What is ASHIPITA

Ashipita is a revolutionary new product that promotes overall health by applying the correct acupressure and stimulus to your feet. Ashipita was developed together with physicians from Nagoya University's School of Medicine and Department of Mechanical Science & Engineering based on the strap used on geta, a traditional form of footwear found in Japan.
Ashipita applies a comfortable amount of acupressure to your feet. It isn't overly tight and you can wear shoes over it. Research has found that wearing Ashipita will increase the temperature of your feet by 2.8 degrees Celsius.

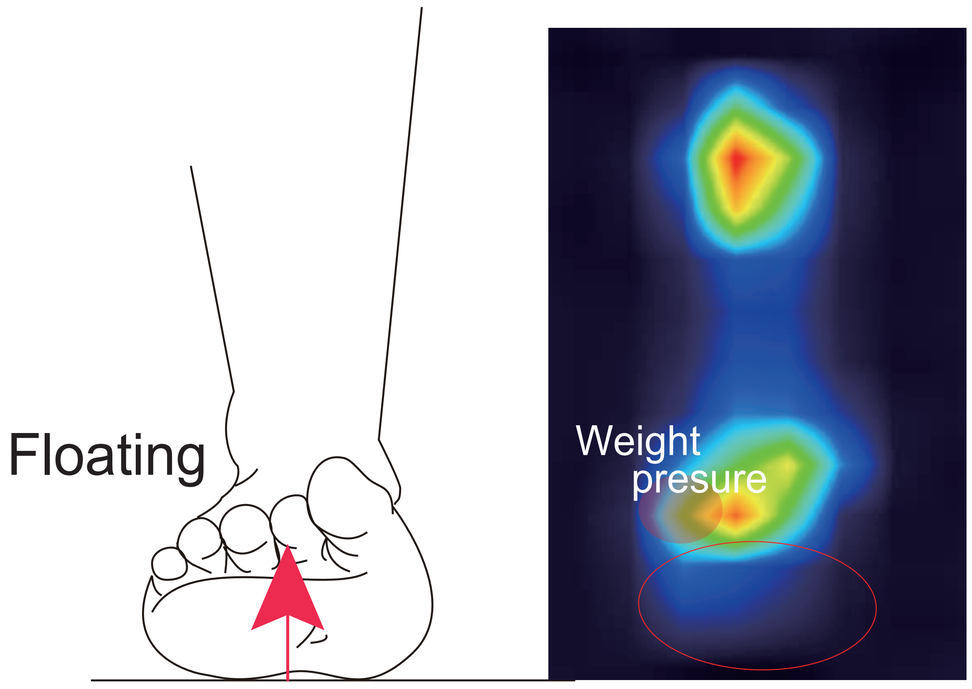
The main efficacies of Ashipita are:
Ashipita can alleviate foot gangrene caused by diabetes by promoting blood flow in the feet.
Ashipita can mitigate the risk of pulmonary embolism, preventing economy class syndrome.
Ashipita improves cold sensation in the feet.
Ashipita helps to treat bunions, corns, calluses and hammer toe, etc., and alleviate pain.
Ashipita stabilizes the feet, promoting your balance and correcting your posture, which makes walking easier.
Ashipita is very comfortable to wear.
The above efficacies have been verified in research and testing.

IWASHOUORIMONO Co.,Ltd.
5-16-17 Meieki Nakmuraku
Nagoya Aichi 450-0002
JAPAN
www.asipita.com/en

CE

ASHIPITA takes balance of weight presure on sole foot.
Hallux Vaigus,Corn and any other foot problem will be good.

