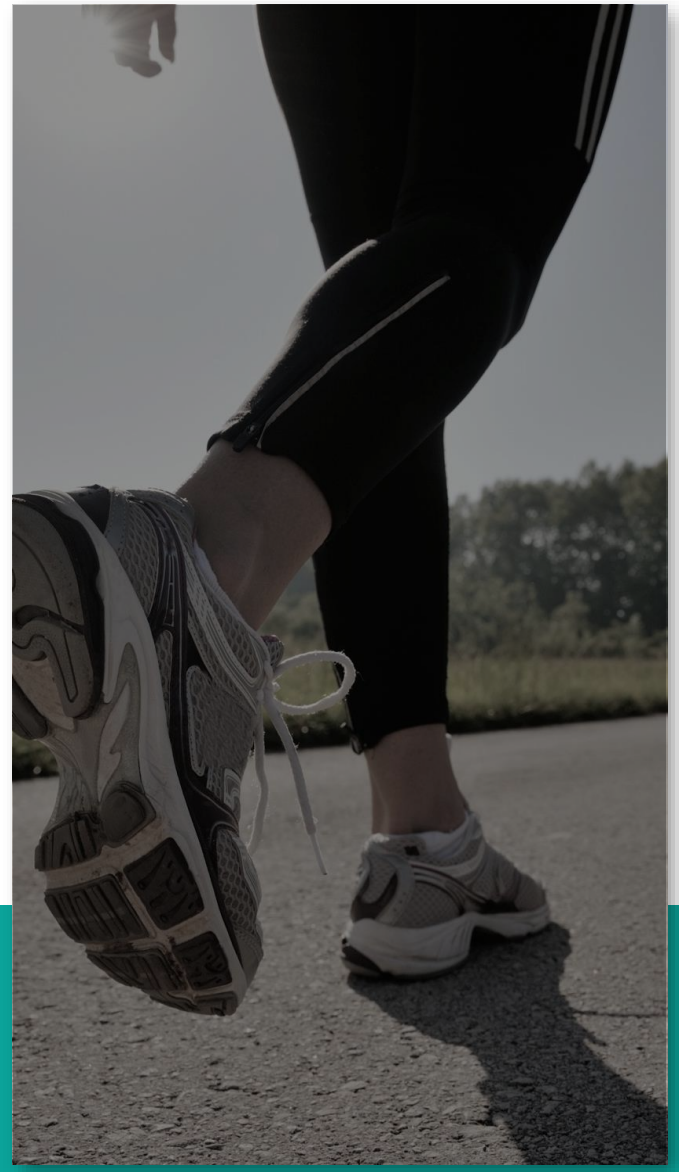


Health Care Product Company

GECKTOE GRIP

GECKTOE GRIP vibration chip health starts with your steps

What is **GECKTOE GRIP** vibration chip?

GECKTOE GRIP Chip is a device that converts personal kinetic energy into vibration energy without external power using small magnets and elastic plates inside.

GECKTOE GRIP Vibration Chip

Key Product features

Powerless System
No charging required, just personal exercise/impact semi-permanently generates low-wavelength, human-beneficial vibrations

