Good Health

Starts With Healthy Feet



職業安全健康局
OCCUPATIONAL SAFETY & HEALTH COUNCIL

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Foreword

The promotion of occupational health is one of the key tasks of the Occupational Safety & Health Council (OSHC) because it involves the health of all members at work. As for the employers, a healthy staff is the most important asset of any organization. In fact, the protection of the health of employees plays a critical role in enhancing productivity and reducing costs.

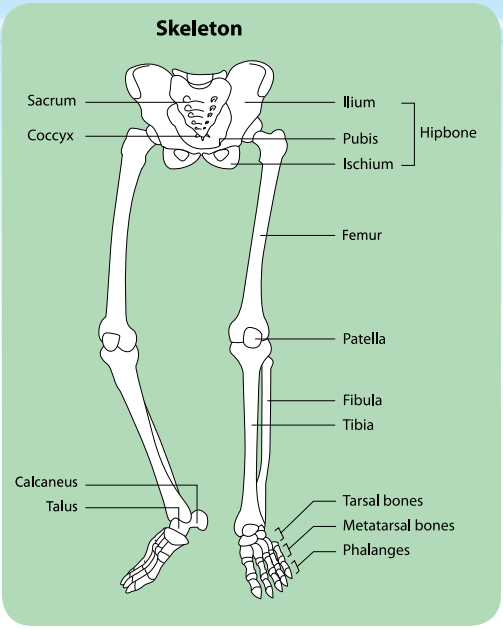
Many employees often experience musculoskeletal disorders which cause pain in their limbs or backs. This is why the OSHC has prepared a series of booklets covering the prevention of work-related musculoskeletal disorders to give employers and employees knowledge about the musculoskeletal disorders and improve podiatric health in the workplace.

The lower limbs of the human body have the functions of supporting the body, providing it with mobility. Every day when one walks or stands up, both feet bear the weight of the entire body. If podiatric care is neglected by using poor walking habits or standing postures or by wearing inappropriate shoes, various podiatric problems will arise. Moreover, various work factors also affect podiatric health. This booklet, "Good Health - Foot Care" aims at providing basic knowledge about the anatomy of the foot, podiatric health, the relationship between the work and podiatric health, correct ways to choose shoes, healthy walking methods and useful information on podiatric care. By learning the risk factors related to work one can prevent and avoid health problems in foot and protect one's health.

In preparation of this booklet, we would like to express our heartfelt thanks to Mr Peter Koo, podiatric specialist for his invaluable opinion and guidance.



Anatomy of the foot



Hong Kong people commonly refer to the lower limbs of the human body as feet which include legs and feet ("foot" is the part under the ankle).

The feet are composed of bones, muscles, tendons, skin, nerves and blood vessels, etc.

The largest bone of the whole body, the femur (thigh bone), is in the lower limbs. In addition there are the fibula, tibia , patella, calcaneus, phalanges, etc.

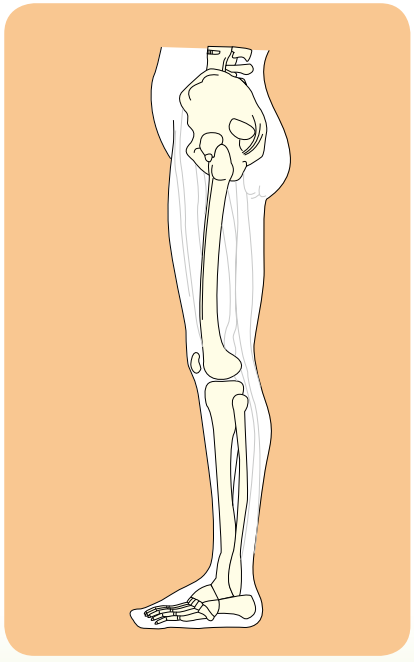
The muscles of the lower limbs are the gluteus maximus, musculus biceps femoris, musculus rectus femoris, musculus gastrocnemius, musculus soleus, and musculus extensor digitorum longus, extending from the buttocks to the foot. They allow the feet and legs to perform all the functions of support and motion.

The nerves controlling the muscles and the skin are branches of the two major nerve pathways, namely the femoral, and sciatic nerve. The sciatic nerve is the largest nerve of the human body.

The blood vessels in charge of transmitting oxygen and nutrients to the feet are part of the main femoral artery which feeds from the aorta. Responsible for carrying away wastes are the femoral vein and great saphenous vein. They join together at the sapheno femoral junction in the legs.

Relationship between podiatric health and occupation

1. Correct Standing Posture



Good standing posture is important for health. From a medical perspective good posture means under relaxed conditions the body can still maintain a proper balance line. When standing up, the back is kept straight so that the internal organs can be maintained in the proper position and the burden borne by the back becomes less. Improper standing posture tends to make the lumbar spine curvature excessively, causing pain in the lower back.

Generally, maintaining the neutral spine position while standing up is the proper posture. The chin should be pulled back and eye sight should be held at approximately two to three metres to the front.

Proper standing posture requires strong muscle and joints in both feet. Walking can strengthen the muscles of the feet and it is an effective exercise to maintain proper posture. If one forms a habit of walking in daily life and uses the stair case instead of the lift or escalators in the MTR train stations and department stores, it helps train the muscles and joints of the feet.

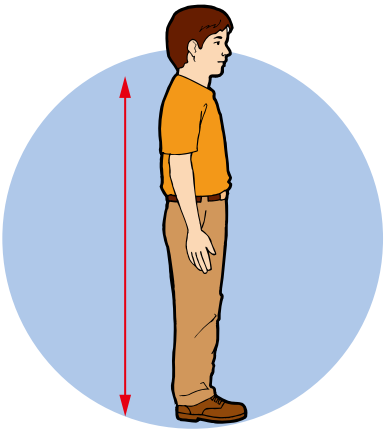
Alternatively, standing for a long time also poses health risks. For example it could cause poor blood circulation of the lower limbs. That in turn may cause varicose veins in the legs. Also, the soles of the feet are under pressure for a long time which may result in plantar fasciitis. So people who always have to stand at work, such as teachers, sales persons, waiters etc, should move around or do some stretching exercises when they are standing to improve vein circulation of the lower limbs. Besides, choosing suitable work shoes can also help.