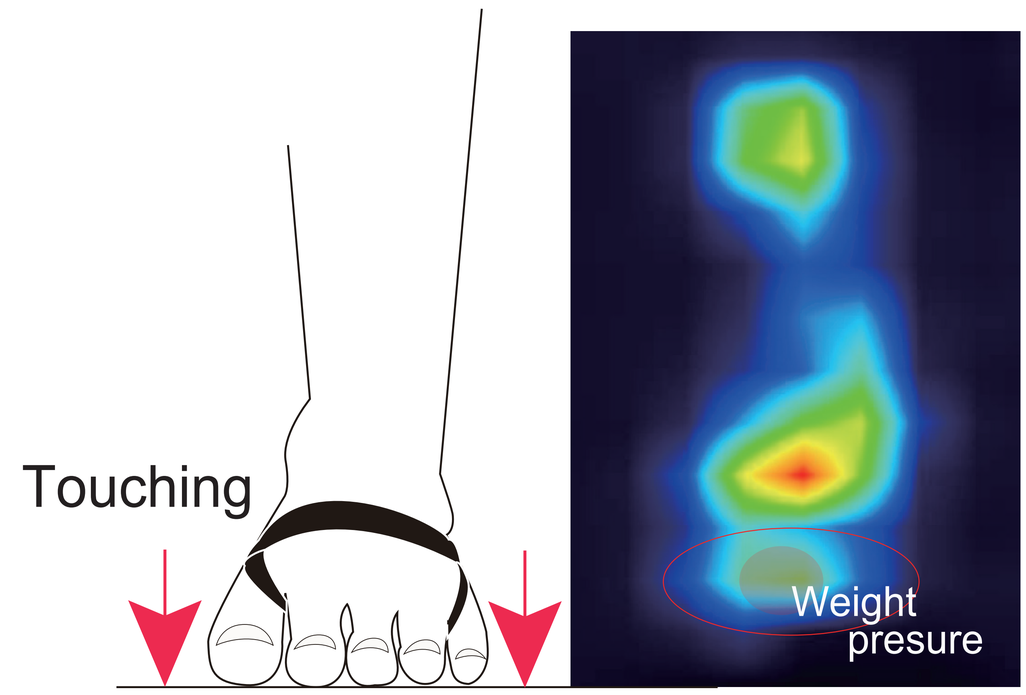
Hallux Valgus



Excessive too much weight
pressure on base of foot finger

It is the most important problem that the pressure of body weight is loaded on the base of finger toe. The pressure of body weight isn't loaded on each finger toe will deform edgeof finger toe. Because the finger toe doesn't move and Hallux vargus,Corn and other foot problems are gotten.....

Wear ASHIPITA



ASHIPITA takes balance to
disperse on foot figer toe

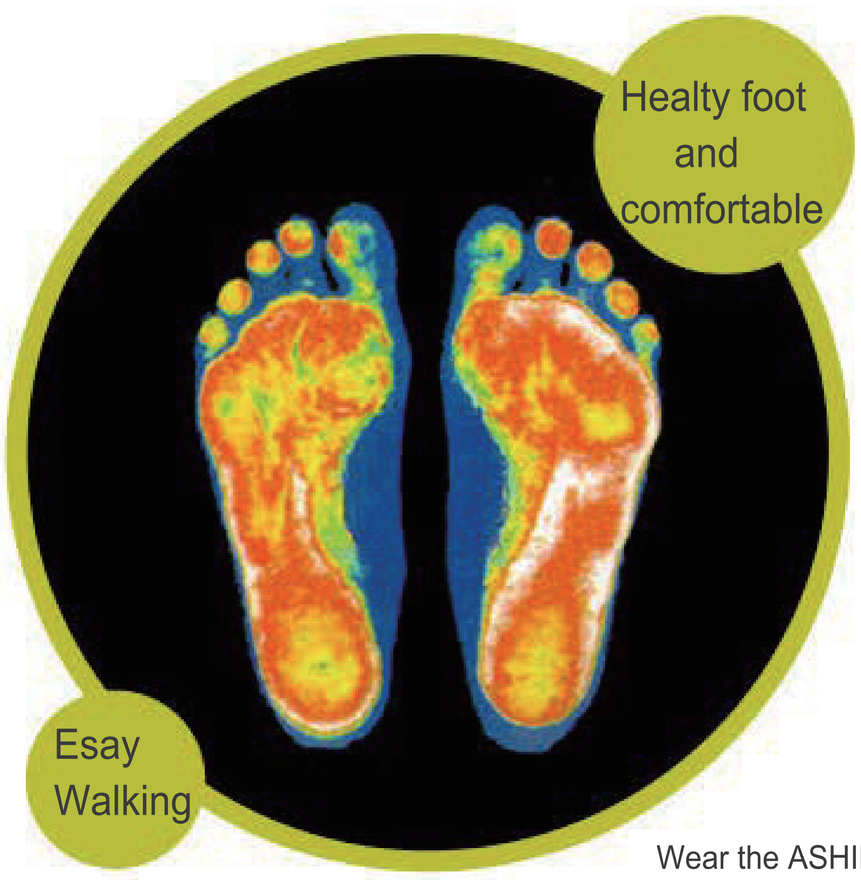
As ASHIPITA help to arrage the pressure of body weight properly around sole foot , Hallux valgus,Corn and other foot problem will be cured.
Because the finger toe movement is improved by ASHIPITA that stimulate finger toe and will be good finger toe movement.
Hallux valgus,Corn and other foot problems isn't cured only to open finger toe by other suporters.

