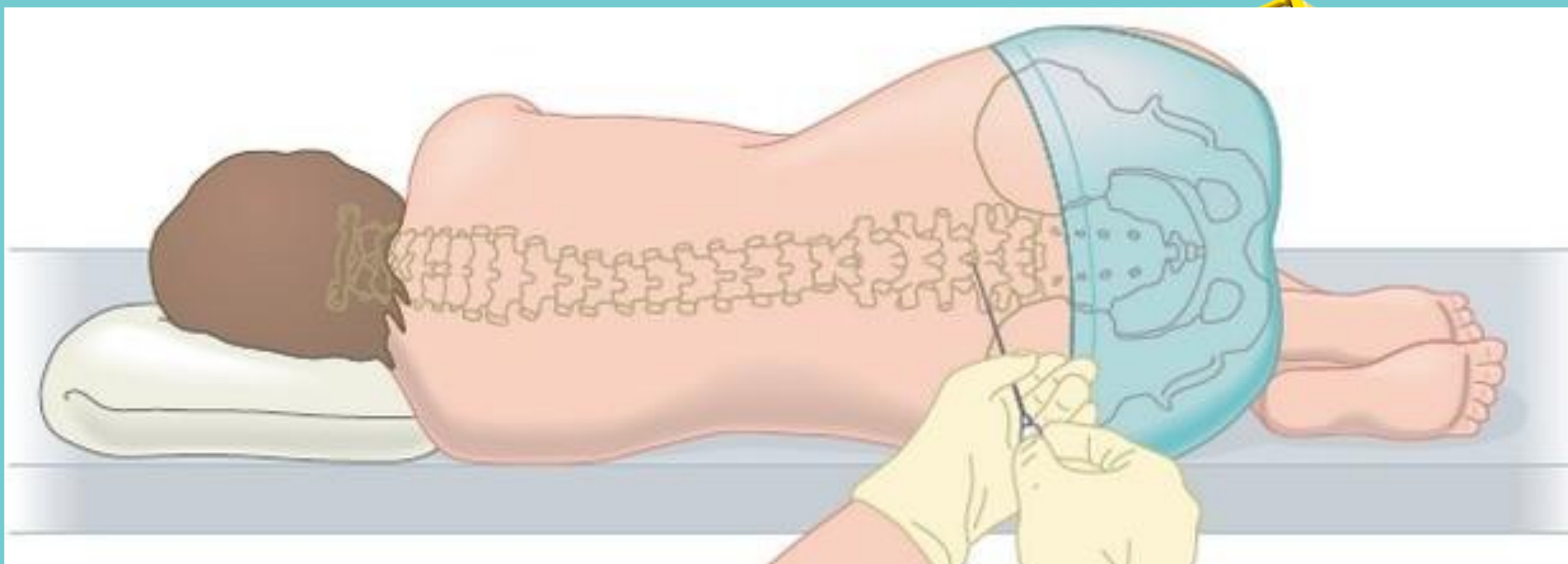
Does Bed Rest Prevent Post–Lumbar Puncture Headache?



引言人:蔡宜珊

指導者:徐玉玫、陳可欣

• 大綱

- 前言
- 院內現況
- 主要引用文獻及評讀
- 佐證文獻：Cochrane systematic review
- 討論

• 前言

- 現況：腰椎穿刺術後常見之副作用為「頭痛」，主要原因為，腦脊液從硬腦膜滲漏所引發，臨床上常規作法為術後需平躺6-8小時，以避免發生頭痛。
- 病人抱怨:1.躺太久了，腰酸背痛
  2.護理師，我可以下床上廁所嗎?沒下床廁所上不出來
  3.吃東西、喝水不方便，有嗆到的風險
- 護理困難點:
  1.病人及家屬極度不耐煩，頻頻抱怨
  2.須不斷解釋平躺的時間與必要性
  3.病人不遵從，造成困擾

• 主要引用文獻及評讀-1

ANNALS OF EMERGENCY MEDICINE FEBRUARY 2012

Systematic Review Snapshot
Clinical Synopsis

系統性回顧文獻整理
的臨床建議類型文章

TAKE-HOME MESSAGE

Bed rest of any duration after a lumbar puncture has not been shown to decrease the incidence of post–lumbar puncture headache.

Does Bed Rest Prevent Post–Lumbar Puncture Headache?

