

# 嚼口香糖可以促進剖腹產 術後胃腸功能恢復嗎？

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# 前言<sup>1</sup>

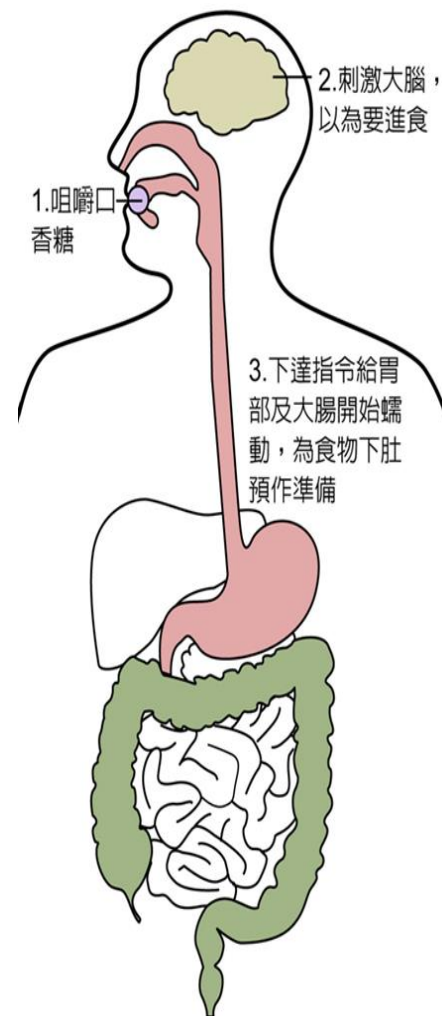


- 剖腹產率 35.5% (衛生福利部, 2016)
- 剖腹產的麻醉及 PCA 影響腸胃功能
- 術後常見腸胃道問題
  - 腹脹、腹痛、嘔吐、食慾不振....等
  - 可能增加住院時間 (Martin et al.,2015)



# 前言<sup>2</sup>

- 為促進剖腹產術後胃腸功能恢復，本單位於2017年5月，將實證結果(提早進食)運用於剖腹產術後進食時間改善
  - 進食時間由術後24小時縮短為8小時
  - 未因提早進食產生不良合併症，且滿意度高
- 腹脹情形仍普遍，臨床做法...
- 嚼口香糖已經被證實是可以改善非產科腹部手術後胃腸功能恢復(Safdari et al.,2011)
- 是否也可以用於促進剖腹產術後腸胃功能恢復？



## Search

"caesarean section"  
AND "gum"

Filters: Meta-Analysis  
不限語言及年代

### 3篇符合主題

Chewing gum for intestinal  
function recovery after **caesarean  
section**: a systematic review and  
meta-analysis.

Wen et al.

BMC Pregnancy Childbirth. 2017  
Apr 18;17(1):105.

Chewing gum for enhancing early  
recovery of bowel function  
after **caesarean section**.

Pereira et al.

Cochrane Database Syst Rev. 2016  
Oct 17;10:CD011562. Review.

J Matern Fetal Neonatal Med. 2018 Jul;31(14):1924-1932. doi: 10.1080/14767058.2017.1330883. Epub 2017 Jun 6.

**Chewing gum improves postoperative recovery of gastrointestinal function  
after cesarean delivery: a systematic review and meta-analysis of  
randomized trials.**

Ciardulli A<sup>1</sup>, Saccone G<sup>2</sup>, Di Mascio D<sup>3</sup>, Caissutti C<sup>4</sup>, Berghella V<sup>5</sup>.

⊕ Author information

#### Abstract

**OBJECTIVE:** To examine whether chewing gum hastens the return of gastrointestinal function after a cesarean delivery.

**METHODS:** All randomized controlled trials comparing the use of chewing gum in the immediate postoperative recovery period (i.e. intervention group) with a control group were included in the meta-analysis. The primary outcome was the time to first flatus in hours. Meta-analysis was performed using the random effects model of DerSimonian and Laird, to produce summary treatment effects in terms of mean difference (MD) or relative risk (RR) with 95% confidence interval (CI).