Pressure distribution according to the soles of the feet

Become imbalance pressure applied to the soles of the feet when wear such as heel shoes

Nothing the ASHIPITA

The pressure applied to the soles of the feet are well-balanced distributed even wearing a heel with a Ashipita



Wear the ASHIPITA

Biomechanical Effect of Waraji-Like Footwear on Walking and Standing

Daisuke KAJI, Kazunori HASE , Weishi LI, Yosuke HIRATE, Masayuki TOMEKI,
Goro OBINATA Dep. of Mechanical Science and Engineering, agoya (niv., Japan
Kazuo IWATA Iwasho+Orimono, Inc., Japan
kaji.daisuke@g.mbox.nagoya-u.ac.jp Nagoya 464-8603, Japan

Introduction

Many footwear and shoes claimed as effective tool of promoting health and rehabilitation have been invented. However, there is little evidence found in many cases. We had an opportunity to evaluate footwear invented by inspiration from Waraji (Japanese traditional sandal). The purpose of this study was to investigate the effect of this footwear from biomechanical point of view.

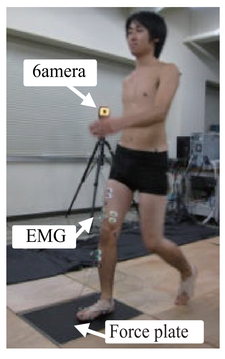
Waraji (Japanese -raditional sandal)

A strap inspired by that of Waraji

Proposed footwear

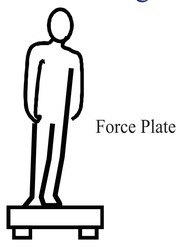
Experiments

First 10 healthy adults were recruited as subjects. Biomechanical data of the subjects with the footwear worn were compared to those with the bare feet in 5 types of motion.

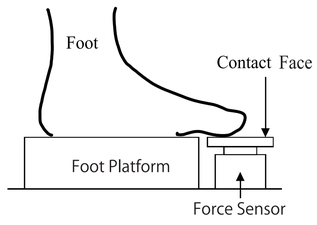


Walking Kinematic data and ground reaction force were collected from a motion capture system (MAC5D) and a force plate. Electromyograms (EMG) of 8 channels were also measured from main muscles on the lower body.

Static standing



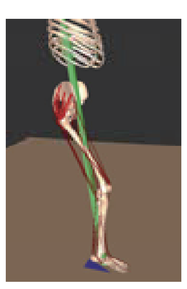
Hallux bending



Then, as an intervention, we asked subjects to wear the footwear for 50 days as long as possible. After the intervention, the same experiments were conducted.

Data processing

The following performance indices were computed: walking basic parameters (gait speed, stride length and gait cycle time), arch angle, gap between toes, maximum ground reaction force, jerk of knee and ankle angles, trajectory length of center of pressure (COP), iEMG, trajectory length of COP in static standing and maximum force in hallux bending.