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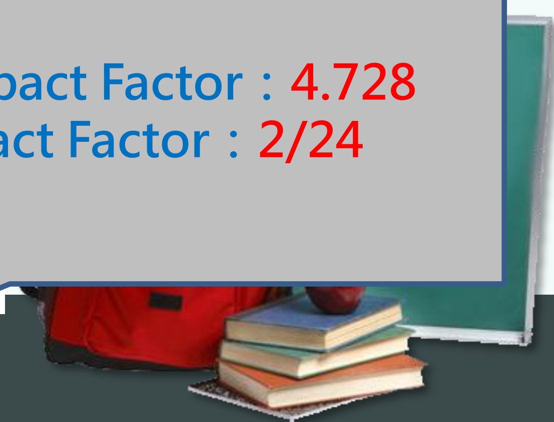
East Lansing, MI

Journal Impact Factor：4.728
JCR Impact Factor：2/24



- 主要引用文獻及評讀-2

Posture and fluids for preventing post-dural puncture headache (Review)

Sudlow CLM, Warlow CP

THE COCHRANE COLLABORATION®

This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library* 2001, Issue 2

http://www.thecochranelibrary.com

步驟 1：系統性文獻回顧探討的問題為何？

- 研究族群 / 問題 (P)：腰椎穿刺術後個案
- 介入措施 (I)：術後1小時內下床活動
- 比較 (C)：術後臥床休息6小時
- 結果 (O)：頭痛發生率

步驟 2：系統性文獻回顧的品質如何？(FAITH)

☑是 □否 □不清楚	F - 研究是否找到 (Find) 所有的相關證據？ 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)

Search methods

We searched the Cochrane Controlled Trials Register (Cochrane Library, Issue 4, 2000), MEDLINE (January 1994-December 1998), and EMBASE (January 1980-December 1998). We also searched the reference lists of articles identified electronically, and contacted trial authors for information about other potentially relevant studies. Date of the most recent search: December 2000.

INDEX TERMS

Medical Subject Headings (MeSH)

*Bed Rest; *Fluid Therapy; Early Ambulation; Headache [*prevention & control]; Randomized Controlled Trials as Topic; Time Factors

MeSH check words

Humans

步驟 2：系統性文獻回顧的品質如何？(FAITH)

☑是 □否 □不清楚	A - 文獻是否經過嚴格評讀 (Appraisal)？ 根據不同臨床問題的文章類型，選擇適合的評讀工具，並說明每篇研究的品質

Risk of bias in included studies

Summary details of methods used in the studies are shown in the 'Characteristics of included studies' Table.

有使用評讀工具，但於2001年時，評估的種類較少，僅評估「保密分配」的區塊。

F-Dieterich(D)

Methods	Randomisation and treatment allocation method: not stated. Blinding of outcome assessment: not stated.
Participants	100 patients undergoing diagnostic lumbar puncture.
Interventions	Patients asked to drink 3.0 litres versus 1.5 litres of fluids per day
Outcomes	Postural headache and severe (i.e. bedridden) postural headache up to 5 days post lumbar puncture
Notes	Losses to follow-up for headache: not stated.

Risk of bias

Item	Authors' judgement	Description
Allocation concealment?	Unclear	B - Unclear

P-Cook(AS)

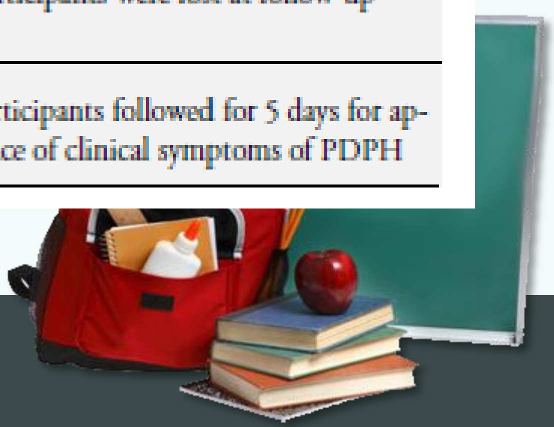
Methods	Randomisation and treatment allocation method: sealed envelopes (sequentially numbered and opaque). Blinding of outcome assessment: partial, since most follow-up was carried out by a telephone interviewer unaware of the treatment allocation, but some was by a patient-completed questionnaire
Participants	129 patients undergoing spinal anaesthesia for minor urological or gynaecological surgery
Interventions	24 hours bed rest versus early mobilisation (4 hours bed rest) post-operatively
Outcomes	Postural headache and severe postural headache up to 4 days post-operatively
Notes	Losses to follow-up for headache: 27 (21%) of total lost to follow-up (18 post randomisation exclusions due to protocol breaches and 9 lost to follow-up), treatment groups unknown

Risk of bias

Item	Authors' judgement	Description
Allocation concealment?	Yes	A - Adequate

• 2016年，使用Risk of bias評讀的情況

Risk of bias		
Bias	**Authors' judgement**	**Support for judgement**
1. Random sequence generation (selection bias)	Unclear risk	Insufficient information to assess this issue. Quote: "After LP patients divided randomly in two groups (...)" Page 44
2. Allocation concealment (selection bias)	Unclear risk	Insufficient information to assess this issue
3. Blinding of outcome assessment (detection bias) All outcomes	High risk	Insufficient information to assess this issue
4. Incomplete outcome data (attrition bias) All outcomes	Low risk	No participants were lost at follow-up
5. Selective reporting (reporting bias)	Low risk	All participants followed for 5 days for appearance of clinical symptoms of PDPH