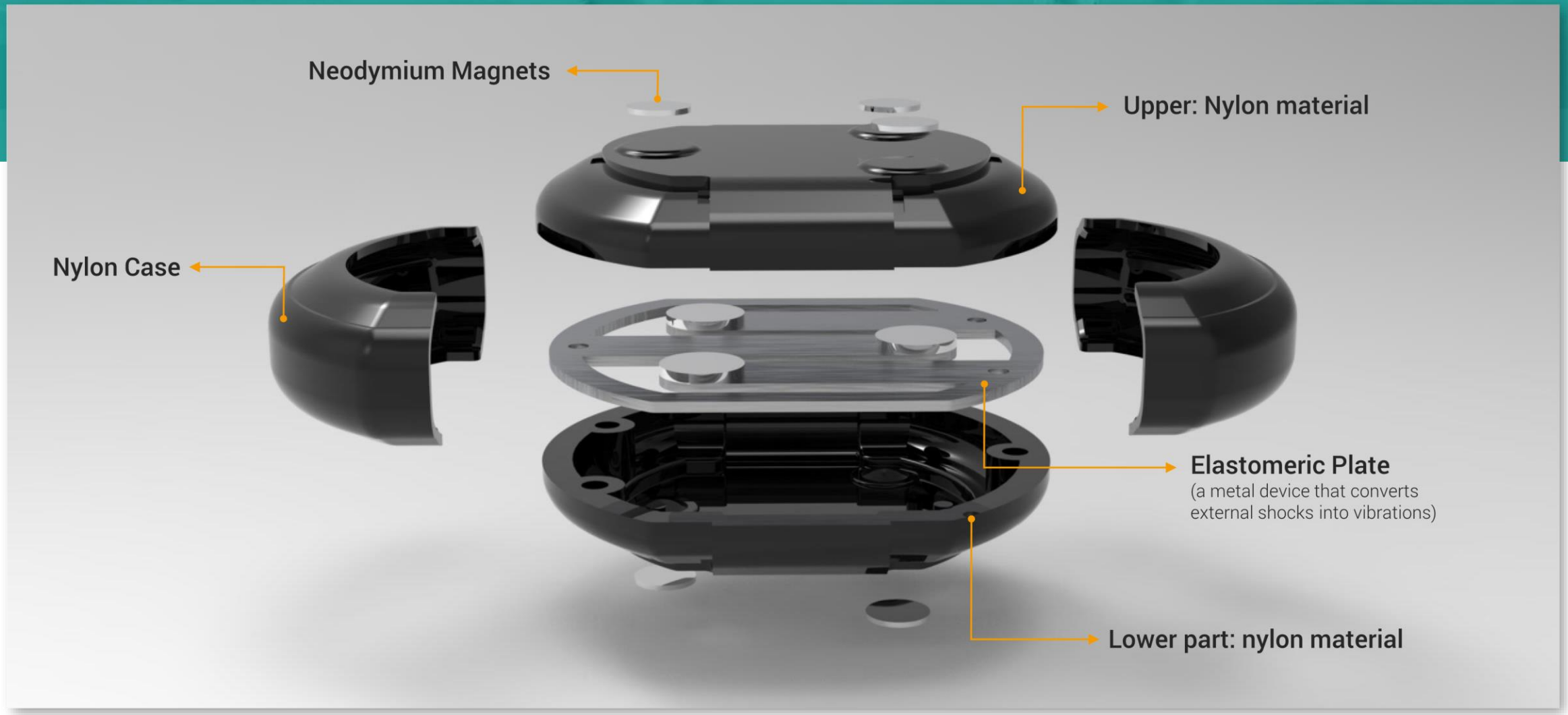
Durability
It's made of a nylon case and Impact-resistant materials shockproof a nd flexible material long-term usable without breaking

Product Applicability
With a small size of 4.4x5.25(cm) and a weight of 17 grams product applicability for sneakers, shoes, golf shoes, rackets, etc.

Health Benefits
- Blood circulation
- Shock absorption
- Increased balance & gait

Use materials that are harmless to humans
imove vibration chip is made of nylon case, magnet, elastic plate that are harmless to the human body.