To estimate internal mechanical loads such as joint torques, we used the inverse dynamics method and a 5D musculoskeletal model (SIMM; MusculoGraphics, Inc.). Using the model, joint torques, muscle forces and contraction speeds of 15 muscles were calculated.

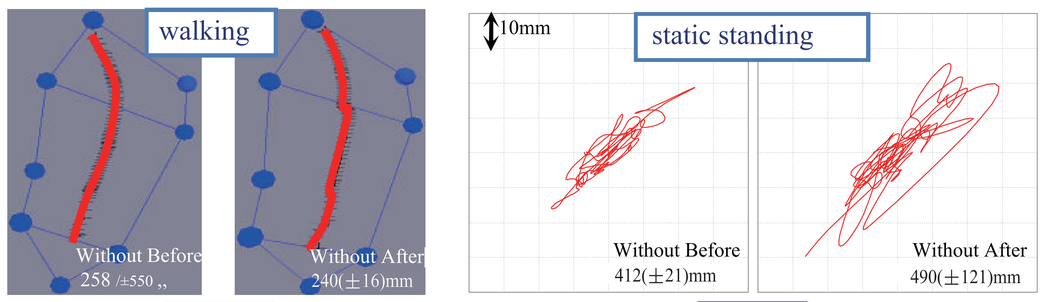
Furthermore, we calculated the energy consumption as following equation.

$$\text{Energy consumption} = \frac{\int_0^{\text{gait cycle time}} (\text{Basal Metabolic Power} + \sum^{15} \text{Muscle Work Rate})\,dt}{\text{Body Mass} \cdot g \cdot \text{Stride Length}}$$

Results

The below figures show the results which have significant differences about intervention effects.

Trajectory length of COP



Decrease Increase

<<!=3"3>,<!=3"2			Without+With Before	Without Before+After	With Before+After
Walking	Gait speed[mm/s]				
	Stride length[mm]				
	Gait cycle time[s]				
	Arch angle[deg]			(+)*	(+)*
	Gap between toes[mm]		(+)**		
	Maximum reaction force:Fx[N]				(+)**
	Maximum reaction force:Fz[N]				(+)**
	Jerk of knee angle($\times 10^{12}$)[rad^2/s^5]				
	Jerk of foot angle($\times 10^{12}$)[rad^2/s^5]		(+)*	(+)**	(+)*
	Trajectory length of COP in walking[mm]			(-)*	(-)**
	iEMG(gastrocnemius)[V・s]				
	Musculo-skeltal model	Anker torque[Nm]		(-)**	(-)**
		Knee torque[Nm]			(-)*
		Hip torque[Nm]			
		Soleus [Nm]		(-)**	(-)**
		Biceps femoris[N]	(+)**	(+)**	
		Energy consumption			
Trajectory length of COP in standing[mm]				(+)**	(+)*
Maximum force in hallux bending[N]					

Discussion

Hypothesis of the footwear's function

We assume that motions of toes are restricted because of its structure when wearing this footwear. Thus, subjects are apt not to use toes after

Relationship between the result and hypothesis

In static standing with footwear, ground contact area is smaller. So subject might be unable to stand stably. In walking, however, the smaller ground contact area is, the shorter trajectory length of COP is, because the body balance is maintained dynamically in walking.

