

# 防跌系列 安步行™醫療鞋

Fall Prevention Series  
Shoe d' Ankor®



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The Chinese University of Hong Kong  
香港中文大學獨家授權製造

## 跌倒的風險

跌倒是導致意外死亡的其中一個主因。

75%跌倒意外發生在長者身上，當中有三分之一長者出現髖骨骨折<sup>1</sup>，需要留院治療，嚴重者甚至一年內過身。跌倒意外不單影響個人生活，更會對護理員及家人造成負擔。

除跌倒受傷外，害怕跌倒也是一種困擾。懼怕跌倒，會令人減低活動意欲，失去自信心，久而久之形成惡性循環，身體缺乏活動，肢體靈活性下降，更容易不小心跌倒。

導致跌倒的原因有很多，個人因素與環境因素同樣重要。個人因素包括視力、藥物、本體感覺 (Proprioception) 及肌力等，而鞋子也是關鍵之一。研究發現，穿著沒有帶扣的鞋，如拖鞋和涼鞋，會增加跌倒意外；而設有帶扣的鞋，則較少導致跌倒<sup>2-4</sup>。跌倒意外的個案中，75%人所穿著的鞋都不合標準<sup>5</sup>。

要預防跌倒，鞋子應有鞋帶或扣帶、適當的鞋底坑紋和鞋底硬度。



### 解決方法 – 安步行™ (Shoe d' Ankor®)

為減少跌倒意外，改善環境條件無疑是必需的，例如光線要充足，及避免把物件堆放於地上等。除此之外，穿著安步行™醫療鞋亦有助進一步減少跌倒危機。

香港中文大學矯形外科及創傷學系梁國穗教授於其研究中發現，除鞋底坑紋產生基本抓地作用外，鞋底的製造物料和密度也是重點因素。物料太硬容易引致滑倒，太軟則會削減從足跟上傳的壓力，降低身體平衡感。我們需要透過鞋底物料取得軀體感覺資訊 (Somatosensory information)，以及鞋子與地面之間所產生的磨擦力，才能操控身體，達至平衡。

香港中文大學與足科矯形有限公司緊密合作，為減少跌倒意外，攜手設計一款名為「安步行™ Shoe d' Ankor®」的醫療鞋，具備下列優點：

- 鞋楦設計以科研為基礎，根據500位華人的足形測量數據來評估足部穩定性需求<sup>6</sup>
- 鞋楦設計參考人類足部18個結構標記，確保屈曲點能配合自然步態
- 最佳外底密度，讓身體獲取足夠的軀體感覺資訊
- 經大學測試，鞋底於乾燥地面之磨擦系數為>1.1，於濕水地面則為>0.70
- 鞋底坑紋設計獨特，廣闊接觸面提升足部穩定性
- 理想鞋跟高度½”(1.25cm)，讓身體重心適度分佈
- 配有魔術貼帶或鞋帶以固定鞋子

## 適應症及益處

Shoe d' Ankor<sup>®</sup> 具有極佳防滑功能，有效減低在濕滑地面活動時意外滑倒的機會，適合容易跌倒或經常在濕滑地方工作的人使用。

## 參考資料 Reference

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## 銷售地點 Shops Location :