2. Understanding the Gait Cycle

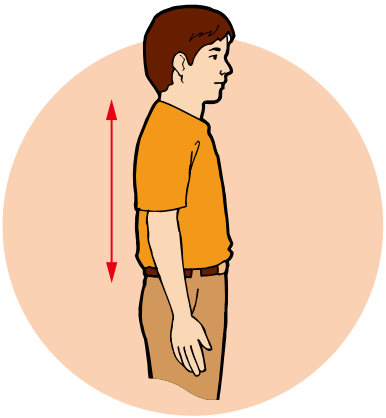
Children start learning to walk at the age of one. Walking seems to be a natural skill but people tend to neglect the importance of proper walking posture. Walking posture not only has a large impact upon podiatric health, it is an important discipline in itself.

Let us first look at the movements of walking. A simple walking motion can basically be divided into six parts. These are:

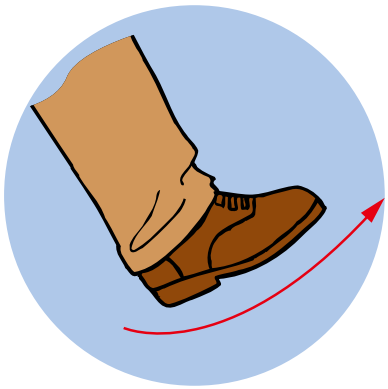
(1) Bearing of the body weight



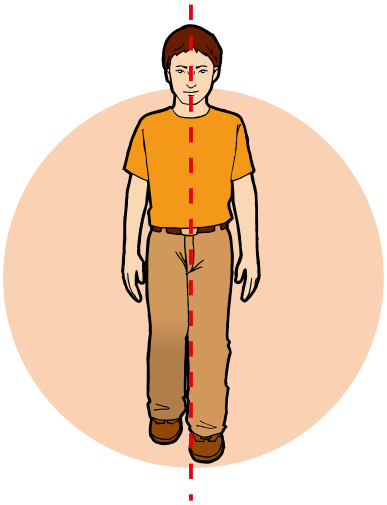
(2) Support of the body



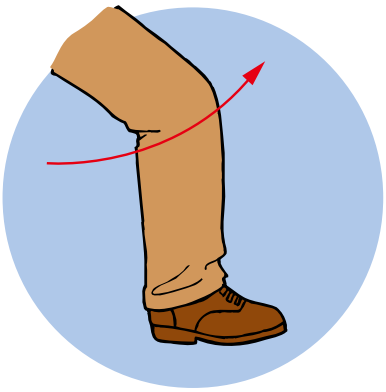
(3) Stance phase



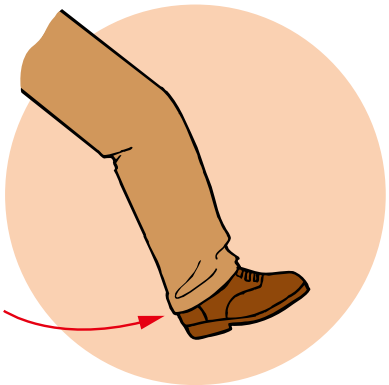
(4) Maintain stability



(5) Swing phase



(6) Limb advancement



This series of basic movements involves rhythmic, alternative movements of the lower limbs, upper limbs with the trunk. Each cycle starts from the heel, touches the ground. Then the posterior outside of the heel and the toes of the other foot both touch the ground in succession bearing the weight of the body. Then the heel is off the ground. The toes are the last to leave the ground. Such sequential motion is called the "Gait Cycle". In terms of human locomotion, this type of "movement" is very important. If one can master each motion correctly it can maintain the stability of the body and one's walking posture will be elegant.

However, if one does not learn to pay attention to maintaining a proper way of walking, different problems can arise.

3. Forming proper way to walk

Every day most people walk, on average, approximately six kilometres. That means by the time they reach seventy years old, the total distance walked will be more than four times around the globe. Therefore, if one has not formed a healthy way to walk, serious problems could be brought about with the passage of time.

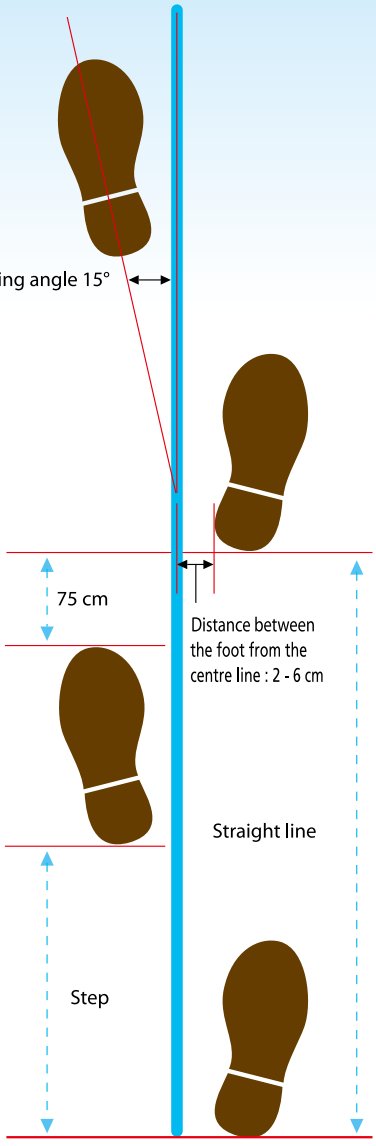


The knee is extended and the ankle is neutral

It is very important to carry out a self-examination on the way we walk. The healthy way to walk is for the knee to be extended while the heel contacts the ground as the toes touch the surface steadily. The heel fully stays on the ground surface and the toes are extended to advance. Actually it is not difficult to master the skills. The simple principle is to maintain suitable steps. Following observations on the streets it has been discovered that the steps of a lot of youngsters are relatively narrow. Some of them walk as if they are trawling. Actually as long as we maintain appropriate step width, the heel will touch the ground first and the toes will kick out naturally.

Also, one must pay attention to the details in the distances between steps, the width between the two feet and the angle of walking. The diagram on the right provides some figures for reference.

Proper walking posture



The feet are sometimes referred to as the second heart by the experts. Many people believe that all that is needed to enhance the functions of the heart is to have normal blood circulation. However, the cardio muscles are not voluntary muscles. The heart cannot be controlled consciously, but the muscles of the feet are voluntary muscles which can be controlled. More walking can effectively enhance blood circulation and improve health greatly.

The feet are at the furthest location from the heart. It takes a considerable time for blood to be transmitted from the heart to the tips of the toes and the path back is also long. The number of times one walks affects blood circulation since the feet perform an important "pumping" function. When a person walks, the feet leave the ground, tips of the toes are flexed, and this motion acts like water pump to boost blood circulation.