**RESULTS:** Seventeen trials, including 3041 women, were analyzed. Trials were of moderate to low quality with different inclusion criteria. In most of the included trials chewing gum was given right after delivery, three times a day for 30 min each and until the first flatus. The intervention group had a significantly lower mean time to first flatus (MD - 8.48 h, 95%CI -9.04 to -7.92), less time to first feces (MD - 9.57 h, 95% CI -10.1 to -9.04), less number of episodes of vomiting (MD - 0.85, 95%CI -4.93 to -0.85), less number of episodes of ileus (RR 0.39, 95%CI 0.19 to 0.80).

**CONCLUSIONS:** Gum chewing starting right after cesarean delivery is associated with early recovery of gastrointestinal function. If this intervention, providers should consider implementing cesarean postoperative care with gum chewing.

✓ PICO 最符合  
✓ 發表年代最新  
✓ Meta-analysis



# The Journal of Maternal-Fetal & Neonatal Medicine

## InCites JCR 期刊排名資料庫 – 查詢期刊影響係數 Impact Factor



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### JCR Impact Factor

JCR Year ▼	OBSTETRICS & GYNECOLOGY		
	Rank	Quartile	JIF Percentile
2017	62/82	Q4	25.000
2016	45/80	Q3	44.375
2015	47/80	Q3	41.875
2014	58/79	Q3	27.215
2013	60/78	Q4	23.718
2012	49/78	Q3	37.821
2011	46/79	Q3	42.405
2010	24/77	Q2	69.481
2009	43/70	Q3	39.286
2008	51/61	Q4	17.213
2007	43/60	Q3	29.167

### Key Indicators 2017

年度影響係數IF:1.493

IMPACT METRICS		INFLUENCE METRICS		SOURCE METRICS	
Total Cites	6,604	Eigenfactor Score	0.01800	Citable Items	539
Journal Impact Factor	1.493	Article Influence Score	0.492	% Articles in Citable Items	92.39
5 Year Impact Factor	1.551	Normalized Eigenfactor	2.05900	Average JIF Percentile	25.000
Immediacy Index	0.531			Cited Half-Life	4.9
Impact Factor Without Journal Self Cites	1.359			Citing Half-Life	9.1



# 步驟1:系統性文獻回顧探討的問題為何？

- 研究族群/問題(P):

剖腹生產 (cesarean section)後的婦女

- 介入措施(I):

有咀嚼口香糖

- 比較(C):

無咀嚼口香糖

- 結果(O):

(主要) 術後首次排氣時間

(次要) 術後首次腸鳴音時間、排便時間

感覺飢餓時間、噁心、嘔吐

住院天數、產婦滿意度、腸阻塞發生率





## 步驟2:系統性文獻回顧的品質如何？

### F - 研究是否找到 (Find) 所有的相關證據？

#### 最好的狀況是？

良好的文獻搜尋至少應包括二個主要的資料庫 (如：Medline, Cochrane 考科藍實證醫學資料庫, EMBASE 等) · 並且加上文獻引用檢索(參考文獻中相關研究、Web of Science, Scopus 或 Google Scholar)、試驗登錄資料等。文獻搜尋應不只限於英文，並且應同時使用 MeSH 字串及一般檢索詞彙(text words)。

#### 我可以在哪裡找到這些資訊？

在文章的方法(Methods)章節，可以找到詳細搜尋策略的說明，包括使用的名詞，結果(Results)章節中可以找到本篇系統性文獻回顧評估的摘要及全文文獻數目、文獻納入與排除的數量及原因。資料可能會以圖表或 PRISMA 的流程圖呈現。

### Materials and methods

#### Search strategy

This review was performed according to a protocol designed *a priori* and recommended for systematic review [17]. Electronic databases (i.e. MEDLINE, Scopus, ClinicalTrials.gov, EMBASE, Sciencedirect, the Cochrane Library at the CENTRAL Register of Controlled Trials, Scielo) were searched from their inception until November 2016. Search terms used were the following text words: "gum," "cesarean", "caesarean", "delivery", "labor", "labour", "chewing", "sham feeding", "general anesthesia", "morbidity", "mortality", "meta-analysis", "metaanalysis", "review", "randomized", "post-operative", "clinical trial", "randomised", "effectiveness", "guidelines", "cost", "ileus", and "clinical trial." No restrictions for language or geographic location were applied. In addition, the reference lists of all identified articles were examined to identify studies not captured by electronic searches. The electronic search and the eligibility of the studies were independently assessed by two authors (AC, GS). Differences were discussed with a third reviewer (VB).