銅鑼灣道11-17A號國泰大廈一樓 (麥當勞餐廳旁) 1/F, Cathay Mansion, 11-17A Tung Lo Wan Rd, Causeway Bay (Next to McDonald)	TEL. 2808 1601
銅鑼灣渣甸街5-19號京華中心五樓505室 (銅鑼灣港鐵站F出口) Rm 505, 5/F, Capitol Centre, 5-19 Jardine's Bazaar, Causeway Bay (CWB MTR Station Exit F)	TEL. 2332 9375
灣仔莊士敦道2號地舖樂康軒 (循道衛理教堂對面) Medimart, G/F, No. 2 Johnston Road, Wanchoi (Opp. Methodist Chinese Church)	TEL. 2522 9673
鰂魚涌英皇道1065號東達中心地下D舖 (太古港鐵站A1出口) Unit D, G/F, Eastern Centre, 1065 King's Road, Quarry Bay	TEL. 2127 4125
尖沙咀柯士甸道102號七樓701-703室 (佐敦港鐵站D出口) Room 701-703, 102 Austin Road, Tsim Sha Tsui (Jordan MTR Exit D) 樂富樂富廣場一樓1165舖 (樂富港鐵站A出口) Shop 1165, 1/F, Lok Fu Plaza, Lok Fu (Lok Fu MTR Exit A)	TEL. 3576 3639 TEL. 2337 1681
將軍澳新都城中心商場1期258舖樂康軒 (寶琳港鐵站B2出口) Shop 258, L2, MetroCity Phase I, The Metropolis, Tseung Kwan O (Po Lam MTR Station Exit B2)	TEL. 3194 6398
荃灣大道51號地下 (大道恒生銀行對面) G/F, 51 Tai Ho Road, Tsuen Wan (Opp. Hang Seng Bank)	TEL. 2615 1756



**Falls are one of the leading causes of accidental death.** 75% of these falls occur in the elderly. One third of the older adults who fall, sustain a hip fracture<sup>1</sup> and are hospitalized, die within a year. Falls not only affect the quality of life of the individual but also increase financial, physical, and emotional responsibility that falls upon family members and caregiver.

Apart from falls, fear of falling is also a major issue. Fear leads to inactivity and loss of confidence, which in turn produces a cycle of fear, loss of self-confidence, and inactivity, with resultant decrease in the quality of life and increase in the risk of falls.

There are many causes of falls. The internal factors play as important a role as the external environment. Vision, drugs, proprioception sense, muscle strength etc are important internal factors, and so do the shoes that one wears. Research has shown that shoes with no fixation, such as slippers and sandals are associated with a higher incidence of falls and that shoes with fixation are associated with a reduction of incidence of falls<sup>2-4</sup>. **75% of the falls are associated with shoes with sub-optimal features<sup>5</sup>.**

To prevent falls, shoes should preferably have some means of fixation, proper tread patterns and outsole of appropriate hardness.

## The Solution - Shoe d' Ankor<sup>®</sup>

Whilst improving the environment such as improved lighting, avoiding putting small stuffs on the floor etc is necessary, the use of Shoe d' Ankor<sup>®</sup> medical shoes also helps reduce the possibility of falls.

Research by Professor Kwok-sui Leung, Department of Orthopedics and Traumatology of The Chinese University of Hong Kong has shown that the type of material and density of the outsole is important, apart

from the tread design in providing the necessary friction. It was found that too rigid a material would invite slip, while too soft a material would attenuate the pressure from heel, thus depriving the body of the required somatosensory information. A balance was made by choosing a material that can provide adequate somatosensory information and the needed friction between the shoes and the floor.

The University has closely worked with Pedorthic Technology Ltd., to design the **Shoe d' Ankor<sup>®</sup>**, which has the following features in order to reduce the risk of falls:

- Research-based shoe last design towards stability as a result of 500 Chinese foot anthropometric study<sup>6</sup>
- The shoe last design, based on 18 human foot anatomical landmarks, ensures the flexing point to facilitate normal gait
- Optimal density of the outsole to provide adequate somatosensory information to human body
- Outsole material based on the University tested coefficient of friction in dry (>1.1) and water (>0.7) conditions
- Special tread pattern design and wide contact area for stability
- Optimal heel height of 1/2" (1.25cm) for suitable centre of gravity
- Fixation by Velcro or shoelaces for security

## Indications and Benefits

The **Shoe d' Ankor<sup>®</sup>** is designed to reduce slipping when treading on wet surfaces. Thus the shoes are suitable for those who are prone to falls, particularly in rainy days and for those who have to frequent wet floors.