GECKTOE GRIP Chip Structure



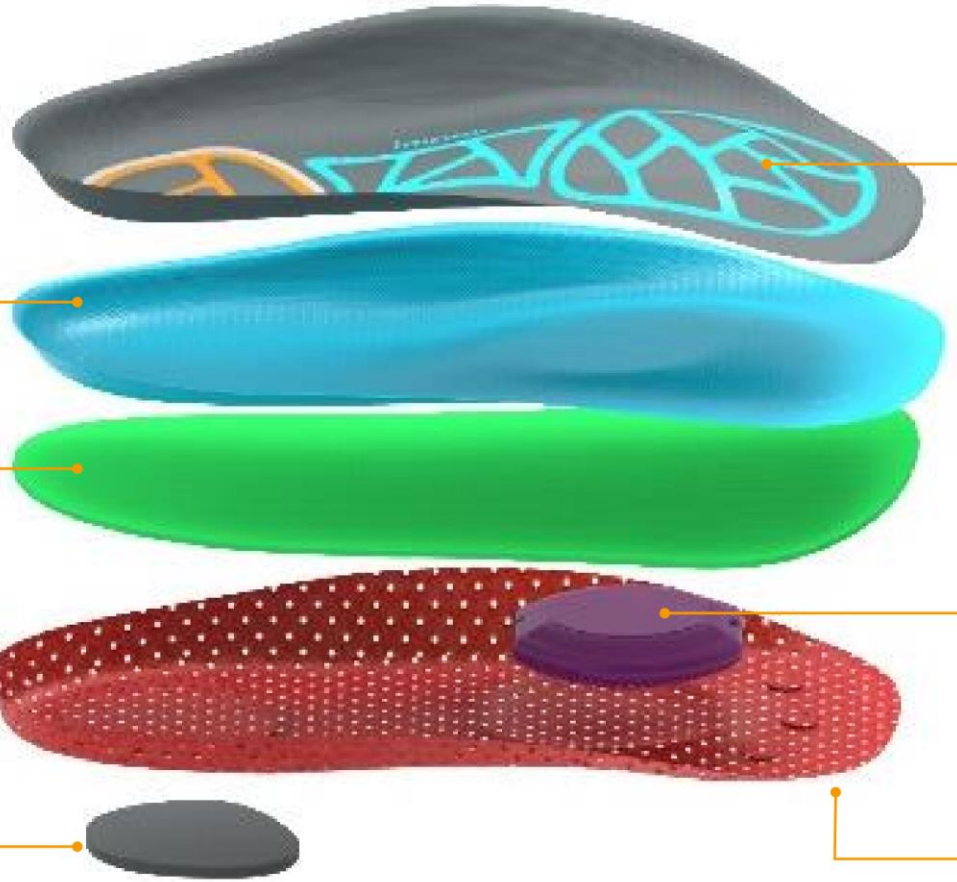
Product Area of Applications

GECKTOE GRIP chip can be applied to
Various sporting/health products
For improving personal health

- **Sporting Goods**
  - Running shoes
  - Casual/Working shoes
  - Climbing shoes
  - Health shoes for aged people

- **Personal Health Devices**
  - Personal Health Devices
  - Hand massager, Shoe Insole

Application example - Vibro Insole



Arch Correction, Fabric
PCM Top Cover

Deodorizing,Antibacterial,Breathable
Ortholite Fabric

Cushioned, Molded, Odorless
EVA Sponge

Powerless magnet vibration
imoov Vibration Chip

Shock Absorber, Cushioning
Foam Sponge

Structure, Ventilation
Multi-Hardness EVA

Improve blood circulation (I)

건강증진을 위한 진동운동 신발적용의 운동
과학적 효과 분석

The Analysis of Vibration shoe walking on anti-obesity and blood circulation

곽이섭 · 지진구 · 김경철 · 진영환*(동의대학교)
Kwak, Yi-Sub · Ji, Jin-Goo · Kim, Gyeong-Cheol · Jin, Young-Wan(*Dongeui University*)

요약

결론.

이상과 같이 진동신발과 마라톤 신고 만보 걷기 운동을 실시한 결과 진동신발이 신체구성이나 혈관탄력성 및 혈액순환개선에 더 긍정적인 영향이 있는 것으로 사료된다.

