

Systematic literature search**Topic**

Interventions to reduce the Incidence of Surgical Site Infection in colorectal resections

Definition of the main topic concepts**P**

Colorectal surgery	
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intravenous antibiotic prophylaxis	
oral antibiotic prophylaxis	
mechanical bowel preparation	

O

Surgical Site Infections	
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Strategy

1	P	
2	I	
3	O	
4	1 AND 2 AND 3	

Databases

- PubMed
- Cochrane Library
- Web of Science Core Collection
- Clinical Trials.Gov

PubMed

P

<p>"Colorectal Surgery"[Mesh] OR "Colon/surgery"[Mesh] OR Proctolog*[tw] OR colectom*[tw] OR ((colorect*[tw] OR "Colo rect*[tw] OR Colon*[tw] OR Rectal*[tw] OR Rectum*[tw]) AND ("General Surgery"[Mesh] OR "Surgical Procedures, Operative"[Mesh] OR Operat*[tw] OR Surg*[tw] OR Excision*[tw] OR Dissection*[tw] OR resect*[tw] OR removal*[tw] OR ectomy[tw] OR ectomies[tw] OR Postoperat*[tw]))</p>	
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I

<p>(("Administration, Oral"[Mesh] OR "Administration, Intravenous"[Mesh] OR Oral*[tw] OR Mouth*[tw] OR Intraven*[tw] OR "iv route*[tw]) AND ("Anti-Bacterial Agents"[Mesh] OR "Antibiotic Prophylaxis"[Mesh] OR Antibacter*[tw] OR "Anti bacter*[tw] OR Antibiotic*[tw] OR "single shot"[tw])) OR</p>	
<p>((bowel*[tw] OR intestin*[tw] OR gut[tw]) AND ("prevention and control"[Subheading] OR "Cathartics"[Mesh] OR prophylax*[tw] OR Prevent*[tw] OR preparat*[tw] OR decontaminat*[tw] OR evacuant*[tw] OR purgativ*[tw] OR cathartic*[tw]))</p>	

O

<p>"Surgical Wound Infection"[Mesh] OR "Site Infecti*[tw] OR "Wound Infecti*[tw] OR SSI[tw] OR</p>	
<p>"Intraoperative Complications"[Mesh] OR "Postoperative Complications"[Mesh] OR "Anastomotic Leak"[Mesh] OR "Anastomotic Leak*[tw] OR ((Intraoperative*[tw] OR Postoperative*[tw]))</p>	

AND Complication*[tw])	
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Search strings

P

"Colorectal Surgery"[Mesh] OR "Colon/surgery"[Mesh] OR Proctolog*[tw] OR colectom*[tw] OR ((colorect*[tw] OR "Colo rect*[tw] OR Colon*[tw] OR Rectal*[tw] OR Rectum*[tw]) AND ("General Surgery"[Mesh] OR "Surgical Procedures, Operative"[Mesh] OR Operat*[tw] OR Surg*[tw] OR Excision*[tw] OR Dissection*[tw] OR resect*[tw] OR removal*[tw] OR ectomy[tw] OR ectomies[tw] OR Postoperat*[tw]))

I

(("Administration, Oral"[Mesh] OR "Administration, Intravenous"[Mesh] OR Oral*[tw] OR Mouth*[tw] OR Intraven*[tw] OR "iv route*[tw]) AND ("Anti-Bacterial Agents"[Mesh] OR "Antibiotic Prophylaxis"[Mesh] OR Antibacter*[tw] OR "Anti bacter*[tw] OR Antibiotic*[tw] OR "single shot"[tw])) OR ((bowel*[tw] OR intestin*[tw] OR gut[tw]) AND ("prevention and control" [Subheading] OR "Cathartics"[Mesh] OR prophylax*[tw] OR Prevent*[tw] OR preparat*[tw] OR decontaminat*[tw] OR evacuant*[tw] OR purgativ*[tw] OR cathartic*[tw]))

O

"Surgical Wound Infection"[Mesh] OR "Site Infection*[tw] OR "Wound Infection*[tw] OR SSI[tw] OR "Intraoperative Complications"[Mesh] OR "Postoperative Complications"[Mesh] OR "Anastomotic Leak"[Mesh] OR "Anastomotic Leak*[tw] OR ((Intraoperative*[tw] OR Postoperative*[tw]) AND Complication*[tw])

