

綠茶及其萃取物對糖尿病影響之探討

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大綱

一、 前言

二、 綠茶透過促進大鼠骨骼肌 GLUT4 的轉運改善糖尿病引起的高血糖

三、 兒茶素改善 STZ 誘導的糖尿病及其併發症

四、 表沒食子兒茶素沒食子酸酯改善第二型糖尿病大鼠的糖代謝及氧化壓力

五、 結論

摘要

糖尿病 (Diabetes Mellitus, DM) 是一種慢性的代謝異常疾病，是由於體內胰島素相對或絕對上的不足，對糖類的利用能力下降，甚至完全無法利用而造成血糖過高，進而造成糖代謝異常，同時也伴隨著脂質及蛋白質代謝異常，長時間會導致其他併發症，如酮酸血症、視網膜病變或腎臟疾病等。綠茶富含對人體有益的多酚類化合物，例如兒茶素 (Catechin)，而 Epigallocatechin gallate (EGCG) 為兒茶素中含量最高的成分，研究指出其具有抗氧化、抗癌、抗發炎、調節脂質代謝、改善動脈硬化及胰島素阻抗等功效，本次報告主要探討綠茶及其萃取物對糖尿病之影響。結果顯示，綠茶可以透過刺激骨骼肌的 GLUT4 蛋白表現，改善 STZ 誘導糖尿病大鼠及小鼠的高血糖及胰島素阻抗，EGCG 還可以改善 HFD 誘導的肥胖及高血糖，兒茶素可以透過增加 Apo A-1 及降低 Apo B，使低密度脂蛋白膽固醇下降，高密度脂蛋白膽固醇上升，改善高脂血症，也可以使抗氧化酵素 SOD 及 CAT 活性增加。綜合上述，綠茶及其萃取物均具有改善糖尿病之效果。

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