

綠茶減重代餐對台灣社區成人體重與血脂肪控制之探討 = Studies on the effects of green tea weight-loss meal replacements ...

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摘要

本研究利用實驗設計，藉由綠茶粉、幾丁聚醣和硒酵母之添加，開發減重代餐包並進行臨床實驗來評估成效。餐包反應曲面實驗操作參數為研磨轉速、溫度與時間對應糊化指標程度、水溶性指標程度、蛋白質含量及硒含量，來找出餐包最適化加工條件及營養組成；臨床實驗受測者篩選條件，身體質量指數大於27，將受測者隨機分配到對照組、綠茶組與幾丁組，共計三組，每組45人，接受12週體重控制課程，來比較受測者之體位測量值、生化值與生理反應值等差異性。實驗結果，餐包最適調配參數比例為轉速700 rpm、時間15 min及溫度50 時，可得到糊化程度70%、水溶性程度7.3%、蛋白質含量2.6mg/g 和硒含量6.5 μg/g，每包136 ± 5大卡，淨重17.5 ± 0.5克，最適口感與營養組成來進行臨床試驗。其臨床試驗結果，在體重、腰圍、低密度/高密度脂蛋白比率變化上，其綠茶組與幾丁組，都有顯著變化，分別為4.7 ± 1.4與2.3 ± 0.5(kg)，7.5 ± 0.4與3.2 ± 1.5(cm)，0.69 ± 0.12與0.26 ± 0.32 (mg/dL)，數據顯示，綠茶組顯著幾丁組，而在對照組則無顯著差異。但在生理反應上，綠茶組所造成失眠情形，顯著幾丁組，而在幾丁組與對照組則無顯著差異。因綠茶組生理反應顯著於其他組別，在臨床實驗部份，另再增加比較一組體適能組。其實驗條件同前述臨床實驗，經延續實驗比較綠茶組，其結果，體適能組在體重與腰圍顯著於綠茶組，分別為7.9 ± 3.4(kg)與8.9 ± 1.4(cm)，在生理反應上，體適能組所造成飢餓感情形，顯著綠茶組。總結，藉由反應曲面法驗證，可確認各反應性狀迴歸模式之預估值與產品實際量測值之適當性。並經由臨床實驗驗證，自製減重代餐包具有降低體重與血脂肪的成效。

關鍵詞：實驗設計、綠茶、代餐包、體重控制、臨床試驗

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