- 文獻搜尋超過二個主要的資料庫等，並包括試驗登錄資料。
- 關鍵字 (gum.....)
- 無語言及地理位置的限制
- 審查所有文獻的參考文獻清單
- 兩位作者(AC, GS)獨立評估了電子檢索和研究資格
- 與第三位評論員(VB)討論差異

## 步驟2:系統性文獻回顧的品質如何？

大部分產婦是計畫性剖腹產

排除：早產、緊急剖腹產、子宮切除、慢性疾病、高危險妊娠、產前出血、輸血、術後進ICU、多胞胎、化療

**Table 2.** Inclusion and exclusion criteria.

	Inclusion criteria	Exclusion criteria
Satij [19]	Women at term undergoing planned CD	Preterm, emergency CD
Liang [23]	Women undergoing CD	Not reported
Akhlaghi [15]	Women at term undergoing planned CD	Preterm, emergency CD
Abd-El-Maeboud [14]	Women at term undergoing planned CD under general anesthesia	Preterm, emergency CD, spinal anesthesia, cesarean hysterectomy, prior abdominal surgery
Luo [21]	Women undergoing CD	Not reported
Lu [22]	Women undergoing CD	Not reported
Kafali [11]	Women undergoing planned or emergency CD	Chronic medical disorders, high risk pregnancy, antepartum hemorrhage, blood transfusion, postoperative admission to intensive care unit
Shang [13]	Women at term undergoing planned or emergency CD	Preterm, preexisting gastrointestinal disorders, blood transfusion
Garshasbi [12]	Women planned or emergency CD	Not reported
Dehcheshmeh [4]	Primiparous women at term undergoing planned CD	Preterm, emergency CD, multiparous
Wang [20]	Women undergoing CD	Not reported
Ledari [9]	Women at term undergoing planned or emergency CD with prior CD	Preterm, primiparous, prior abdominal surgery
Zamora [10]	Women at term undergoing planned or emergency CD	Preterm
Rashad [6]	Women at term undergoing planned or emergency CD	Preterm
Ledari [7]	Primiparous women at term undergoing planned or emergency CD	Preterm, multiparous, prior abdominal surgery
Jakkaew [8]	Women at term undergoing planned or emergency CD	Preterm, cesarean hysterectomy, recent chemotherapy, postoperative admission to intensive care unit
Ajuzieogu [5]	Primiparous women at term undergoing planned CD	Preterm, emergency CD, multiparous, prior abdominal surgery, diabetic, hypothyroid, women who were on opioids