1 AND 2 AND 3 ()

Cochrane Library

1. P

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[mh "Colorectal Surgery"] OR
[mh "Colon"/SU] OR
Proctolog*:ti,ab,kw OR
colectom*:ti,ab,kw OR
(colorect*:ti,ab,kw OR
Colo NEAR/2 rect*:ti,ab,kw OR
Colon*:ti,ab,kw OR
Rectal*:ti,ab,kw OR
Rectum*:ti,ab,kw)
AND
([mh "General Surgery"] OR
[mh "Surgical Procedures, Operative"] OR
Operat*:ti,ab,kw OR
Surg*:ti,ab,kw OR
Excision*:ti,ab,kw OR
Dissection*:ti,ab,kw OR
resect*:ti,ab,kw OR
removal*:ti,ab,kw OR
ectomy:ti,ab,kw OR
ectomies:ti,ab,kw OR
Postoperat*:ti,ab,kw)
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2. I

```
([mh "Administration, Oral"] OR
[mh "Administration, Intravenous"] OR
Oral*:ti,ab,kw OR
Mouth*:ti,ab,kw OR
Intraven*:ti,ab,kw OR
iv NEAR/2 route*:ti,ab,kw)
AND
([mh "Anti-Bacterial Agents"] OR
[mh "Antibiotic Prophylaxis"] OR
Antibacter*:ti,ab,kw OR)
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Anti NEAR/2 bacter*:ti,ab,kw OR
Antibiotic*:ti,ab,kw OR
"single shot":ti,ab,kw)
OR
(bowel*:ti,ab,kw OR
intestin*:ti,ab,kw OR
gut:ti,ab,kw)
AND
([mh "Cathartics"] OR
prophylax*:ti,ab,kw OR
Prevent*:ti,ab,kw OR
preparat*:ti,ab,kw OR
decontaminat*:ti,ab,kw OR
evacuant*:ti,ab,kw OR
purgativ*:ti,ab,kw OR
cathartic*:ti,ab,kw)

3. O

[mh "Surgical Wound Infection"] OR
Site NEAR/2 Infecti*:ti,ab,kw OR
Wound NEAR/2 Infecti*:ti,ab,kw OR
SSI:ti,ab,kw OR
[mh "Intraoperative Complications"] OR
[mh "Postoperative Complications"] OR
[mh "Anastomotic Leak"] OR
Anastomotic NEAR/2 Leak*:ti,ab,kw OR
((Intraoperative*:ti,ab,kw OR
Postoperative*:ti,ab,kw)
AND
Complication*:ti,ab,kw)

Search strings

(as in the table above)

1 AND 2 AND 3

Web of Science Core Collection**P**

Proctolog* OR
 colectom* OR
 ((colorect* OR
 "Colo rect*" OR
 Colon* OR
 Rectal* OR
 Rectum*))
 AND
 (Operat* OR
 Surg* OR
 Excision* OR
 Dissection* OR
 resect* OR
 removal* OR
 ectomy OR
 ectomies OR
 Postoperat*))

I

(Oral* OR
 Mouth* OR
 Intraven* OR
 "iv route*")
 AND
 (Antibacter* OR
 "Anti bacter*" OR
 Antibiotic* OR
 "single shot")
 OR
 (bowel* OR
 intestin* OR
 gut)
 AND
 (prophylax* OR
 Prevent* OR
 preparat* OR
 decontaminat* OR
 evacuant* OR
 purgativ* OR
 cathartic*)

O

"Site Infecti*" OR
 "Wound Infecti*" OR
 "SSI" OR
 "Anastomotic Leak*" OR
 ((Intraoperative* OR
 Postoperative*)
 AND
 Complication*)

Search strings

1.

TI=(Proctolog* OR colectom* OR ((colorect* OR "Colo rect*" OR Colon* OR Rectal* OR Rectum*)) AND (Operat* OR Surg* OR Excision* OR Dissection* OR resect* OR removal* OR ectomy OR ectomies OR Postoperat*))
 OR

AB=(Proctolog* OR colectom* OR ((colorect* OR "Colo rect*" OR Colon* OR Rectal* OR Rectum*)) AND (Operat* OR Surg* OR Excision* OR Dissection* OR resect* OR removal* OR ectomy OR ectomies OR Postoperat*))

2.

1

TI=((Oral* OR Mouth* OR Intraven* OR "iv route*") AND (Antibacter* OR "Anti bacter*" OR Antibiotic* OR "single shot") OR (bowel* OR intestin* OR gut) AND (prophylax* OR Prevent* OR preparat* OR decontaminat* OR evacuant* OR purgativ* OR cathartic*))

OR

AB=((Oral* OR Mouth* OR Intraven* OR "iv route*") AND (Antibacter* OR "Anti bacter*" OR Antibiotic* OR "single shot") OR (bowel* OR intestin* OR gut) AND (prophylax* OR Prevent* OR preparat* OR decontaminat* OR evacuant* OR purgativ* OR cathartic*))

3.

O

TI=("Site Infecti*" OR "Wound Infecti*" OR "SSI" OR "Anastomotic Leak*" OR ((Intraoperative* OR Postoperative*) AND Complication*))

OR

AB=("Site Infecti*" OR "Wound Infecti*" OR "SSI" OR "Anastomotic Leak*" OR ((Intraoperative* OR Postoperative*) AND Complication*))

4.

1 AND 2 AND 3

Clinical Trial Gov**P**

Proctology OR
 colectomy OR
 ((colorectomy OR
 "Colo rectomy" OR
 Colon OR
 Rectal OR
 Rectum)
 AND
 (Operation OR
 Surgery OR
 Excision OR
 Dissection OR
 resection OR
 removal OR
 ectomy OR
 ectomies OR
 Postoperative))

I

(Oral OR
 Mouth OR
 Intravenous OR
 "iv route")
 AND
 (Antibacterial OR
 "Anti bacterial" OR
 Antibiotic OR
 "single shot")
 OR
 (bowel OR
 intestine OR
 gut)
 AND
 (prophylaxis OR
 Prevention OR
 preparation OR
 decontamination OR
 evacuant OR
 purgative OR
 cathartic)

O

"Site Infection" OR
 "Wound Infection" OR
 SSI OR
 "Anastomotic Leak" OR
 ((Intraoperative OR
 Postoperative)
 AND
 Complication)

Search strings

1. P	(Proctology OR colectomy OR ((colorectomy OR "Colo rectomy" OR Colon OR Rectal OR Rectum) AND (Operation OR Surgery OR Excision OR Dissection OR resection OR removal OR ectomy OR ectomies OR Postoperative))) AND
2. I	((Oral OR Mouth OR Intravenous OR "iv route") AND (Antibacterial OR "Anti bacterial" OR Antibiotic OR "single shot") OR (bowel OR intestine OR

	gut) AND (prophylaxis OR Prevention OR preparation OR decontamination OR evacuant OR purgative OR cathartic) AND
3. O	("Site Infection" OR "Wound Infection" OR SSI OR "Anastomotic Leak" OR ((Intraoperative OR Postoperative) AND Complication))

4.

1 AND 2 AND 3