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The report of an investigation to confirm Nakai's "Posture and Health Law"

using "Health Power-Balancer Band (including the shorts type)"

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Medical Intelligence Co., Ltd.

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Summary of the results of an investigation to confirm Nakai' s "Posture and Health Law"

Investigation period: July 8, 2010 (before/immediately after band use) - October 8 (after 3 months use)

■ Purpose of investigation

To scientifically confirm the theory of Nakai's "Posture and Health Law" and its effects

■ Site of investigation

Otemachi Park Clinic (Chiyoda-ku, Tokyo, JAPAN)

Persons in charge

Person responsible for the investigation

Shigeru Suzuki (Medical Doctor), Director of Otemachi Park Clinic

• Supervisor for analysis

Masako Koyanagi (Doctor of Engineering), Adviser of Medical Intelligence, Co., Ltd.

Product for investigation

Health Power-Balancer Band (including the shorts type)

Period of investigation

July 8, 2010-October 7, 2010 (3 months)

Measurement days

June 25, 2010 (Screening) July 8, 2010 (First measurement concerning immediate changes) October 7, 2010 (Final measurement concerning long-term changes)

Subjects

10 females in their 30s-50s

■ Investigation items and summary of results

On the measurement days, the following 17 items were measured after "Nakai Excise" and results were obtained:

 $\langle 1 \rangle$

1) Measurement of the inclinations of the femur, iliac bone, lumbar spine, clavicle, and cervical spine using skeletal X-rays

a) Confirmation of "5 bad postures"

The skeletal states in the natural standing position observed using X-rays (Fig.1-b) were consistent with those in the standing position characteristics of "5 bad postures" (Fig.1-a) (tilted pelvis, curved spine, a difference in the level between the bilateral scapulae).







Fig.1-b State in the natural standing position (X-ray)

b) In connection with maintenance of the hip joint in an appropriate position using the Balancer Band, the equilibrium organ acted, and unfavorable postures represented by "5 bad postures" improved immediately after band application and further improved after its long-term continuous use (Fig. 2).



Before band application



Immediately after band application Fig. 2. Changes in posture



After three-months use

2) Measurement of the position of the center of gravity

The center of gravity shifted by bad postures changed to an appropriate position immediately after Balancer Band application, and not only the site of the center of gravity but also its stability improved after its long-term continuous use (Fig. 3).







Immediately after band application

Fig.3. Changes in the position of the center of gravity

3) Measurement of the joint range of motion The range of joint motion limited due to bad postures increased immediately after Balancer Band application, and further increased after its long-term continuous use.



4) Measurement of muscle strength (back muscle strength, the level of muscle stimulation)

Back muscle strength and the levels of stimulation of the biceps brachii, latissimus dorsi, rectus abdominis, and quadriceps femoris muscles, increased immediately after Balancer Band application, facilitating muscle exertion and decreasing exercise-associated fatigue. Both the back muscle strength and level of muscle stimulation further increased after its long-term continuous use (Figs. 5 and 6).





5) Measurement of vital capacity (natural respiratory volume)

The lungs that appeared to have been compressed due to bad postures showed an increase in vital capacity immediately after Balancer Band application, being released from compression (Fig. 7).







7) Measurement of blood pressure In some subjects with hypotension, the blood pressure increased to the normal range after the long-term use of the Balancer Band due to postural improvement (Table 1).

Blood pressure(mmHg)			
Before band application		After three- months use	
Systolic	Diastolic	Systolic	Diastolic
86	60	106	60
96	60	122	76

Table 1. Representative subjects with hypotension

8) Blood analysis

In some subjects with a total cholesterol level above the normal limits, the level decreased to the standard range after the long-term continuous use of the Balancer Band despite no changes in daily life (Table 2).

Total cholesterol(mmHg)			
Before band application	After three- months use		
269	235		
227	205		

Table 2. Changes in total cholesterol

9) Measurement of axillary body temperature Body temperature increased immediately after Balancer Band application due to improvement in posture (Fig. 9).



10) Body component analysis

Due to improvement in posture after the long-term use of the Balancer Band, the sizes of the waist and hip decreased (Fig. 10).



Due to improvement in posture after Balancer Band application, the hemodynamic state improved, and skin metabolism increased, resulting in improvement in pigmented spots, pores, and the skin texture (Fig. 11).



Fig.11. Changes in the skin condition (number of pigmented spots)

12) Measurement of skin sebum and moisture contents

Sebum secretion and moisture level increased due to improvement in posture immediately after Balancer Band application, and further improved after its long-term continuous use(Figs.12 and 13).



13) Measurement of the severity of pain at tender points

The severity of pain at tender points decreased due to improvement in posture immediately after Balancer Band application, and further decreased after its long-term continuous use (Fig.14).





14) Measurement of the entire body shape

The waist size changed because internal organs displaced downward were lifted due to improvement in posture immediately after Balancer Band application. Further changes were observed after its long-term continuous use (Fig.15).



a) Changes immediately after application compared with the pre-application shape



b) Changes after 3-month use compared with the pre-application shape

Fig.15. Changes in the entire body shape

15) Questionnaire survey

Many subjects became aware of changes on the first day of Balancer Band application, and some noticed improvement in 20 of the 42 items after its long-term continuous use.

16) Comparison of the blood flow pattern

Even when the hip joint was maintained in an appropriate position using the Balancer Band, neither vascular compression nor blood flow disturbance was observed (Fig. 16).



Fig.16. Changes in the blood flow pattern

17) Measurement of body surface temperature

The hemodynamic state improved due to postural improvement immediately after Balancer Band application, also increasing the surface temperature. After its long-term continuous use, the peripheral temperature also increased (Fig.17).



 $\langle 6 \rangle$

Conclusions

This investigation suggested the following:

• In connection with Balancer Band application, equilibrium organs act, automatically improving posture.

• Good posture increases the range of joint motion, also increasing muscle strength and vital capacity.

• Good posture releases the compression of the blood vessels and internal organs, improving blood flow and increasing body temperature.

 $\boldsymbol{\cdot}$ Good posture also improves the compression of the nervous system, improving pain.

 $\boldsymbol{\cdot}$ Long-term continuous use further improves some items.



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