Regardless of how strong the body is, the size of one's feet can have a difference approximately 5 to 10% between morning and night. This is because poor vein circulation at night may lead to blockage of blood vessels. It is also an indication of feet fatigue. The symptom of swollen feet can be observed as a result.

If one finds swollen feet when the body is tired, it is wise to do appropriate massage in order to improve the speed of venous blood flow. When the phenomenon of swollen feet is disregarde, swollenness may spread throughout the entire body, causing chronic fatigue.

Therefore, it stands to reason that people engaging in long hours of walking, such as postmen, deliverymen, etc, should pay more attention to proper walking posture. They need to choose comfortable and light work shoes as well as do more foot stretching exercises and let their feet have adequate rest. Otherwise podiatric health will suffer.

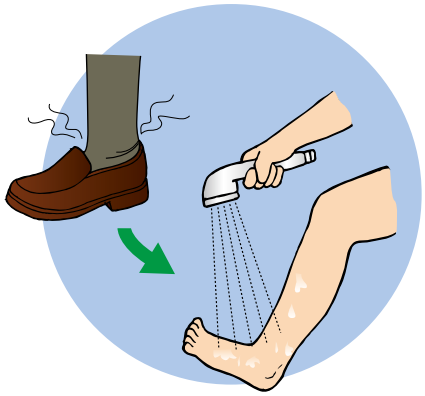
4. The impact of the squatting posture or kneeling posture on the knees

Some occupations always involve squatting posture or kneeling posture, for instance cleaning workers, automobile repair technicians, renovation workers, and so on. When workers kneel to work, the outer parts of the knees are partially under pressure. Prolonged exposure to pressure may lead to inflammation of muscle tendon such as mucus capsulitis or myotenositis.

In addition the squatting posture or kneeling posture require the knees to bend for a long time. This creates a burden to the joints and may lead to arthritis of the knee joint. Any work which usually involves the bending of the waist can hurt the back easily. Workers should avoid staying in the same posture position for too long and when kneeling, the knees should avoid touching the hard ground.

Podiatric care

1. Foot Cleaning



Ever experience a nasty smell from one's feet when taking off shoes at home after being out during the hot summer? This of course is due to the sweating of the feet secreted from the apocrine secretion gland and eccrine secretion gland respectively.

The major sweat glands in the feet are the apocrine glands. In addition to giving out a strong odor, it is slightly yellow in colour. Other than the feet, the underarm and neck can also give out such kind of sweat.

Another sweat from secretion of the eccrine gland does not have any smell. For example, while sweating heavily after having a bath or a sauna there is no special smell.

The feet can give out these two types of sweat. It is most difficult to keep the feet clean. On top of taking a bath, one should remember to wash one's feet at other times and keep feet clean. Otherwise tinea pedis (commonly known as the athlete's foot) can easily develop.

2. Learning about podiatric care methods

Warm and Cold Foot Baths are good for relieving feet tiredness and combating the problem of chillness in the lower limbs.

Alternate use of hot and cold water to soak the feet is commonly called "Warm and Cold Foot Baths". After repeating this for two to three times, one can use a towel to wipe the water away, massage the toes and the sole of the feet. The Warm Cold Foot Bath is most suitable for relieving tiredness or hypothermia of the lower limbs.

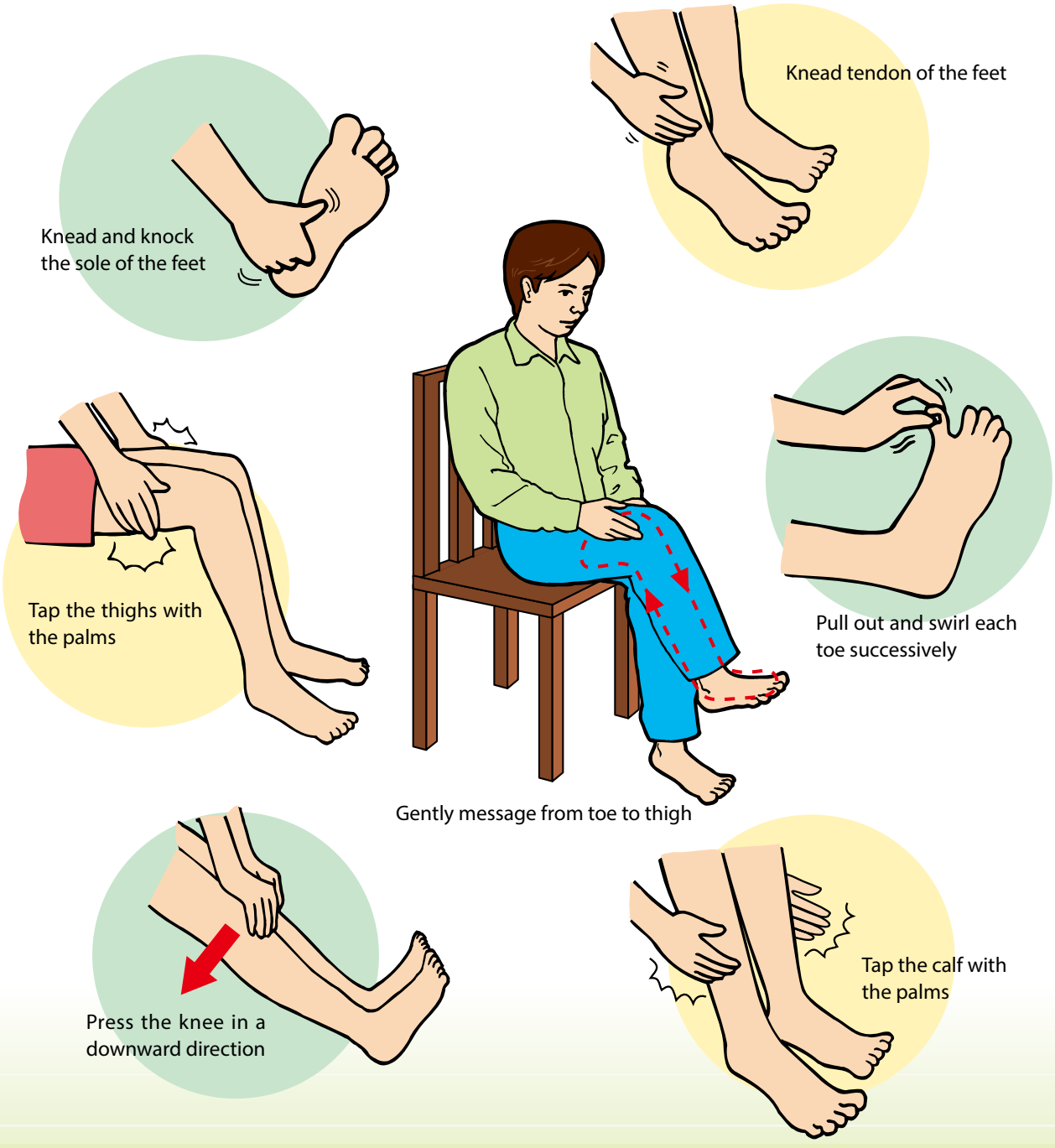


Exercises for the feet

Soak the feet in hot water, swirl the ankles, or do the toe open and close exercise. One can also do standing on tiptoe, slow squatting, or knee stretching exercises.