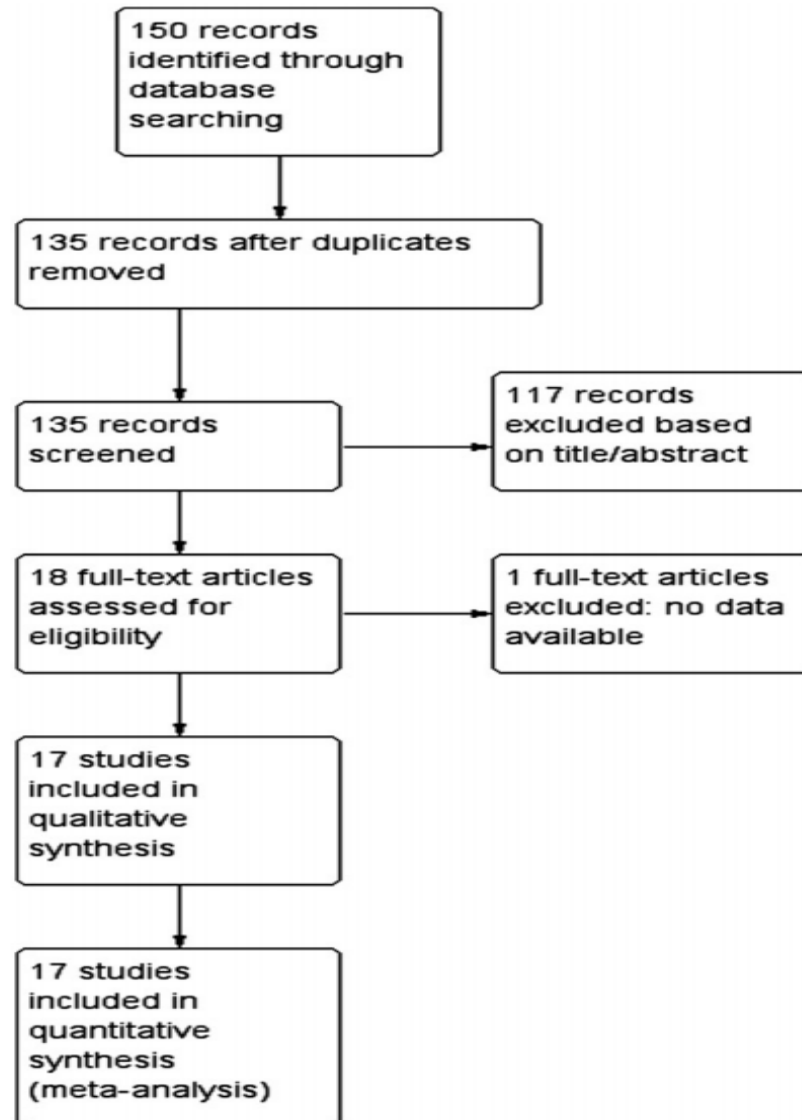
Data are presented as total number (number in the intervention versus number in the control group).

CD: cesarean delivery.





## 步驟2:系統性文獻回顧的品質如何？



### 使用PRISMA流程圖呈獻文獻篩選過程：

- 150篇刪除重複的文獻餘135篇
- 其中117篇標題與摘要不符合餘18篇
- 其中1篇不包含全文無可用數據
- 最後納入17篇進行統合分析

**Figure 1.** Flow diagram of studies identified in the systematic review. Prisma template (Preferred Reporting Item for Systematic Reviews and Meta-analyses).

地點 人數 開始 數量 時間 停止 飲食 下床 灌腸 曾經 曾經 麻醉

c/s 開腹

Table 1. Characteristics of the included studies.

	Study location	Simple size	Chewing gum Start	Chewing gum Times per day	Chewing gum Duration	Chewing gum End	Postoperative diet	Out of bed policy	Need for intestinal enema	Prior cesarean delivery	Prior abdominal surgery	Type of anesthesia	Primary outcome <sup>a</sup>
Satij [19]	USA 美國	32 (15 versus 17)	From delivery	Three	30 min	First flatus or defecation	Not reported	Not reported	Not reported	Not reported	Not reported	Spinal anesthesia, or general anesthesia	Evaluate the effect of the gum chewing on the return of bowel function in cesarean delivery patients
Liang [23]	China 中國	120 (60 versus 60)	From delivery	Three	15 min	First flatus	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	Time to first flatus, to first bowel movement, complications, tolerability of gum
Akhlaghi [15]	Iran 伊朗	400 (200 versus 200)	From delivery	Three	45 min	First flatus	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	To investigate the effect of gum chewing as false nutrition on the bowel movement and prevention of post cesarean ileus
Abd-El-Maeoud [14]	Egypt 埃及	200 (93 versus 107)	From 2 h postoperatively	Every 2 h during daytime	15 min	First flatus	Oral intake of clear fluids and soft foods began after passage of first flatus	Not reported	Not reported	Not reported	3/93 versus 11/107	General anesthesia	To test the hypothesis that gum chewing would enhance rapid return of bowel motility after elective cesarean section
Luo [21]	China	300 (150 versus 150)	From 2 h postoperatively	Four	10–15 min	3 days after CS	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	Time to first bowel flatus, first bowel movement, first bowel sound and complications
Lu [22]	China	97 (47 versus 50)	From 2 h postoperatively	Every 2 h (at least 6 h chewing)	30–40 min	First flatus	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	Time to first flatus, time to first bowel movement
Kafali [11]	Turkey 土耳其	150 (74 versus 76)	From 2 h postoperatively	Three	1° 15 min; then 1 h	First flatus	Oral fluids 6h after surgery, irrespective of return of bowel sound. Oral food after 24h on detection of bowel sounds on auscultation	Early ambulation encouraged	If no flatus in the first 48h postoperatively	28/74 versus 22/76	22/74 versus 20/76	Spinal anesthesia, or general anesthesia	To assess the effects of gum chewing on post-operative bowel function after cesarean section
Shang [13]	China	386 (195 versus 191)	From delivery	Three	30 min	Defecation of discharge	Oral intake of clear fluids and soft foods after first flatus	Early ambulation encouraged	Not reported	34/195 versus 30/191	Not reported	Spinal anesthesia	Time to first operative passage of flatus
Garshasbi [12]	Iran	500 (238 versus 262)	From delivery	Three	At least 30 min	Until start of regular diet	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported	To determine whether gum chewing in the immediate postoperative period facilitated recovery from ileus following cesarean section