그림 1. 맥진기(3-D MAC)

손
요골동맥
관
척

그림 2. 촌, 관 ,척

학제간연구

건강증진을 위한 진동운동 신발적용의 운동 과학적 효과 분석

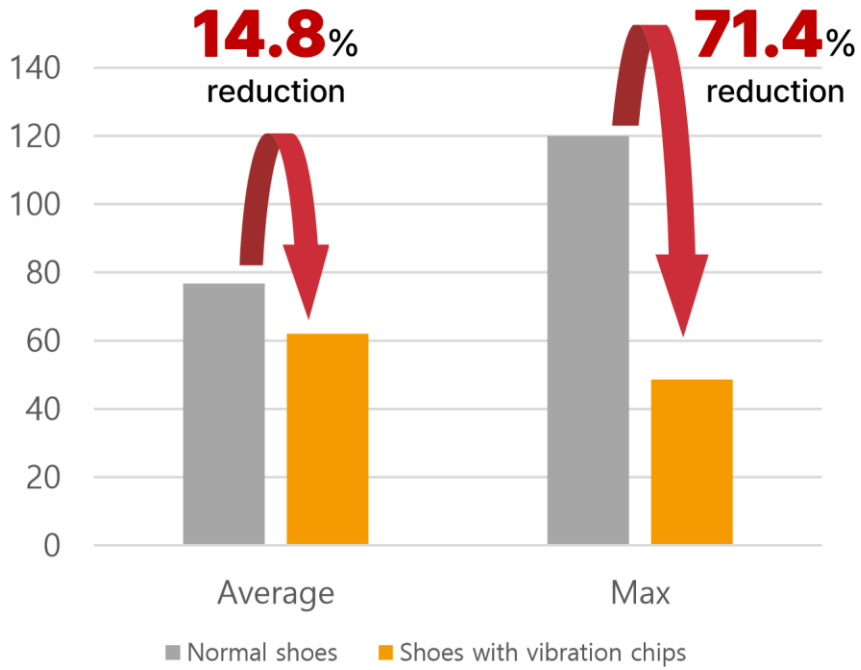
진동신발을 신고 걷기운동시 체지방감소와 신체조성이나 혈관탄력성 및 혈액순환에 긍정적영향

"An experiment to analyze the scientific effects of shoes with vibration chips on exercise" described in the Korean Journal of Wellness (August 24, 2012)

After 40 adult men and women performed walking exercises for 12 weeks,
the results showed that the shoes with vibration chips reduced peripheral blood circulation problems by **14.8%** and blood pressure **9.4%** an the average compared to ordinary walking shoes.

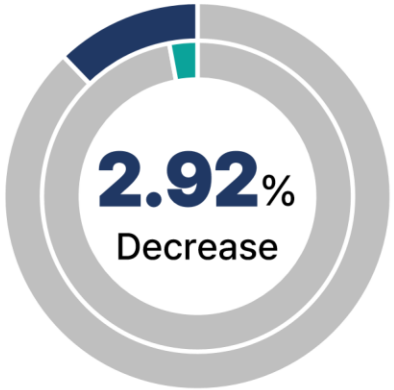
Improve blood circulation (Ⅱ)

Reduced peripheral circulation problems



After wearing vibrating shoes
Average **14.8**% reduction / Max **71.4**% reduction

Body fat mass decrease

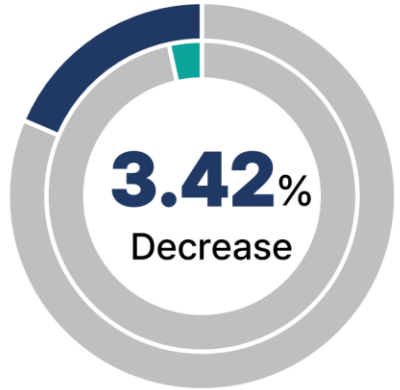


After wearing vibrating shoes
Average **2.92**% decrease
Max **12.17**% decrease

Body mass decrease

After wearing vibrating shoes
Average **1.08**% decrease
Max **6.08**% decrease

Fat decrease



After wearing vibrating shoes
Average **3.42**% decrease
Max **18.60**% decrease

[Please note that the numbers above are not absolute and may vary from person to person.]