Feet massage to enhance blood circulation

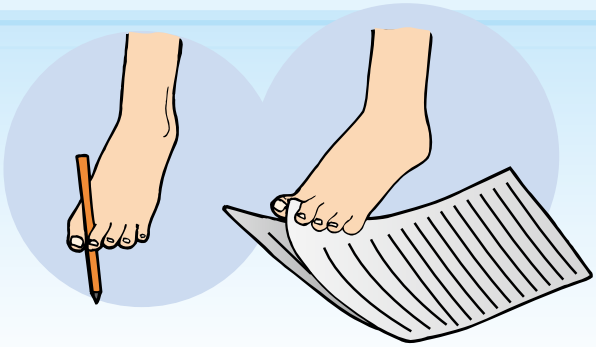
Massage can relax the muscles and enhance blood circulation as well. The most suitable time to have a massage is right after the bath. The proper massage method is to press with both palms and increase the force gradually to suitable strength.



Exercises which revitalize the feet

- **Stretching the ligament**

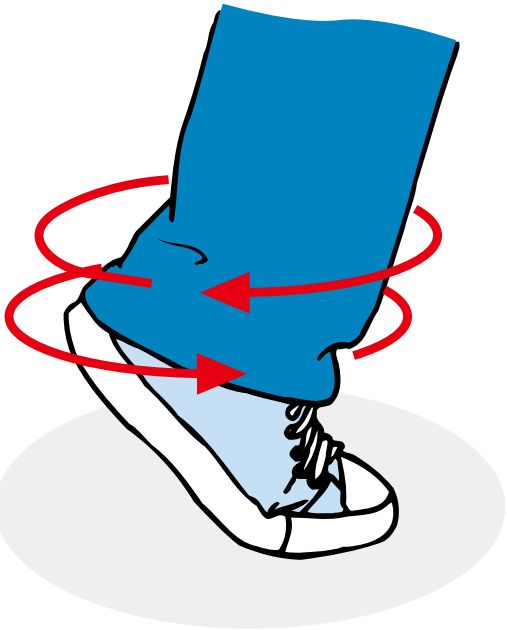
  Try to pick up marble ball, pencil or flip over newspaper and telephone directory with toes. These open and close exercises help revitalize the toes.

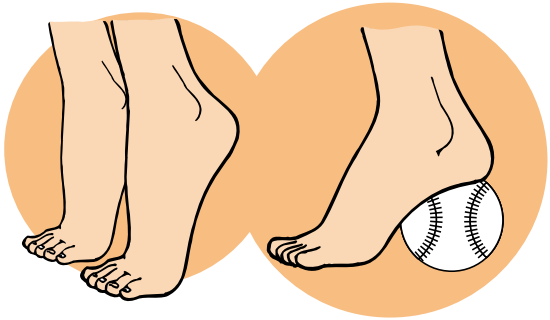


- **Stretching the tendon**

  On a place with a step, do the touch toes exercise followed by stretching the tendon of the calves ten to thirty times. Then rotate the ankles.







- **Treating flat feet**

  Point toes to walk, step on a baseball or bamboo, etc to add more stimulus to the arch of the foot.

Resting the feet

- **Avoid prolonged standing, walking, kneeling or squatting on the ground.**
- **Sit down and take a rest.**

Avoid overweight and obesity of the body.



Footwear and podiatric health

In ancient China, foot binding of women was a symbol for beauty and wealth. At adolescence, a girl's feet were tied with cloth and their toes were bent inwards so that the feet stopped growing. Today, this aesthetic standard of a feudal society still exists, in a peculiar way. Many young ladies like choosing shoes one size smaller. However, prolonged wearing of excessively tight shoes can make the bones of the top part of the feet deformed, and make walking difficult. Besides, wearing high heels for a long period of time is one of the common fashion factors affecting podiatric health.

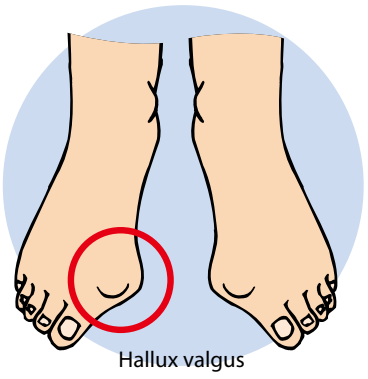
In order to keep the feet healthy and to prevent damages to the feet, not only should shoes conform to the shape of the feet but, the materials used and the design are equally important. It is essential to choose suitable shoes. In the European and American countries people have a lot of knowledge related to feet and the shoes to be worn at home and at school since they are small. Everyone should pay more attention to this topic.

1. Podiatric diseases and other diseases of the body caused by unsuitable footwear

Shoes are indispensable things. Hong Kong people stress the importance of fashion and appearance. Many believe that style is the most important factor when choosing shoes. Some even think that "as long as the shoes look good, sore feet are no big deal" or convince themselves that "after wearing for some time, the shoes will become more and more comfortable". However, in fact, podiatric diseases can be said to be directly affected by a choice of shoes. Wearing unsuitable shoes may well cause the following podiatric problems:

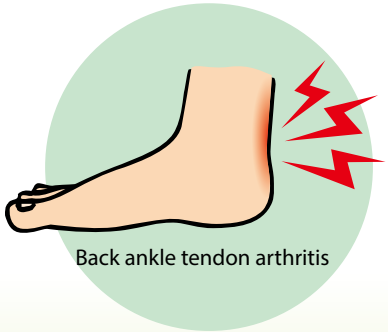
- **Hallux valgus**

  The wearing of excessively tight shoes, in particular prolonged wearing of high heels or excessively narrow pointy shoes, may cause the big toe to bend towards the direction of the fifth toe and become deformed. More females tend to have this problem. The open and close toes exercise is a very effective method to prevent it.


