• 系統編號	RG9513-4117		
• 計畫中文名稱	藉由強化鈣質的米飯或飲食介入學校營養午餐計畫		
• 計畫英文名稱	Involvement of School Lunch Dieting Plan through Calcium-Fortified Rice or Diets.		
• 主管機關	行政院衛生署	• 計畫編號	DOH94-TD- F-113-065-(2)
• 執行機構	台北醫學大學保健營養學系		
• 本期期間	9407 ~ 9506		
• 報告頁數	0 頁	• 使用語言	--
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• 中文關鍵字	加鈣米；鈣補充劑；學童；營養午餐；生物利用率		
• 英文關鍵字	fortified rice with calcium；calcium supplement；school children；school lunch；bioavailability		
• 中文摘要	兒童到青少年時期是最理想增加飲食鈣量進而增加登峰骨量（peak bone mass）的階段。以富化或添加鈣的方式強化開發中國家人民的主食，可以增加鈣質的攝取量。研究目的爲藉由米飯中添加鈣質之方式與量及介入學童午餐的可行性探討。文獻回顧方式找出碳酸鈣爲最適合添加之鈣化合物形式；調查分析市售加鈣食品、鈣片與加鈣米之成本效益，得 80 克米飯中添加 304 毫克鈣量的加鈣米，就其經濟與熱量獲得的層而言爲理想的介入強化鈣食品。取得市售的加鈣米，委託食品工業研究所以感應耦合電漿原子發射光譜儀（Inductively Coupled Plasma Atomic Emission Spectrometer, ICPAES）進行分析鈣含量分析，得到加鈣米的鈣含量與經過清洗和烹煮的過程中有 10%流失。以 30 位消費者的官能品評試驗得加鈣米比起白米在色澤、口感皆有較佳之接受度。以加鈣米介入學童午餐的試驗，分別於 94 學年度冬季和春季，介入期間前者爲 2 週、後者爲一個月，定量學童進米飯食量和廚餘量，結果加鈣米和一般供應的米食並沒有顯著差異。使用飲食頻率問卷和飲食日記、輔以 24 小時回憶法分析加鈣米介入學童午餐後得學童在未使用加鈣乳片或鈣片時並不會有鈣攝取過量之虞。文獻回顧得鈣在血液中爲？瑌 w 值，從血鈣檢驗分析並無法反應飲食差異量。又受試學校不同意作侵入性試驗，經過學者、專家會議後亦認同，因此研究沒有取得學童血鈣資料。綜合結論藉由加鈣米介入學童午餐或提倡國人攝食加鈣米是可行之政策，未來可以持續追蹤學童身高值與成年後的骨密度，進而更確定加鈣米的營養政策。 關鍵詞：加鈣米、鈣補充劑、學童、營養午餐		
• 英文摘要	The peak stage of storage and absorption of calcium is school children and adolescent period By increasing intake of calcium by staple		

food, body can store a lots of calcium to increase the peak bone mass and also can decrease the incidence of bone fracture due to osteoporosis at elder age. The purpose of this study is to find out the feasibility of the calcium-fortified rice in school lunch. Calcium carbonate is the most suitable calcium chemical form to be added into food by article reviewed. Investigating and analyzing the calcium-fortified/rich food, calcium tablet or calcium-fortified rice from market products. The result of cost-effective analysis is calcium-fortified rice, which content 304 milligrams of calcium quantity of 80 grams of rice. Using Inductively Coupled Plasma Atomic Emission Spectrometer (ICPAES) To evaluate the amount of calcium loss during the cooking process by the Institute of Food Industry. There is 10% calcium loss during the cooking process. 30 consumer judge and taste the calcium-fortified rice have better acceptance in the color and luster, taste than white rice. To intervened into school lunch program by using the calcium-fortified rice in December 2005 and May 2006. There is no quantity difference between white rice and calcium-fortified rice intake among subject students. Seldom possibility of excessive calcium intake over the upper limit by evaluated the food frequency questionnaire and diet diary except calcium tablet administering. No blood data can be approved for several reasons, First, blood calcium can not respond to the dietary calcium especially short term intervention because of the human homeostasis mechanism, second, subject school can not give their permission for getting blood sample from subject students, third, get a coherency peroration after a committee discussion. It is a feasible policy that the comprehensive gets involved calcium-fortified rice in school lunch program or recommends compatriot's ingesting calcium-fortified rice. Tracking student's height continuously in the future and the density of bone after growing up, and then confirm the nutrition policy with calcium rice even more. Key words: fortified ric