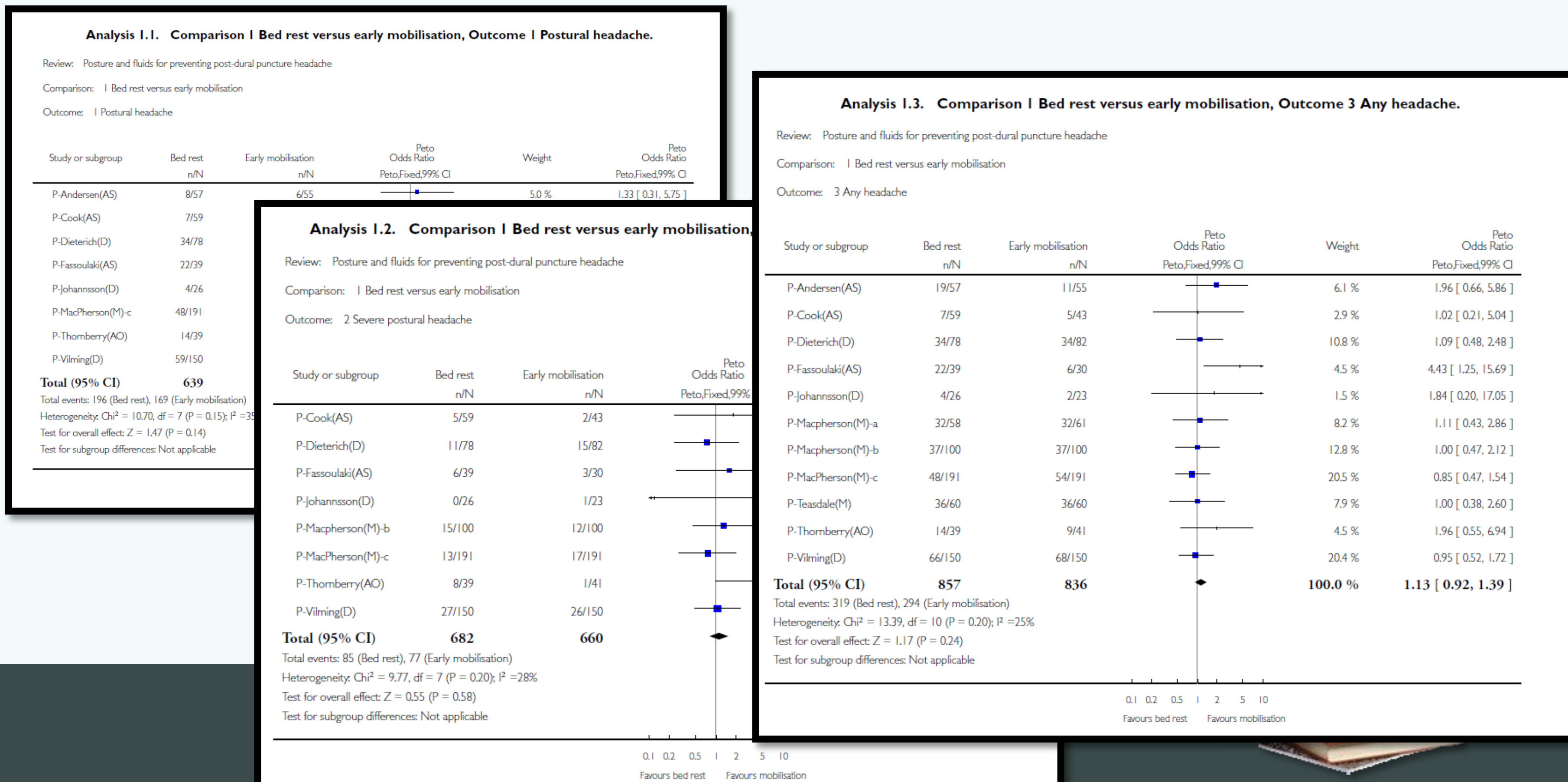
步驟 2：系統性文獻回顧的品質如何？(FAITH)

□是 □否 □不清楚	I - 是否只納入 (Included) 具良好效度的文章？僅進行文獻判讀是不足夠，系統性文獻回顧只納入至少要有一項研究結果是極小偏誤的試驗。

	Risk of bias		
第一作者	Item	Authors' judgement	Description
F-Dieterich(D)	Allocation concealment?(分配保密)	Unclear	B - Unclear
P-Andersen(AS)		Unclear	B - Unclear
P-Cook(AS)		Yes	A - Adequate
P-Dieterich(D)		Unclear	B - Unclear
P-Fassoulaki(AS)		Yes	A - Adequate
P-Hilton-Jones(D)		Yes	A - Adequate
P-Johannsson(D)		Unclear	B - Unclear
P-Macpherson(M)-a		Unclear	B - Unclear
P-Macpherson(M)-b		Unclear	B - Unclear
P-MacPherson(M)-c		Unclear	B - Unclear
P-Smith(D)		Yes	A - Adequate
P-Teasdale(M)		Unclear	B - Unclear
P-Thornberry(AO)		Yes	A - Adequate
P-Vilming(D)		Yes	A - Adequate

步驟 2：系統性文獻回顧的品質如何？(FAITH)

☑是 □否 □不清楚	T - - 作者是否以表格和圖表「總結」(Total up) 試驗結果？



Analysis 1.1. Comparison 1 Bed rest versus early mobilisation, Outcome 1 Postural headache.