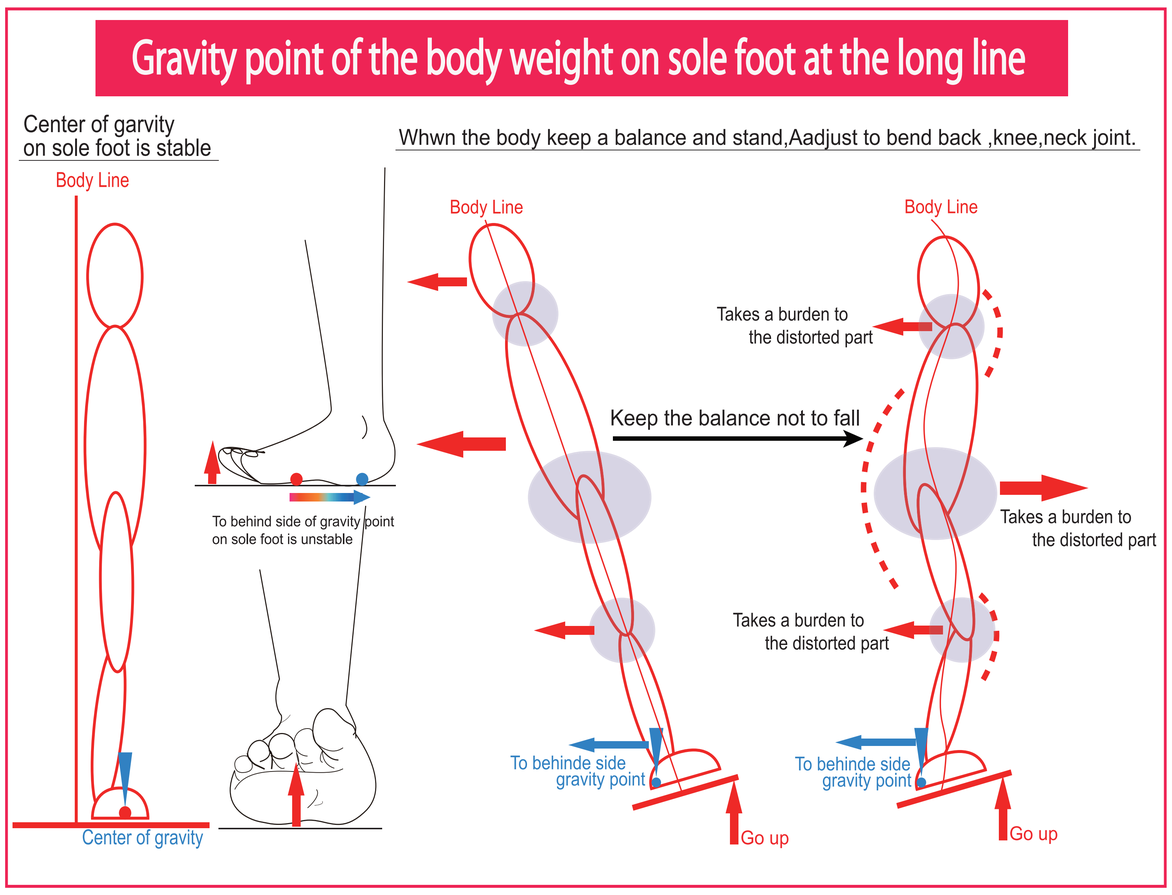
If subjects do not use their toes so much, position of the reaction force is closer to the ankle joint. So ankle and knee torques and soleus muscle force decreased significantly.

