• 計畫中文名稱	跌倒老人之長期追蹤結果、骨質密度與太極拳運動		
• 計畫英文名稱	Longitudinal Outcomes, Bone Density, and Tai Chi Exercise in Older Fallers		
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• 執行機構	台北醫學大學傷害防治學研究所		
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• 研究領域	公共衛生學, 復健醫學		
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• 中文關鍵字	骨質密度；跌倒；功能結果；傷害；老人；太極拳；；		
• 英文關鍵字	Bone mineral density；Fall；Functional outcome；Injury；Older people；Tai chi；；		
• 中文摘要	隨著人口老化，老人跌倒已成爲的重要公共衛生問題。本研究計劃目的爲評估六十歲以上老人跌倒相關的長期縱貫追蹤結果、骨質密度相關的測量、以及太極拳預防老人跌倒的效能。五年的研究期間有二個相關研究設計，預估從台北三家醫院急診室收集約 799 位跌倒老人。基線與追蹤測量將收集人口社經資料、骨質密度、平衡能力、移動力、日常生活活動能力、遷移、跌倒後害怕、憂鬱程度、健康相關生活品質、社交活動與支持以及其他與跌倒相關特性的資料。本計畫主要有三項目標：(一)追蹤老人跌倒後生理(包括平衡能力、移動力、日常生活活動能力、遷移、失能、以及死亡情形)、心理(包括跌倒後害怕、憂鬱程度、以及健康相關生活品質)、以及社會功能(包括社交活動與支持)的變化，並進一步瞭解每項跌倒相關結果之危險或保護因子。(二)評估超音波儀(quantitative ultrasonography)對於老人發生骨折的預測效度。(三)比較太極拳運動與下肢功能訓練二種介入方法對改善老人跌倒、平衡能力、移動力、日常生活活動能力、跌倒後害怕、憂鬱程度、及健康相關生活品質等是否有顯著差異；並同時瞭解老人對二種介入方法之短期與長期之持續率。		
• 英文摘要	Falls are a serious public health problem among elderly people because it is associated with considerable mortality, morbidity, reducing functioning, and premature nursing home admissions. This research is designed to evaluate longitudinal fall-related outcomes, measure bone mineral density, and determine the efficacy of tai chi exercise for fall prevention among elderly fallers who aged 60 years and older in Taiwan. During a 5-year study period, about 799 subjects for two study designs will be recruited from emergency rooms of three hospitals located in the Taipei area. Information on socio-demographics, bone mineral density, balance, mobility, activities of daily living (ADLs), and other fall-related characteristics will be collected at the baseline and follow-up assessments. Three specific aims are targeted in this research. First, important fall-related outcomes of physical (including balance ability, mobility, ADLs, relocation status, disability, and mortality), psychological (including post-fall fear, level of depression, and health-related quality of life), and social functions (including social activities and social support) in older fallers will be tracked over the study period. Risk or protective factors for changes in the outcomes will also be determined. Second, the predictive validity of quantitative ultrasonography (QUS) of bone density for the occurrence of fractures in older fallers will be examined. Third, the effects of tai chi exercise and lower-extremity training on improving the primary outcome (i.e., falls) and secondary outcomes (including balance ability, mobility, ADLs, depression, post-fall fear, and health-related quality of life) among older fallers will be compared. Short- and long-term adherence rates to the two intervention programs will also be examined.		