Hallux valgus

- **Metatarsal gin**

  The support of excessive bodily weight will cause the pain in the metatarsal region of the foot (the area just before the toes). If this symptom is experienced, stretching exercises will help relieve the pain.


Back ankle tendon arthritis

- **Achilles Bursitis or Tendinitis**

  They involve painful inflammation and swelling of respectively, the small sacs (bursae) that surround that tendon or the tendon (Achilles tendon) that joins the heel bone (calcaneus to the calf muscle).

- **Big toe capsulitis**

  Inflammation of the joint capsule of the forefoot involves the big toe and causes pain, redness or swelling around the joint and difficulty in shoes or with walking.

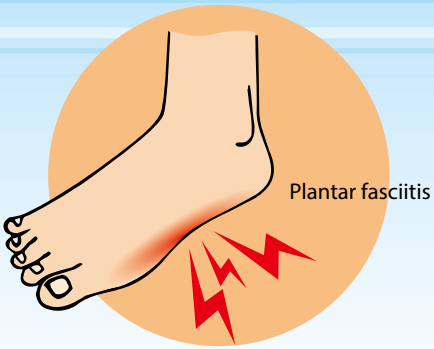

Hammertoe

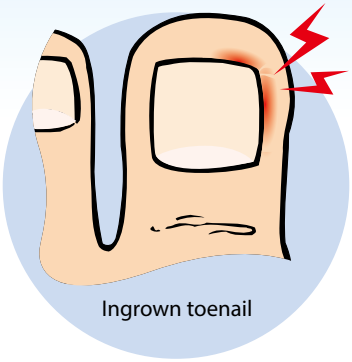
- **Hammertoe**

  It is a contracture of the second, third or fourth toes. Permanent deformity of the toes are caused by a toe too long in a cramped position when a tight shoe is worn.

- **Plantar Fasciitis**

Plantar fascia is the thick connective tissue (foscia) which supports the arch on the bottom / plantar side of the foot. Plantar fasciitis is a painful inflammatory process of the plantar fascia. Prolonged wearing of shoes without good arch support or cushioned sole can easily lead to this health condition.





- **Ingrown toenail**

It is a painful condition occurred when a sharp corner of the toenail oligs into the skin at the end of or side of the toe.

- **Tinea pedis (Athlete's foot)**

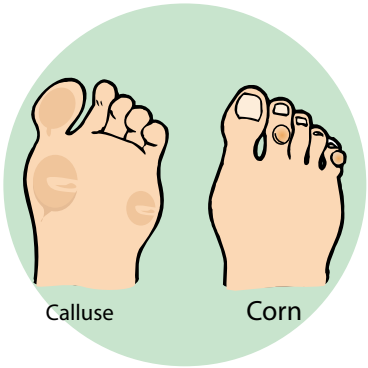
It is a fungal infection caused by wearing foot wear or poor foot hygiene conditions. To prevent athlete's foot, occlusive wash feet thorougly, including those parts between the toes. Also change shoe inner soles regularly and keep the shoes dry.

- **Abrasion / blister of the ankle**

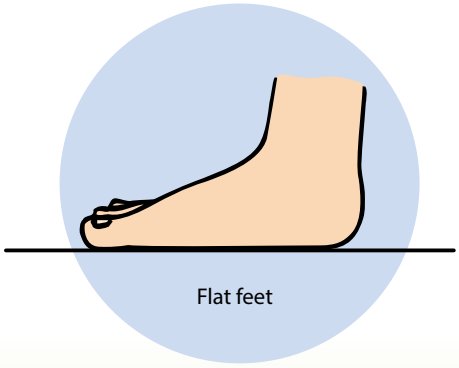
Abrasion of the ankle is due to the wearing of the wrong size of shoes. The poor-fitting shoes also cause friction at a foot area leading to the formation of blister.

- **Calluse, corn**

A Calluse grows on the surface of the sole of the feet. It can be cut away. It is mainly caused by the friction between the foot and the shoes. Usually it grows between the back of the big toe and the second toe, and also on the ends of the fifth toe. If the feet have calluses, when the skin softens after bathing, a foot file or pumice stone can be used to smooth skin. Or can apply special lotion onto the feet to massage the area. However, cutting too deeply can cause bleeding. Also, if pus is formed the results may be serious.



A corn grows under the lower layer of the skin. The causes are repeated pressure and friction of the toes. Usually it grows between the pressure spot of the metatarsus or between toes.



Flat Feet

The sole of the feet comes into complete or near complete contact with the ground. The arch on the inner portion of the foot collapses. This condition can be a congenital deformity or formed later. For example, the wearing of shoes of unsuitable shape during the development stages can lead to abnormal walking posture. Some cases are due to abnormal growing of the arch of the foot. When pain or difficulty in walking is caused by flat feet, treatment is necessary.

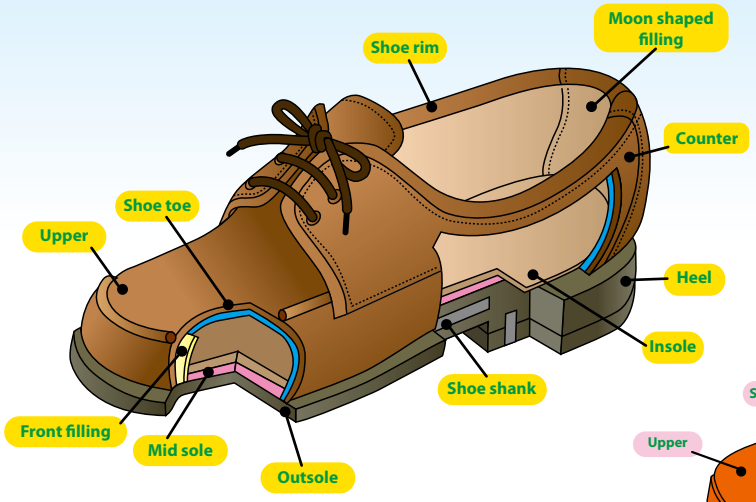
Although the bone itself can form a curve of the arch of the foot, there are cases of flat feet due to the presence of fatty pads in the sole.

People with flat feet are advised to walk on pebbles or roads with uneven surface. Besides, regular walking barefoot on the grass can be beneficial.