Increased shock absorption

시 험 성 적 서

(주)부산테크노파크
고령친화산업지원센터

페이지 (1)/(총 3)

1. 의 뢰 자
○ 기 관 명 : 벨니스텝스 주식회사
○ 주 소 : 부산시 남구 대연3동 55-1 21생존리시티빌딩 1018호
○ 의뢰일자 : 2010. 9. 9

2. 시험실적서의 용도
충격흡수율

3. 시료명/모델명
운동화/A형(전용소자 탑재), B형(전용소자 미탑재)

4. 시험기간
2010. 9. 10 ~ 2010. 9. 13

5. 시험방법
ASTM F 1614

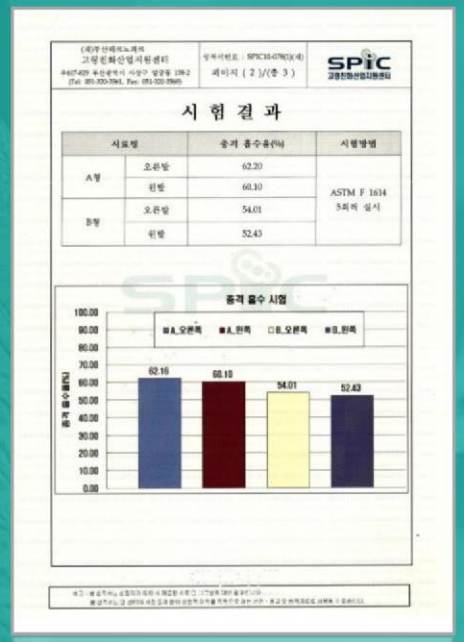
6. 시험환경
○ 온도 : (25.1 ~ 25.5) ℃ , ○ 상대습도 : (47 ~ 51) % R.H.

7. 시험결과
○ 시험결과 참조.

확 인	시험자	기술책임자
	성 명 : 전 성 철 (서명)	성 명 : 서 민 호 (서명)

2010. 10. 5

(주)부산테크노파크
고령친화산업지원센터장 (인)



(주)부산테크노파크
고령친화산업지원센터

페이지 (2)/(총 3)

시 험 결 과

시료명		충격 흡수율(%)	시험방법
A형	오른발	62.20	ASTM F 1614 5회씩 실시
	왼발	60.10	
B형	오른발	54.01	
	왼발	52.43	