Review: Posture and fluids for preventing post-dural puncture headache

Comparison: 1 Bed rest versus early mobilisation

Outcome: 1 Postural headache

Study or subgroup	Bed rest n/N	Early mobilisation n/N	Peto Odds Ratio Peto,Fixed,99% CI	Weight	Peto Odds Ratio Peto,Fixed,99% CI
P-Andersen(AS)	8/57	6/55		5.0 %	1.33 [0.31, 5.75]
P-Cook(AS)	7/59				
P-Dieterich(D)	34/78				
P-Fassoulaki(AS)	22/39				
P-Johannsson(D)	4/26				
P-MacPherson(M)-c	48/191				
P-Thornberry(AO)	14/39				
P-Vilming(D)	59/150				
Total (95% CI)	**639**				

Total events: 196 (Bed rest), 169 (Early mobilisation)

Heterogeneity: Chi² = 10.70, df = 7 (P = 0.15); I² =35

Test for overall effect: Z = 1.47 (P = 0.14)

Test for subgroup differences: Not applicable

Analysis 1.2. Comparison 1 Bed rest versus early mobilisation,

Review: Posture and fluids for preventing post-dural puncture headache

Comparison: 1 Bed rest versus early mobilisation

Outcome: 2 Severe postural headache

Study or subgroup	Bed rest n/N	Early mobilisation n/N	Peto Odds Ratio Peto,Fixed,99%
P-Cook(AS)	5/59	2/43	
P-Dieterich(D)	11/78	15/82	
P-Fassoulaki(AS)	6/39	3/30	
P-Johannsson(D)	0/26	1/23	
P-Macpherson(M)-b	15/100	12/100	
P-MacPherson(M)-c	13/191	17/191	
P-Thornberry(AO)	8/39	1/41	
P-Vilming(D)	27/150	26/150	
Total (95% CI)	**682**	**660**	

Total events: 85 (Bed rest), 77 (Early mobilisation)

Heterogeneity: Chi² = 9.77, df = 7 (P = 0.20); I² =28%

Test for overall effect: Z = 0.55 (P = 0.58)

Test for subgroup differences: Not applicable

0.1 0.2 0.5 1 2 5 10

Favours bed rest Favours mobilisation

Analysis 1.3. Comparison 1 Bed rest versus early mobilisation, Outcome 3 Any headache.

Review: Posture and fluids for preventing post-dural puncture headache

Comparison: 1 Bed rest versus early mobilisation

Outcome: 3 Any headache

Study or subgroup	Bed rest n/N	Early mobilisation n/N	Peto Odds Ratio Peto,Fixed,99% CI	Weight	Peto Odds Ratio Peto,Fixed,99% CI
P-Andersen(AS)	19/57	11/55		6.1 %	1.96 [0.66, 5.86]
P-Cook(AS)	7/59	5/43		2.9 %	1.02 [0.21, 5.04]
P-Dieterich(D)	34/78	34/82		10.8 %	1.09 [0.48, 2.48]
P-Fassoulaki(AS)	22/39	6/30		4.5 %	4.43 [1.25, 15.69]
P-Johannsson(D)	4/26	2/23		1.5 %	1.84 [0.20, 17.05]
P-Macpherson(M)-a	32/58	32/61		8.2 %	1.11 [0.43, 2.86]
P-Macpherson(M)-b	37/100	37/100		12.8 %	1.00 [0.47, 2.12]
P-MacPherson(M)-c	48/191	54/191		20.5 %	0.85 [0.47, 1.54]
P-Teasdale(M)	36/60	36/60		7.9 %	1.00 [0.38, 2.60]
P-Thornberry(AO)	14/39	9/41		4.5 %	1.96 [0.55, 6.94]
P-Vilming(D)	66/150	68/150		20.4 %	0.95 [0.52, 1.72]
Total (95% CI)	**857**	**836**		**100.0 %**	**1.13 [0.92, 1.39]**

Total events: 319 (Bed rest), 294 (Early mobilisation)

Heterogeneity: Chi² = 13.39, df = 10 (P = 0.20); I² =25%

Test for overall effect: Z = 1.17 (P = 0.24)

Test for subgroup differences: Not applicable

0.1 0.2 0.5 1 2 5 10

Favours bed rest Favours mobilisation

步驟 2：系統性文獻回顧的品質如何？(FAITH)

☑是 □否 □不清楚	H - 試驗的結果是否相近 - 異質性 (Heterogeneity)？各個試驗的結果應相近或具同質性，若具有異質性，作者應評估差異是否顯著(卡方檢定)。根據每篇個別研究中不同的PICO及研究方法，探討造成異質性的原因。

異質性低

Bed rest versus early mobilization.

Outcome	Number of Studies	Number of Participants	Odds Ratio (95% CI)	I^2, %
Any headache	11	1,693	1.1 (0.9–1.4)	25
Postural headache	8	1,254	1.2 (0.9–1.6)	35
Severe postural headache	8	1,342	1.1 (0.8–1.5)	28

CI, Confidence interval.