Wearing unsuitable shoes not only causes problems to the feet themselves, but also results in headaches, inflexibility of shoulders, waist pain, physical disorder, poor appetite, tiredness of the whole body, lack of strength of the limbs and difficulty in concentration etc. People need to be aware that every day feet bear heavy burdens, so the care of the feet is very important.

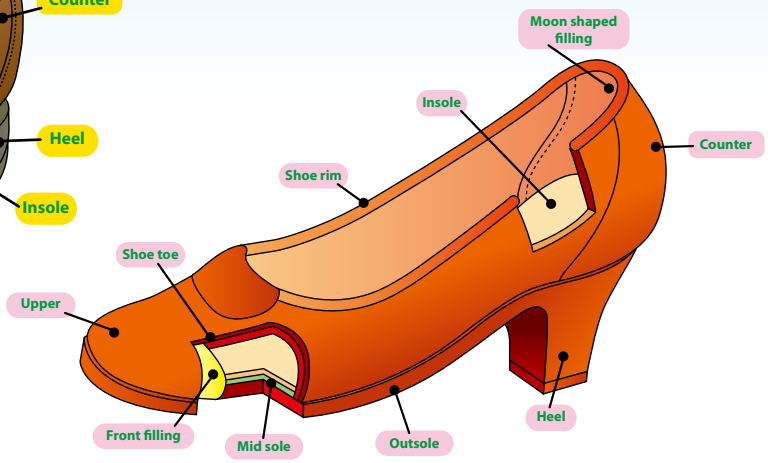
2. Learning about the structure of shoes

There are numerous types, styles and materials of shoes. To learn about how to choose a pair of suitable shoes, start by learning about the structure of shoes. Here are different components of shoes.



Structure and names of men's shoes

Structure and names of women's shoes



Upper

The front part of the shoes. It is commonly understood as all parts of the shoes other than the outsole.

Insole

The part in the inner sole of the shoes, that means the part touching the sole of the feet. In order to absorb sweat, the sole of the feet must closely fit this part. Also, this part needs to tolerate bending several hundred thousand times.

Outsole

The part touching the surface of the ground. On top of being durable, the most important thing is that it can also stand bending, that it is elastic, light in weight and abrasion resistant. It should be made of materials not prone to wearing out and have good grip properties so as not to slip easily.

Mid sole

The shock-absorbent soft pad materials between the insole and the outsole. This can absorb the impact of walking so that the shoes can be more comfortable to wear.

Heel

It is designed for supporting the ankle. From the perspective of ergonomics, a difference in height of two centimeters between the front and rear parts of the shoes will be better for walking, while excessively high heels can cause various problems.

Front filling

These are the reinforcing materials added between the outer layer and mid sole of the upper in order to maintain the shape of the front part of the shoes.

Shoe toe

They are also the reinforcing materials added between the outer layer and mid sole of the upper in order to make the upper more comfortable.

Shoe shank

This part supports the arch of the foot so that the arch line does not deform when it is pressurized.

Heel counter

The part engulfing the ankle is located on the upper part of the heel. The curvature of the heel must fully touch this part of the ankle.

Moon shaped filling

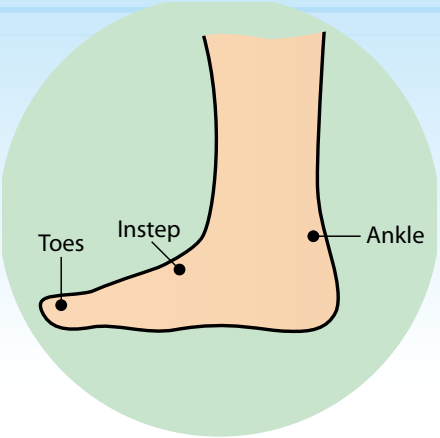
Inner lining placed in the internal part of the heel. On top of closely fitting and protecting the heel, it also prevents the heel from deformation.

Shoe rim

The rim of the opening of the shoe. If it is too large, it becomes loose and unsafe. Alternatively, if the shoe rim is too narrow, the ankle will be hard pressed by the shoe rim and that will have a negative effect on the feet.

3. Choosing suitable shoes

There are basically three parts in the feet of the human beings.



The first part is the ankle

It is an important part to maintain stability when standing up. The tendon of the ankle keeps the muscles and joints in a fixed position while walking.

The second part is the instep

This part is very soft and possesses a certain degree of elasticity.

The third part are the toes

These can move freely and can also grab things like hands.

If the structure of the shoes can match the structure of the feet, the health of different parts of the feet will be safeguarded. The front part of an ideal shoe should be soft enough for the toes to bend freely with an approximate additional space of 1 to 1.5 cm. In addition, the heel of the shoe must be stable in order to fit around the ankle solidly, there should be no empty space between the toes and the shoes. Besides, the softness and elasticity of the middle part is also important. Ideally, it can be close to the shape of the feet.

When choosing a pair of shoes in the shoe shop to suit the shape of one's feet, one should try them on both feet and walk around on solid floor rather than carpet to ensure if the shoes are suitable before purchasing. As there are differences between the sizes of the feet during day and night time, so it is more appropriate to choose a size during the evening.

Key factors for choosing shoes

- Check if all toes can touch the sole closely.



- Ideally the ankle can touch the shoe closely.



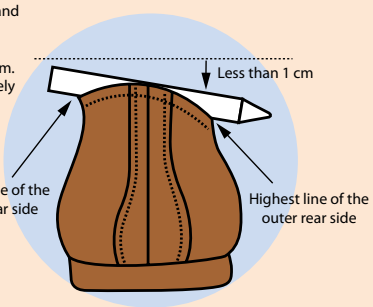
- Check carefully if the shoes suit the shape of the feet.
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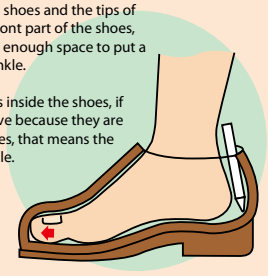
- Check if the instep touches too closely.
- The convex parts of the base of the toes should touch the sole closely.
- Check if the arch of the foot matches the shape of the shoe.



- Check the craftsmanship and shape of the shoes.
- Put a pencil on the shoe rim. Choose shoes with relatively higher inner rear side and relatively lower outer rear side.