충격 흡수 시험

■A_오른쪽 ■A_왼쪽 □B_오른쪽 ■B_왼쪽

62.10 60.10 54.01 52.43

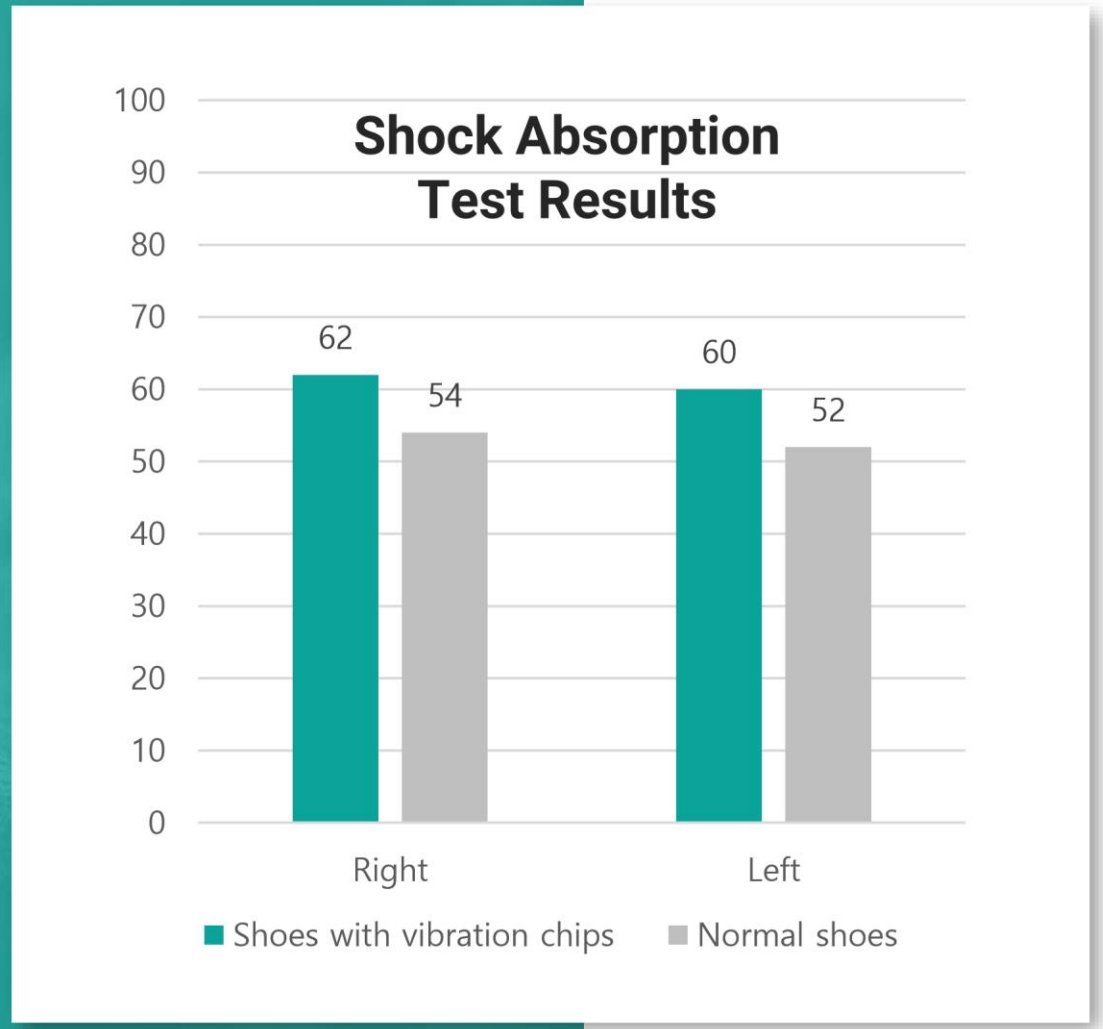
충격 흡수율(%)

100.00 90.00 80.00 70.00 60.00 50.00 40.00 30.00 20.00 10.00 0.00

Experimental results by Age-Friendly Industry Support Center Experiment

(September 10 - September 13, 2010)

A three-day experiment conducted by AISC on the elderly showed that the shock absorption rate of shoes with vibration chips was 8% higher than the case of ordinary walking shoes.



Improve balance and gait

Balance-Restoring Insoles,
a research by Wyss Institute, Harvard University.

(October 28, 2014)

Using the principle of stochastic resonance, vibrating insoles designed at the Wyss Institute use small piezoelectric actuators to deliver imperceptible mechanical vibrations to feet, enhancing detection of nerve signals. Insoles similar to these have been shown to reduce walking variability and improve balance in the elderly.
Credit: Harvard's Wyss Institute

Potential applications:

- Improve balance in the elderly, futher resulting in fewer falls, a more active lifestyle with greater independence, lower cost of care, improved quality of life
- Reduce the incidence of foot ulcers in diabetic patients
- Improve the mobility of stroke sufferers
- Accelerate rehabilitation
- Help children with cerebral palsy
- Improve performance of athletes (e.g., runners)
- Workplace safety (e.g., steel workers working on tall structures)

Balance-Restoring Insoles

Wearable shoe inserts that improve balance

Balance in humans relies on complex feedback from the senses that govern the body's mechanical stability. But with aging and diseases such as diabetes and stroke, sensory function can diminish. This can dull the feedback that normally keeps healthy people steady on their feet during standing and walking.