總結：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？	YES
A	文獻是否經過嚴格評讀 (Appraisal)？	YES
I	是否只納入 (Included) 具良好效度的文章？	NO
T	作者是否以表格和圖表「總結」(Total up) 試驗結果？	YES
H	試驗的結果是否相近 - 異質性 (Heterogeneity)？	YES

步驟 3：結果為何？ 使用何種評估方式? 療效有多大？

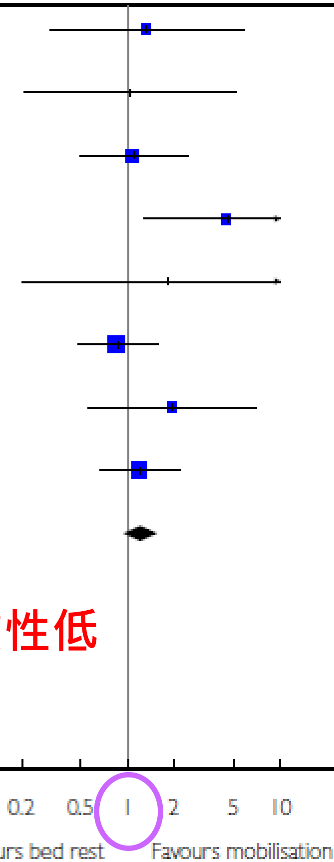
Analysis 1.1. Comparison 1 Bed rest versus early mobilisation, Outcome 1 Postural headache.

Review: Posture and fluids for preventing post-dural puncture headache

Comparison: 1 Bed rest versus early mobilisation

Outcome: 1 Postural headache ← 姿勢性頭痛

Study or subgroup	Bed rest n/N	Early mobilisation n/N	Peto Odds Ratio Peto,Fixed,99% CI	Weight	Peto Odds Ratio Peto,Fixed,99% CI
P-Andersen(AS)	8/57	6/55		5.0 %	1.33 [0.31, 5.75]
P-Cook(AS)	7/59	5/43		4.2 %	1.02 [0.21, 5.04]
P-Dieterich(D)	34/78	34/82		16.0 %	1.09 [0.48, 2.48]
P-Fassoulaki(AS)	22/39	6/30		6.7 %	4.43 [1.25, 15.69]
P-Johannsson(D)	4/26	2/23		2.2 %	1.84 [0.20, 17.05]
P-MacPherson(M)-c	48/191	54/191		30.5 %	0.85 [0.47, 1.54]
P-Thornberry(AO)	14/39	9/41		6.7 %	1.96 [0.55, 6.94]
P-Vilming(D)	59/150	53/150		28.6 %	1.19 [0.64, 2.19]
Total (95% CI)	**639**	**615**		**100.0 %**	**1.21 [0.94, 1.55]**



Total events: 196 (Bed rest), 169 (Early mobilisation)

Heterogeneity: $Chi^2 = 10.70$, $df = 7$ ($P = 0.15$); $I^2 = 35\%$ ← 異質性低

Test for overall effect: $Z = 1.47$ ($P = 0.14$)

Test for subgroup differences: Not applicable

步驟 3：結果為何？ 使用何種評估方式? 療效有多大？

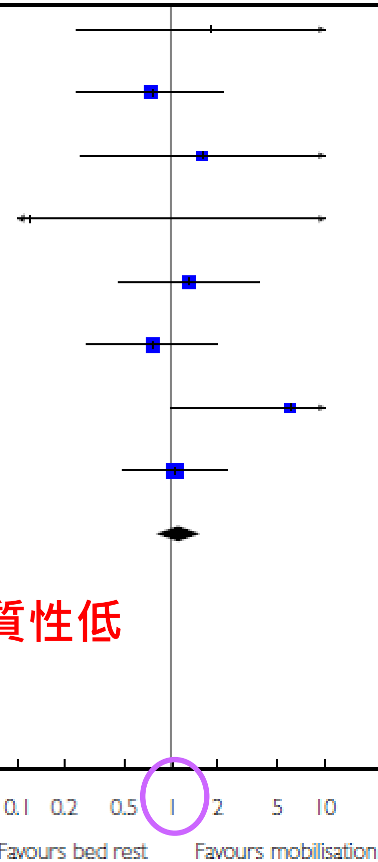
Analysis 1.2. Comparison 1 Bed rest versus early mobilisation, Outcome 2 Severe postural headache.