Distant muscles and joints will be less strained

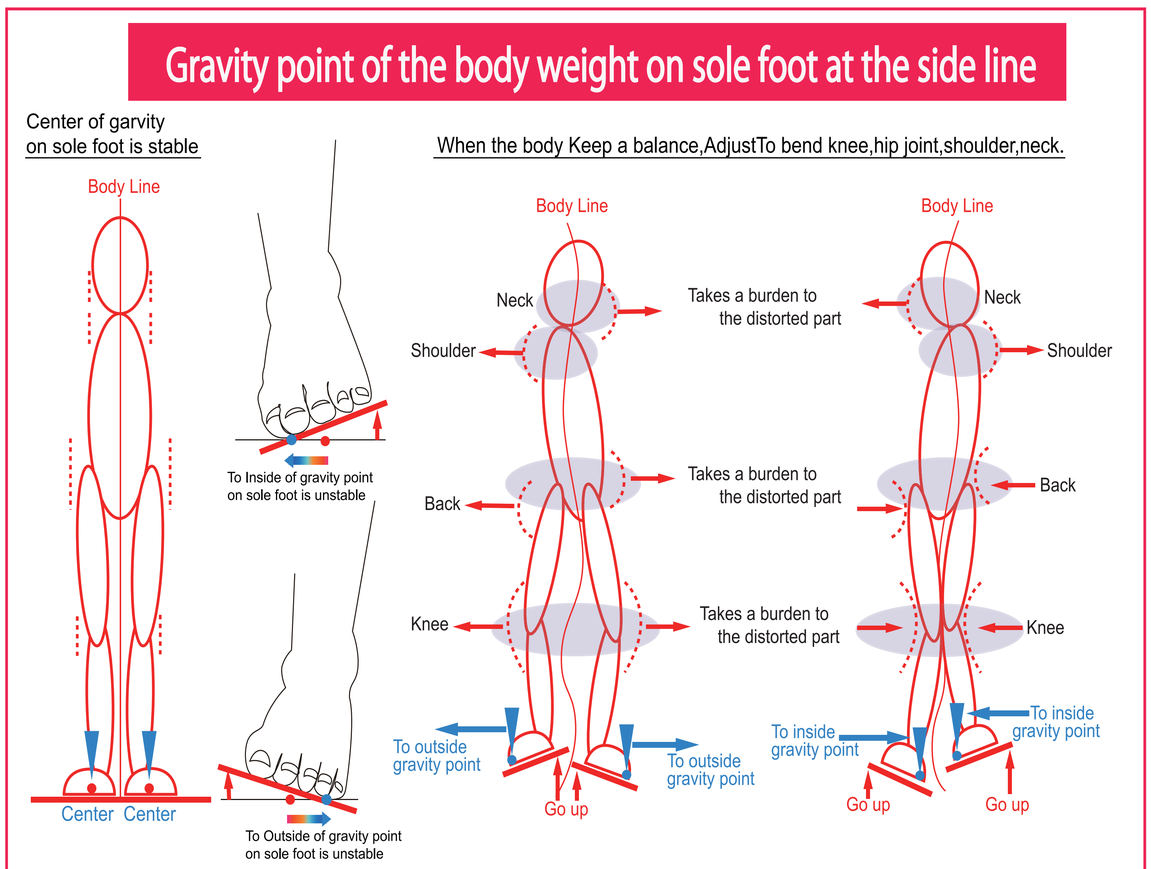
On the other hand, the other parts of the body would make up for restriction of toes' motion, because energy consumption is not changed. Ground reaction force and muscle force of the biceps femoris increase significantly

Proximal muscles and joint will be more active

Gravity point of the body weight on sole foot at the long line



Gravity point of the body weight on sole foot at the side line

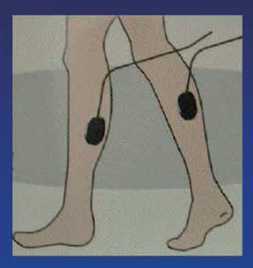


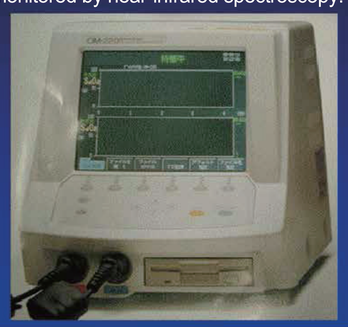
Doctor Yukihiro Matsuyama Professor at Nagoya University Hospital

The oxygen saturation of the gastrocnemius muscle and your feet rises.
Blood circulation of the lower extremities peripheral circulation improves.
Announced at a medical conference.

Improvement of the lower extremities peripheral circulation by exercising your toes.

The state of oxygen in legs was monitored by near-infrared spectroscopy.