(continued)

地點

人數

開始

數量

時間

停止

飲食

下床

灌腸

曾經  
C/S曾經  
開腹

麻醉

成果

Table 1. Continued

	Study location	Simple size	Chewing gum Start	Chewing gum Times per day	Chewing gum Duration	Chewing gum End	Postoperative diet	Out of bed policy	Need for intestinal enema	Prior cesarean delivery	Prior abdominal surgery	Type of anesthesia	Primary outcome <sup>a</sup>
Dehcheshmeh [4]	Iran	120 (60 versus 60)	From delivery	Four	–	First flatus or defecation	Not reported	Not reported	Not reported	0/60 versus 0/60	Not reported	Spinal anesthesia	To assess the effects of chewing of sugar free gum after elective cesarean delivery of return of bowel function in primiparous women
Wang [20]	China	233 (116 versus 117)	From 2 h postoperatively	Every 2 h during day time	15 min	First flatus	Not reported	Not reported	Not reported	Not reported	Not reported	Spinal anesthesia	Time to first flatus
Ledari [9]	Iran	100 (50 versus 50)	From 6 h postoperatively	Three	At least 1 h	Discharge	Not reported	Not reported	Not reported	50/50 versus 50/50	Not reported	Spinal anesthesia	To evaluate the effect of chewing gum on the recovery of bowel function after cesarean section
Zamora [10]	Philippines	53 (18 versus 35)	From 12 h postoperatively	–	15 min	First flatus	Not reported	Not reported	Not reported	Not reported	Not reported	Spinal anesthesia	To compare the effects of post-operative gum chewing with traditional feeding on the early return of bowel motility after cesarean delivery
Rashad [6]	Egypt	60 (30 versus 30)	From delivery	Three	30 mi	Discharge	Not reported	Not reported	Not reported	Not reported	Not reported	Spinal anesthesia, or general anesthesia	To identify the effect of sugarless chewing gum on intestinal movement after cesarean section
Ledari [7]	Iran	60 (30 versus 30)	From 6 h postoperatively	Three	1 h	Discharge	Not reported	Not reported	Not reported	0/30 versus 0/30	0/30 versus 0/30	Spinal anesthesia	To investigate the effect of gum chewing on the return of intestinal function in women with cesarean section
Jakkaew [8]	Thailand	50 (25 versus 25)	From delivery	Four	30 min	First flatus	Oral intake of clear fluids and soft foods after first flatus	Not reported	Not reported	4/25 versus 8/25	0/25 versus 1/25	Spinal anesthesia, or general anesthesia	To evaluate the effect of gum chewing on recovery of bowel function after cesarean section
Ajuzieogu [5]	Nigeria	180 (90 versus 90)	From the first day postoperatively	Three	30 min	5 days	Not reported	Not reported	Not reported	0/90 versus 0/90	0/90 versus 0/90	Spinal anesthesia	To identify the effect of chewing gum on duration of post operative ileus following cesarean section

菲律賓

泰國

奈及利亞

Data are presented as total number (number in the intervention versus number in the control group).

<sup>a</sup>When the primary outcome was not specifically stated, all listed outcomes were included in this table.