Review: Posture and fluids for preventing post-dural puncture headache

Comparison: 1 Bed rest versus early mobilisation

Outcome: 2 Severe postural headache ← 嚴重姿勢性頭痛

Study or subgroup	Bed rest n/N	Early mobilisation n/N	Peto Odds Ratio Peto,Fixed,99% CI	Weight	Peto Odds Ratio Peto,Fixed,99% CI
P-Cook(AS)	5/59	2/43		4.6 %	1.81 [0.24, 13.81]
P-Dieterich(D)	11/78	15/82		15.6 %	0.74 [0.24, 2.21]
P-Fassoulaki(AS)	6/39	3/30		5.6 %	1.60 [0.25, 10.09]
P-Johannsson(D)	0/26	1/23		0.7 %	0.12 [0.00, 20.72]
P-Macpherson(M)-b	15/100	12/100		16.7 %	1.29 [0.45, 3.74]
P-MacPherson(M)-c	13/191	17/191		19.8 %	0.75 [0.28, 1.99]
P-Thornberry(AO)	8/39	1/41		5.8 %	5.97 [0.98, 36.58]
P-Vilming(D)	27/150	26/150		31.2 %	1.05 [0.48, 2.28]
Total (95% CI)	**682**	**660**		**100.0 %**	**1.10 [0.79, 1.53]**



Total events: 85 (Bed rest), 77 (Early mobilisation)

Heterogeneity: $Chi^2 = 9.77$, $df = 7$ ($P = 0.20$); $I^2 = 28\%$ ← 異質性低

Test for overall effect: $Z = 0.55$ ($P = 0.58$)

Test for subgroup differences: Not applicable

步驟 3：結果為何？ 使用何種評估方式? 療效有多大？

Analysis 1.3. Comparison 1 Bed rest versus early mobilisation, Outcome 3 Any headache.

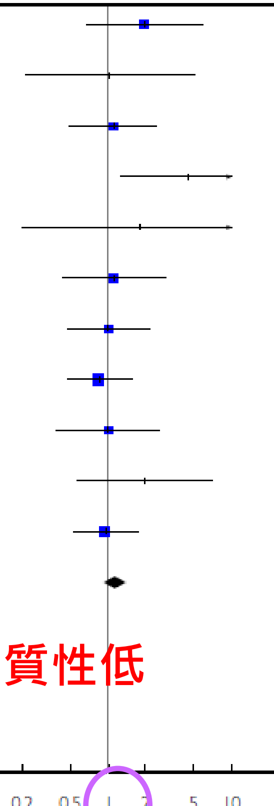
Review: Posture and fluids for preventing post-dural puncture headache

Comparison: 1 Bed rest versus early mobilisation

Outcome: 3 Any headache

任何頭痛

Study or subgroup	Bed rest n/N	Early mobilisation n/N	Peto Odds Ratio Peto,Fixed,99% CI	Weight	Peto Odds Ratio Peto,Fixed,99% CI
P-Andersen(AS)	19/57	11/55		6.1 %	1.96 [0.66, 5.86]
P-Cook(AS)	7/59	5/43		2.9 %	1.02 [0.21, 5.04]
P-Dieterich(D)	34/78	34/82		10.8 %	1.09 [0.48, 2.48]
P-Fassoulaki(AS)	22/39	6/30		4.5 %	4.43 [1.25, 15.69]
P-Johannsson(D)	4/26	2/23		1.5 %	1.84 [0.20, 17.05]
P-Macpherson(M)-a	32/58	32/61		8.2 %	1.11 [0.43, 2.86]
P-Macpherson(M)-b	37/100	37/100		12.8 %	1.00 [0.47, 2.12]
P-MacPherson(M)-c	48/191	54/191		20.5 %	0.85 [0.47, 1.54]
P-Teasdale(M)	36/60	36/60		7.9 %	1.00 [0.38, 2.60]
P-Thornberry(AO)	14/39	9/41		4.5 %	1.96 [0.55, 6.94]
P-Vilming(D)	66/150	68/150		20.4 %	0.95 [0.52, 1.72]
Total (95% CI)	**857**	**836**		**100.0 %**	**1.13 [0.92, 1.39]**



Total events: 319 (Bed rest), 294 (Early mobilisation)

Heterogeneity: $Chi^2 = 13.39$, $df = 10$ ($P = 0.20$); $I^2 = 25\%$

Test for overall effect: $Z = 1.17$ ($P = 0.24$)

Test for subgroup differences: Not applicable

異質性低

- 佐證文獻：Cochrane systematic review

Cochrane Library

Cochrane Database of Systematic Reviews

Posture and fluids for preventing post-dural puncture headache (Review)

Arevalo-Rodriguez I, Ciapponi A, Roqué i Figuls M, Muñoz L, Bonfill Cosp X

Arevalo-Rodriguez I, Ciapponi A, Roqué i Figuls M, Muñoz L, Bonfill Cosp X. Posture and fluids for preventing post-dural puncture headache. *Cochrane Database of Systematic Reviews* 2016, Issue 3. Art. No.: CD009199. DOI: 10.1002/14651858.CD009199.pub3.

www.cochranelibrary.com

• 佐證文獻：Cochrane systematic review

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SUMMARY OF FINDINGS FOR THE MAIN COMPARISON *[Explanation]*

證據等級 (LOE) ▶▶
強烈 ⊕⊕⊕⊕
中等 ⊕⊕⊕○
弱 ⊕⊕○○
很弱 ⊕○○○

Bed rest versus ambulation for preventing post-dural puncture headache

Patient or population: Participants undergoing lumbar puncture
Intervention: Bed rest
Comparison: Ambulation