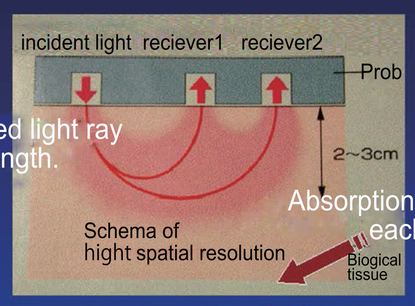


NIRS

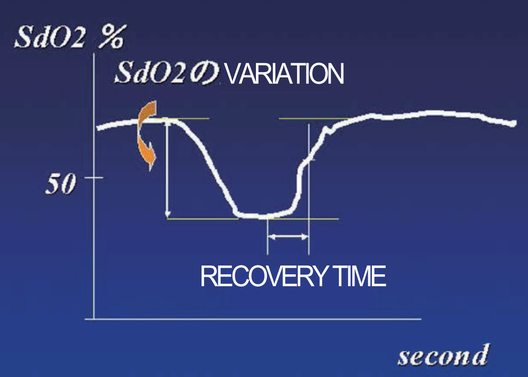
Near-infrared spectroscopy

NIRS uses the light absorbency characteristics of hemoglobin and myoglobin at the specified wave length of the near-infrared rays to mesure changes in the oxygen concentration of tissue.

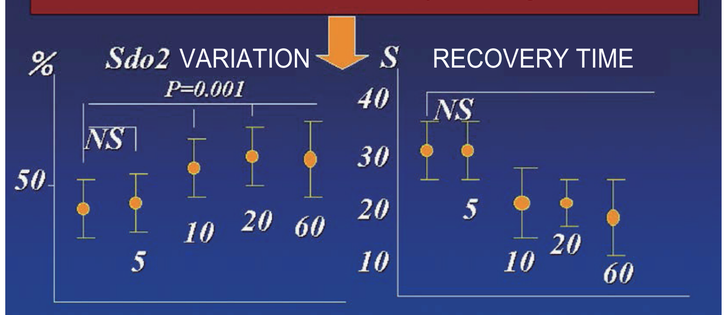
Caluclate ray diffusion equation of hight spatial resolution.



Absolute value Oxy,Hb,decxyHB ⇨ Tissue of oxygen saturation



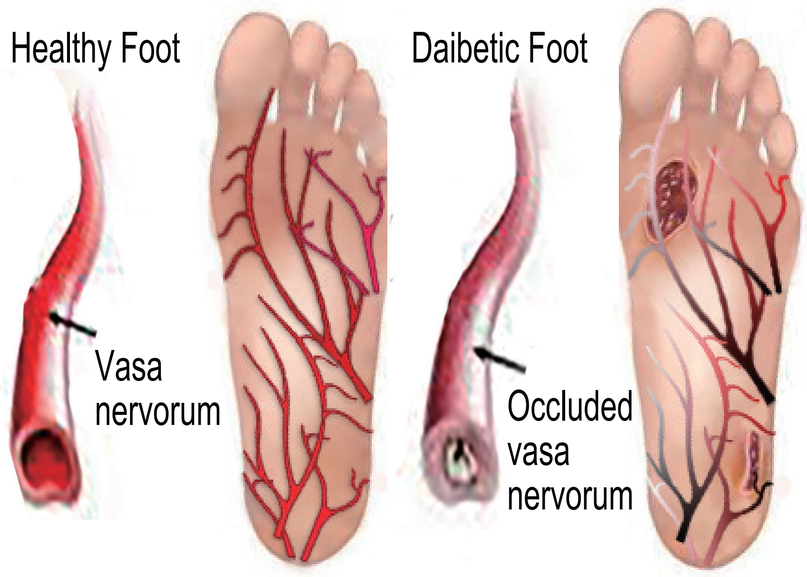
After wear the ASHIPITA,5,10,20,60minutes past.
Mesure SdO2 variation and recocery time of gastrocnemius.



After wear the ASHIPITA,10minutes past.gastrocnemius of SdO2 variation decreased and recocery time reduced.

The ASHIPITA improved lower limbs tip circulation.

Diabetic foot



The Ashipita stimulate between the toes move finger reflexively and naturally by applying the principle of expansion and contraction of the muscle like a heart.
It is to promote the work that movement of the finger becomes the movement of the muscles of the foot, by the expansion and contraction of the muscles is compressed and expansion of blood vessels, like a pump for circulating the blood.The Ashipita promoted the movement of the muscles of the entire foot by moving the toes naturally It is better blood circulation.

Blood Flow Observation Of Blood Capillary Of FigerTip

Nothing the ASHIPITA	Wear the ASHIPITA
	

10 minutes after putting foot into the water of 10 degrees