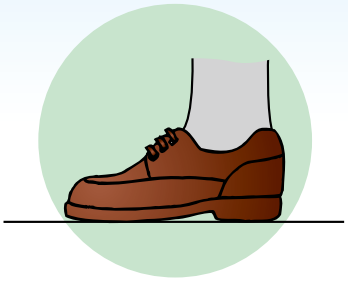
- After putting on the shoes and the tips of the feet touch the front part of the shoes, there should be just enough space to put a pencil behind the ankle.
- Try to move the toes inside the shoes, if the toes cannot move because they are too close to the shoes, that means the shoes are not suitable.



Key points for shoe fitting

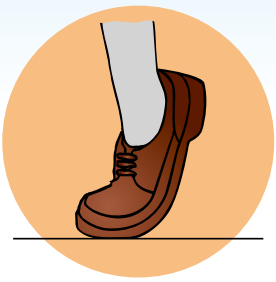
(1) Wearing the shoes

- The two feet must wear shoes which suit the feet.
- The shoe lace should be tied tightly.



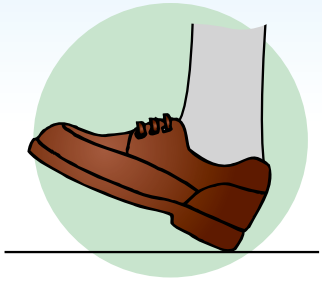
(2) Point toes

- Point toes on both feet.
- Point toes on one foot alternately.
- To confirm if the base of the toes can bend normally.



(3) Press down with the ankle

- Press down with the ankles of the feet at the same time.
- Press down with the ankle of each foot alternately.



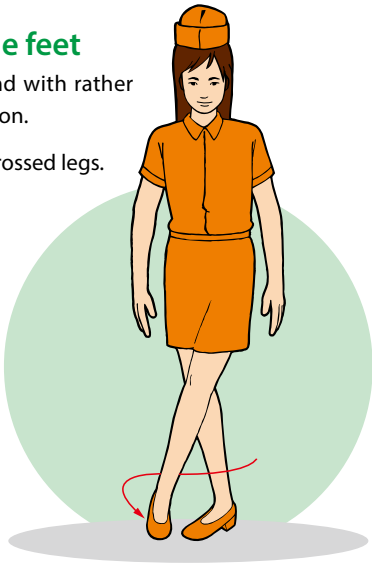
(4) Squatting

- Stand on the tips of the toes. After squatting the buttocks should be over the ankles.
- The two feet should be kept slightly apart.



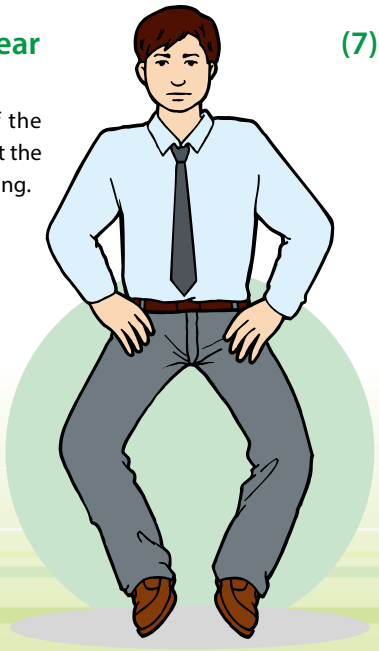
(5) Crossing of the feet

- Try to walk around with rather exaggerated motion.
- Try to walk with crossed legs.



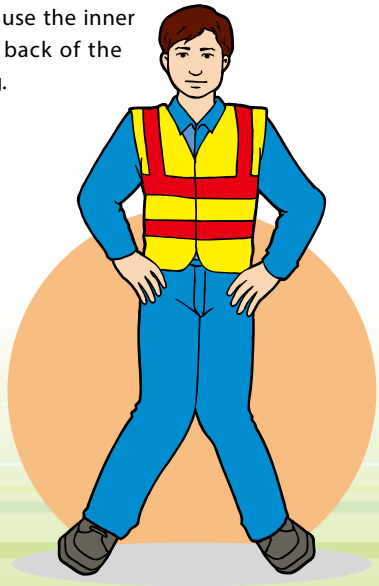
(6) Stand on the outer rear side of the feet

- Use the outer rear side of the back of the shoes to support the weight of the body in standing.



(7) Stand on the inner rear side of the feet

- In a similar way, use the inner rear side of the back of the shoes in standing.



4. Classification of different functional shoes



Although it is said that as long as a pair of shoes are comfortable to wear then it will be alright, wearing the same pair of shoes all the time is not good. One should choose shoes of different design to suit the needs of work, leisure, attending a banquet or other activities. Since the structure of each pair of shoes will vary according to its purpose, the materials used, its design and weight and its manufacturing methods will be different.

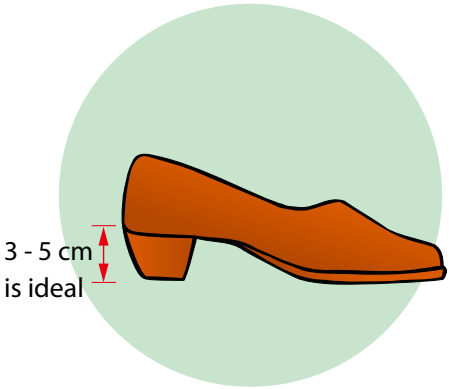
For example, for work shoes, as the duration of wear is long, there must be two pairs for alternate wearing in order to reduce the chance of getting hurt and to keep the shoes clean.

Regarding shoes for attending banquet, as the sole is relatively thin, it is alright to wear them in carpeted places such as hotel and restaurant, but if you walk on hard ground for a long time, not only the shoes will wear out easily, the feet will also experience pain.

Sport shoes and leisure shoes are lighter in weight, although the outsoles of the shoes are thin, the insoles are thick, this ensures there will not be any negative impact on the feet when wear them for sports. Different sports have their own special shoes such as jogging shoes, golf shoes, baseball shoes, soccer shoes, etc.

Choosing suitable footwear to suit different occupations

We should choose suitable shoes according to the needs of our occupations. The followings are some examples for your reference:



Salespersons, courier and field personnel should not wear shoes with thin soles, shallow back of the shoes, shallow opening or those without shoe laces. As the duration of walk in these sectors is long, good posture and stability should be maintained, so shoes with shoe laces serving attaching functions should be chosen. Besides, they should wear shoes with longer front to avoid prolonged pressure upon the toes. And shoes with thick soles or with shock-absorbent pad can reduce the abrasion between the shoes and the sole of the feet are more suitable for field personnel.

Office workers usually pay more attention to the work shoes. Shoes with shoe lace and shoes without shoe lace but not easy to remove are suitable for men. As for women, shoes of less than 5 cm in the heel, shoes with shoe lace or shoes with longer front are suitable for women.