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Ambulation	Bed rest				
Post-dural puncture headache Reported by participant Follow-up: 0 to 15 days	**205 per 1000**	**254 per 1000** (213 to 303)	**RR 1.24** (1.04 to 1.48)	1519 (12 studies)	⊕⊕⊕○ **moderate**[1]	
Severe post-dural puncture headache Reported by participant Follow-up: 0 to 15 days	**107 per 1000**	**105 per 1000** (73 to 151)	**RR 0.98** (0.68 to 1.41)	1568 (9 studies)	⊕⊕○○ **low**[2]	
Any headache Reported by participant Follow-up: 0 to 15 days	**287 per 1000**	**333 per 1000** (293 to 379)	**RR 1.16** (1.02 to 1.32)	2477 (18 studies)	⊕⊕⊕○ **moderate**[3]	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).
CI: Confidence interval; **RR:** Risk ratio

• 佐證文獻：Cochrane systematic review

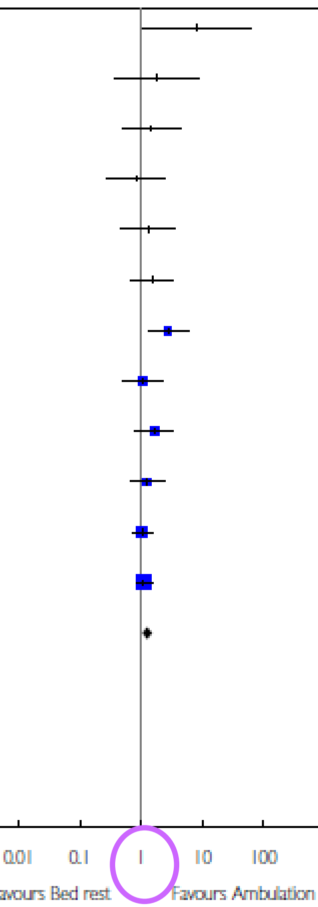
Analysis 1.1. Comparison 1 Bed rest versus immediate ambulation, Outcome 1 PDPH.

Review: Posture and fluids for preventing post-dural puncture headache

Comparison: 1 Bed rest versus immediate ambulation

Outcome: 1 PDPH 姿勢性頭痛

Study or subgroup	Bed rest n/N	Ambulation n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Ebinger 2004	9/59	1/52		0.8 %	7.93 [1.04, 60.52]
Johannsson 1992	4/26	2/23		1.2 %	1.77 [0.36, 8.78]
Cook 1989	7/59	5/61		2.6 %	1.45 [0.49, 4.31]
Tejavanija 2006	5/32	6/32		2.7 %	0.83 [0.28, 2.46]
Andersen 1986	8/57	6/55		3.2 %	1.29 [0.48, 3.47]
Murata 2003	14/106	9/101		5.0 %	1.48 [0.67, 3.27]
Fassoulaki 1991	22/39	6/30		5.3 %	2.82 [1.31, 6.07]
Congia 1985	8/19	8/20		5.5 %	1.05 [0.50, 2.23]
Thornberry 1988	14/39	9/41		6.1 %	1.64 [0.80, 3.34]
Vimala 1998	19/104	15/104		8.1 %	1.27 [0.68, 2.35]
Dieterich 1985	34/78	34/82		23.9 %	1.05 [0.73, 1.51]
Vilming 1988	59/150	53/150		35.7 %	1.11 [0.83, 1.49]
Total (95% CI)	**768**	**751**		**100.0 %**	**1.24 [1.04, 1.48]**



Total events: 203 (Bed rest), 154 (Ambulation)

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 11.02$, $df = 11$ ($P = 0.44$); $I^2 = 0\%$

Test for overall effect: $Z = 2.35$ ($P = 0.019$)

Test for subgroup differences: Not applicable

• 佐證文獻：Cochrane systematic review

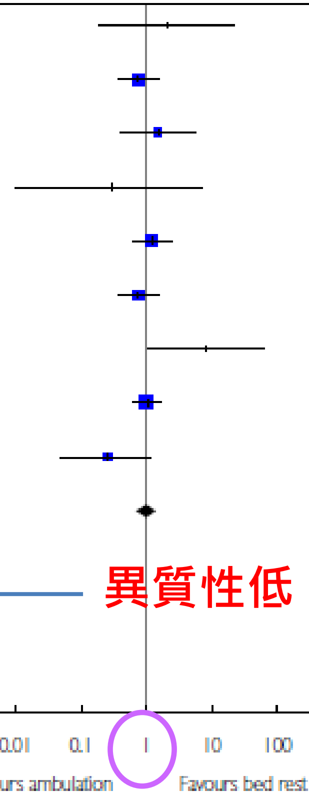
Analysis 1.2. Comparison 1 Bed rest versus immediate ambulation, Outcome 2 Severe PDPH.

