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**Topic :** Adhesion Prevention

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To close or not to close? Peritoneal non-closure and adhesion formation – results of a systematic review

Caesarean section (CS) is one of the commonest operations performed and the CS rate is on the rise. Previous studies showed that non closure of the peritoneum after surgery decreased operation time (RCOG 2002). Until recently, there has been little data on adhesion formation after closure versus non closure of the peritoneum after caesarean section. Several studies have since been published examining this clinical question.

We performed a systematic review on peritoneal closure versus non-closure in relation to adhesion formation in repeat caesarean section. The search strategy involved a thorough literature review using MEDLINE, Pubmed, EMBASE, and hand searching all the references cited in the relevant studies. All prospective studies that formally examined adhesions after repeat caesarean sections were included. To maintain clinical homogeneity, retrospective studies and studies that included the use of any anti-adhesion agents were excluded.

Eleven studies were identified according to our search strategy. Seven were excluded and four were included in our meta-analysis. Non closure of the peritoneum during CS resulted in increased adhesion formation (O.R. 2.49, 95% CI 1.47-4.19). In a subgroup analysis, more patients in the non-closure group had severe adhesions (O.R. 1.87, 95% CI 1.03-3.39).

This systematic review suggests that peritoneal non-closure results in more adhesions. It is an important finding as severe adhesions can result in delay in the delivery of the fetus with significant clinical consequences. The long term data from CAESAR study may throw some light on this issue in due course. In the mean time, it is important that clinicians understand the long term implications relating to adhesion formation and non-closure of the peritoneum after caesarean section.

Reference: RCOG, (United Kingdom) (2002) Peritoneal closure. Guideline 15