According to research findings, the best height of the high heel is 3 to 5 cm for ladies, the maximum limit for health is 7 cm. High heels of excessive height can cause the body to slant in the front, prolonged maintenance of this posture will lead to hip bone injury.

For salesmen or those people standing at work for the whole day on hard and slippery floor for long hours, they should wear shoes which are slip resistant, thicker and with shock-absorbent pad.

5. Footwear care

If the same pair of shoes are worn all the time without maintenance, not only the shoes are prone to be worn out, but they will easily accumulate dirt and germs, and may even stain. To make shoes durable, one needs to store and keep them properly at all times.

Method to make shoes durable



Put the shoes under shade with good ventilation once every week



Spray them with antiseptic product once every two weeks



When the shoes are not in use, put the shoe shapers or paper insert inside the shoes



Put desiccating agent into the shoes after wearing to maintain dryness.



Try to wear different shoes every day

Forming the walking habit

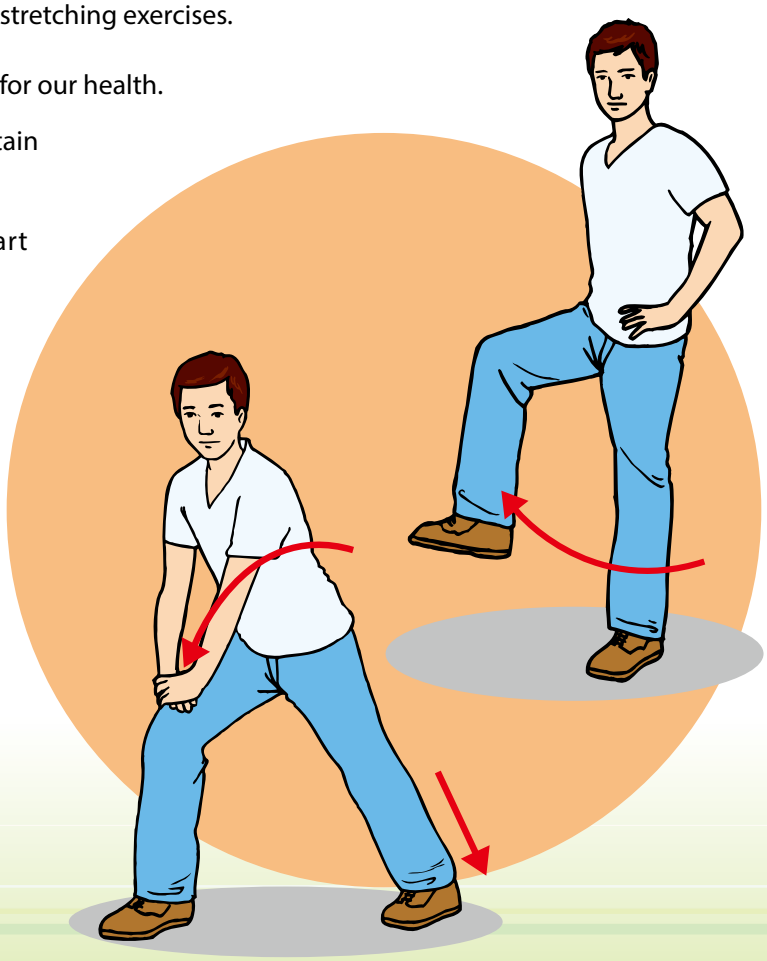
It is universally known that exercises are good for the body. Light exercises can also foster good health. As long as the volume of daily exercises can consume 150 calories, the body will benefit. And the volume of exercise is calculated taking its duration, intensity and frequency together. To make it simple, any exercise which accelerates and strengthens heart activity, generates sweat or enhances breathing can be regarded as an exercise of moderate or appropriate intensity.

So which exercises should be choosen to strengthen his or her body? Here we introduce the "Quick Walk" exercise. "Quick Walk" refers to the completion of approximately 1.6 km of route within 15 to 20 minutes. When you walk, your heart beat will accelerate but will not go too fast, and you will feel that your body temperature is rising gradually.

The following are things requiring attention when engaging in "Quick Walk". To start with, choose a flat road for the Quick Walk exercise. Warm up and do stretching exercises before walking. Pay attention to proper posture and skills when walking. For example, walking, hold the head up and shoulders relaxed. The ankles should touch the ground gently like normal walking even going up or down slopes. Keep the body in an upright position, relax the muscles, do not tighten them, and each step should be natural. The distance between two steps should be larger than that of normal promenade, do some calming down exercises after having finished walking, for instance, walk slowly. Finally do some stretching exercises.

Persistent Quick Walk habit has long term benefits for our health.

- The consumption of calories can help to maintain appropriate body weight
- Reduction of the chances to suffer from heart disease, high blood pressure and diabetes
- Improvement of the cardiopulmonary functions
- Reduction of the cholesterol level in the blood
- Keeping the mind sharp, enhancing memory
- Prevention of osteoporosis
- Strengthening of the bones, muscles and joints
- Helping to reduce pressure, relax the nerves



However, it must be noted that if one has chronic diseases, such as heart disease, respiratory disease, or have shortness in breath when doing these exercises, then consult a doctor before continuing.

Persistence is the key to forming the walking habit. If one is able, stop taking transportation when going to work, returning home and going shopping, or take off at one or two stations ahead and walk to the destination.

The effectiveness of exercises is related to the exercise intensity. Observing the rate of heart beat while exercising can let us know the intensity of the exercise. The highest rate of heart beat is 220 minus the age of the person exercising, and the target rate of heart beat (medium degree of exercise) is between 50% to 70% of the highest rate of heart beat. Taking a person of 40 years old as an example, his target rate of heart beat while exercising should equal to 50% to 70% of 180 (220 minus 40), that means between 90 and 126.

From the above information we should understand the importance of walking exercises upon our health! For modern people living amid advanced public transportation, walking exercises can be more important than any other matters.



職業安全健康局
OCCUPATIONAL SAFETY & HEALTH COUNCIL

香港北角馬寶道28號華匯中心19樓

19/F, China United Centre, 28 Marble Road

North Point, Hong Kong

電話 Tel : 2739 9377　傳真 Fax : 2739 9779

電郵 Email : oshc@oshc.org.hk

職安熱線 Hotline : 2739 9000

職安資訊傳真服務 SafeFax : 2136 2576

網址 Website : www.oshc.org.hk

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