Review: Posture and fluids for preventing post-dural puncture headache

Comparison: 1 Bed rest versus immediate ambulation

Outcome: 2 Severe PDPH ← 嚴重姿勢性頭痛

Study or subgroup	Bed rest n/N	Ambulation n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Cook 1989	2/59	1/61		2.3 %	2.07 [0.19, 22.20]
Dieterich 1985	11/78	15/82		17.6 %	0.77 [0.38, 1.57]
Fassoulaki 1991	6/39	3/30		6.8 %	1.54 [0.42, 5.65]
Johannsson 1992	0/26	1/23		1.3 %	0.30 [0.01, 6.94]
Macpherson 1984	15/100	12/100		17.9 %	1.25 [0.62, 2.53]
Macpherson 1985	13/191	17/191		18.3 %	0.76 [0.38, 1.53]
Thornberry 1988	8/39	1/41		3.0 %	8.41 [1.10, 64.17]
Vilming 1988	27/150	26/150		27.6 %	1.04 [0.64, 1.69]
Vimala 1998	2/104	8/104		5.2 %	0.25 [0.05, 1.15]
Total (95% CI)	**786**	**782**		**100.0 %**	**0.98 [0.68, 1.41]**



Total events: 84 (Bed rest), 84 (Ambulation)

Heterogeneity: Tau² = 0.06; Chi² = 10.23, df = 8 (P = 0.25); I² =22% ← 異質性低

Test for overall effect: Z = 0.12 (P = 0.91)

Test for subgroup differences: Not applicable

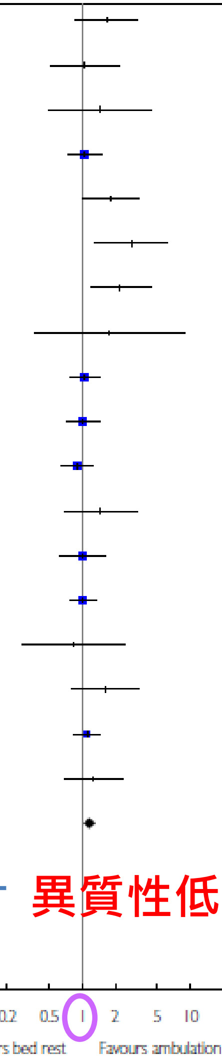
Analysis 1.3. Comparison 1 Bed rest versus immediate ambulation, Outcome 3 Any headache.

Review: Posture and fluids for preventing post-dural puncture headache

Comparison: 1 Bed rest versus immediate ambulation

Outcome: 3 Any headache ← 任何頭痛

Study or subgroup	Bed rest n/N	Ambulation n/N	Weight	Risk Ratio M-H,Random,95% CI
Andersen 1986	19/57	11/55	3.6 %	1.67 [0.88, 3.17]
Congia 1985	8/19	8/20	2.7 %	1.05 [0.50, 2.23]
Cook 1989	7/59	5/61	1.3 %	1.45 [0.49, 4.31]
Dieterich 1985	34/78	34/82	9.4 %	1.05 [0.73, 1.51]
Ebinger 2004	23/59	11/52	3.9 %	1.84 [1.00, 3.41]
Fassoulaki 1991	22/39	6/30	2.6 %	2.82 [1.31, 6.07]
Jensen 1987	22/40	9/37	3.7 %	2.26 [1.20, 4.26]
Johannsson 1992	4/26	2/23	0.6 %	1.77 [0.36, 8.78]
Macpherson 1983	32/58	32/61	10.5 %	1.05 [0.75, 1.47]
Macpherson 1984	37/100	37/100	9.3 %	1.00 [0.70, 1.44]
Macpherson 1985	48/191	54/191	10.5 %	0.89 [0.64, 1.24]
Murata 2003	14/106	9/101	2.5 %	1.48 [0.67, 3.27]
Robertson 1980	16/30	16/30	6.1 %	1.00 [0.62, 1.61]
Teasdale 1983	36/60	36/60	12.6 %	1.00 [0.75, 1.34]
Tejavanija 2006	5/32	6/32	1.4 %	0.83 [0.28, 2.46]
Thornberry 1988	14/39	9/41	3.0 %	1.64 [0.80, 3.34]
Vilming 1988	59/150	53/150	12.5 %	1.11 [0.83, 1.49]
Virmala 1998	19/104	15/104	3.8 %	1.27 [0.68, 2.35]
Total (95% CI)	**1247**	**1230**	**100.0 %**	**1.16 [1.02, 1.32]**



Total events: 419 (Bed rest), 353 (Ambulation)

Heterogeneity: $Tau^2 = 0.01$; $Chi^2 = 20.38$, $df = 17$ ($P = 0.26$); $I^2 = 17\%$ ← 異質性低

Test for overall effect: $Z = 2.30$ ($P = 0.021$)

Test for subgroup differences: Not applicable

- **討論**

腰椎穿刺後要絕對臥床，以預防頭痛嗎?

	不須絕對臥床(可睡枕頭、可以在床上坐起來/活動，在不影響手術部位的原則下，可以側臥，可以短暫下床如廁[注意預防跌倒])
	需再評估
	需絕對臥床6小時

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- 後續 Action Plan
  - ➢ 與醫療科溝通後，修訂護理部SOP


thank you