

題目:

中文題目：孕產期憂鬱症與多元不飽和脂肪酸血中濃度的相關性－系統性回顧暨統合分析

英文題目：Perinatal depression and serum polyunsaturated fatty acid compositions- a systematic review and meta-analysis

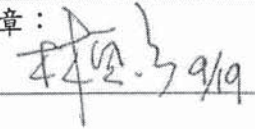
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## 摘要

「孕產期憂鬱症」是指發生於懷孕期或是生產後的憂鬱發作。Omega-3 (n-3) 多元不飽和脂肪酸 (PUFAs) 因為能夠抗發炎以及調整神經可塑性，加上具有安全優勢，對於孕產期憂鬱症具有相當治療潛力。許多觀察性研究顯示血中 n-3 多元不飽和脂肪酸 (PUFAs) 濃度偏低時，會增加孕產期憂鬱症的風險。然而，檢驗個別脂肪酸濃度(包括屬於 omega-3 的 DHA、EPA 及屬於 omega-6 的 AA 等)的研究，卻有不一致的結果。為了解答這個問題，Lin 與 Chang 團隊於 2016 年進行了一個統合分析研究，這個研究從 2016 年 3 月以前發表的所有相關文獻中，篩選出 12 篇符合分析條件的觀察性研究，以統計學方法統合上述研究數據。結果發現，在孕產期憂鬱症婦女，DHA 及 n-3 PUFAs 的總濃度，顯著降低；n-6/n-3 比值顯著升高。次群組分析顯示，EPA、DHA 及 n-3 PUFAs 的總濃度顯著降低的現象，主要出現在產前；相對地，n-6/n-3 比值顯著升高的現象，在產前及產後憂鬱症皆出現。本研究結果，提供了憂鬱症的脂肪酸假說進一步佐證，也支持 n-3 PUFAs 可作為孕產期憂鬱症的替代治療方式。

關鍵字：孕產期憂鬱症、多元不飽和脂肪酸、omega-3 脂肪酸、omega-6 脂肪酸

## Abstract

Perinatal depression (PND) refers to depressive episodes during pregnancy (prenatal) and after delivery (postnatal). Omega-3 (or n-3) polyunsaturated fatty acids (PUFAs) are a promising antidepressant treatment for PND because of the supporting evidence from clinical trials, the safety advantage, and their anti-inflammatory and neuroplasticity effects. Abnormal serum polyunsaturated fatty acid compositions in patients with PND have been reported extensively, while the findings of the differences in individual PUFAs (including the omega-3 (n-3) docosahexaenoic acid (DHA), eicosapentaenoic acid (EPA) and the omega-6 (n-6) arachidonic acid (AA)) between patients and control groups are inconsistent.

Lin, Chang and colleagues conducted a systematic review and meta-analysis to compare the levels of PUFA indices, including eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), arachidonic acid (AA), total n-3, total n-6, and the n-6/n-3 ratio between women with PND and healthy controls. The meta-analysis included 12 eligible studies available by March 2016. The effect sizes (ESs) were synthesized by using a random effects model. In addition, subgroup analysis was performed for both prenatal and postnatal depression.

The results showed significant lower levels of total n-3 PUFAs and DHA, and a significant increased n-6/n-3 ratio in PND patients. In the subgroup analyses, there were significant lower levels of n-3 PUFAs, EPA, and DHA in women with prenatal depression. The n-6/n-3 ratio was significantly increased in both prenatal and postnatal depression subgroups.

The meta-analysis suggested that PUFAs may play a role in the pathogenesis of PND. It also provided further support for the PUFAs hypothesis of depression and a rationale for use of n-3 PUFAs as an alternative treatment for PND.

**Keywords:** perinatal depression (PND), polyunsaturated fatty acids, omega-3 fatty acids, omega-6 fatty acids

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