In the elderly, sensory loss as a result of normal aging is especially problematic. One in three people over the age of 65 fall every year. In 2009, elderly falls resulted in 2.2 million non-fatal injuries in the United States alone. By 2020, fall related health care costs in the United States are expected to reach $55 billion annually. In addition to the cost, fall-related injuries impact elderly independence, mobility, and quality of life.

The Wyss Institute Solution

Wyss Institute and Boston University researchers have discovered that random vibrations, too gentle to be felt, can improve the sensory feedback system and may restore stability through a mechanism known as "stochastic resonance". By incorporating vibrating elements in insoles and footwear, it has been shown that stochastic resonance improves balance and gait.

How it works

Mechanical actuators, designed to be inserted into any type of footwear, are embedded into the insoles. A signal generator and a small battery are also integrated within the insole to provide sensory enhancement stimulation to the user's feet. A smart phone app controls the stimulation level and can inform the user of device status, such as stimulation and battery levels. When used by elderly individuals, this sensory enhancement insole could potentially improve their sense of balance and walking stability, which is understood clinically to be related to the risk of falling. For diabetics, who suffer from peripheral neuropathy, this kind of device may increase the sensitivity of their feet and might eventually decrease the risk of ulceration.

Potential applications:

- Improve balance in the elderly, futher resulting in fewer falls, a more active lifestyle with greater independence, lower cost of care, improved quality of life
- Reduce the incidence of foot ulcers in diabetic patients
- Improve the mobility of stroke sufferers
- Accelerate rehabilitation
- Help children with cerebral palsy
- Improve performance of athletes (e.g., runners)
- Workplace safety (e.g., steel workers working on tall structures)

Production facilities

Company overview

Insole Process Step #1

Insole Process Step #2

Quality Control #1

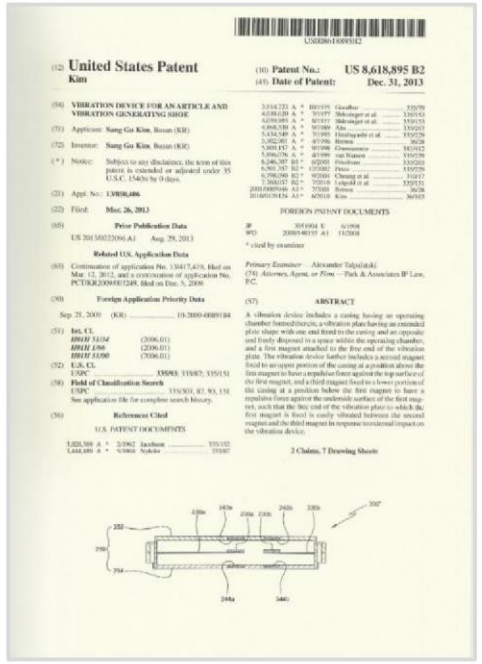
Quality Control #2

Vibration Chip Patent Status

Patented product inventions in four major countries.

KOREA

Patent : Vibrators in shoes, etc.
Patent No. : No. 10-1158760
Application Date : Dec. 15, 2009.



USA

Patent : Vibrating device for vibration
Patent No. : US 8,618,895 B2
Application Date : Dec. 31, 2013

JAPAN

Patent : Vibrating apparatus for generating vibration
Patent No. : No. 5459741
Application date : Dec. 5, 2009

CHINA

Patent : Vibrating shoe and its vibration device
Patent No. : ZL 2009 80161541. X
Application Date : Dec. 5, 2009

GECKTOE GRIP Chip Product Specifications

Model	Thickness (cm)	Size (cm)	Weight
imoov 100	1.0	4.4 x 5.25	13g
imoov 200	1.1	4.1 x 4.4	10g
imoov 300	1.4	4.4 x 5.25	17g

- Vibration chips are available in thicknesses ranging from 9 to 14T and flexible sizing.
- It can be customized according to the client's application needs.

Contact / Inquiry

GECKTOE GRIP

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