Supplementary material: included studies, individual characteristics, and quality assessment

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| **Surgery** | **Study (ref)** | **Publication Year** | **Surgery Type** | **Antibiotic** | **Country** | **Infected Patients** | **Total Patients** | **Source** | **RSG** | **AC** | **IOD** | **SR** | **BP** | **BOA** | **SSI reported** | **Follow up** | **Antibiotic timing** |
| Appendectomy | Bauer(16) | 1989 | NA | Cefoxitin | Denmark | 20 | 736 | Cochrane | LR | U | HR | U | U | U | wound infection and intraabdominal abscess | 4 weeks | 3-5minutes before surgery |
| Appendectomy | Morris (17) | 1980 | NA | C+M | New Zealand | 6 | 59 | Cochrane | U | LR | U | U | U | U | wound infection, sepsis | 2 weeks | beginning of surgery |
| Appendectomy | Winslow (18) | 1983 | NA | Cefoxitin | USA | 0 | 51 | Cochrane | U | HR | U | U | U | U | wound infection and intraabdominal abscess | Do not specify | beginning of surgery |
| Appendectomy | Buckels(19) | 1985 | NA | Cefotetan | UK | 1 | 36 | PubMed | U | U | U | LR | U | U | wound infection, intraabdominal abscess, sepsis | 28days | induction of anesthesia |
| Appendectomy | Liberman(20) | 1995 | NA | Cefotetan | USA | 0 | 37 | PubMed | LR | LR | LR | U | LR | LR | report only wound infections | 3 weeks | 5 to 15 minutes before surgery |
| Appendectomy | Lang (21) | 1988 | NA | Cefoxitin | New Zealand | 4 | 64 | PubMed | LR | U | HR | U | LR | LR | wound infection, sepsis | 4 weeks | induction of anesthesia |
| Appendectomy | Liberman(20) | 1995 | NA | Cefoxitin | USA | 6 | 99 | PubMed | LR | LR | LR | U | LR | LR | report only wound infections | 3 weeks | 5 to 15 minutes before surgery |
| Appendectomy | O'Rouke(22) | 1984 | NA | Cefoxitin | Australia | 4 | 58 | PubMed | U | U | HR | U | LR | LR | wound infection, intraabdominal abscess, sepsis | 4 weeks | induction of anesthesia |
| Appendectomy | Salam(23) | 1994 | NA | Cefoxitin | UAE | 3 | 124 | PubMed | U | LR | LR | U | U | U | report only wound infections | 6 weeks | prior to skin incision |
| Appendectomy | Kang(24) | 2000 | NA | Cefoxitin | Korea | 0 | 68 | Cochrane library | U | U | HR | HR | U | U | report only wound infections | Do not specify | induction of anesthesia |
| C-section | Fugere(25) | 1983 | Non-elective | Cefazolin | Canada | 3 | 30 | Cochrane | U | U | U | U | LR | U | wound infection and endometritis | 6 weeks | 30 minutes before skin incision |
| C-section | Witt(26) | 2011 | Elective | Cefazolin | Austria | 10 | 370 | Cochrane | LR | U | LR | LR | LR | LR | wound infection and endometritis | 30 days | 20-30 minutes before skin incision |
| C-section | Kandil(27) | 2014 | Both | Cefazolin | Egypt | 3 | 50 | PubMed | LR | LR | U | LR | HR | U | wound infection and endometritis | Do not specify | 30 minutes before skin incision |
| C-section | Macones(28) | 2012 | Elective | Cefazolin | USA | 7 | 217 | PubMed | LR | LR | U | U | U | U | wound infection and endometritis | Do not specify | 30 minutes before skin incision |
| C-section | Mivumbi(29) | 2013 | Both | Cefazolin | Rwanda | 3 | 66 | PubMed | LR | LR | LR | LR | HR | HR | wound infection and endometritis | 2 weeks | beginning of surgery |
| C-section | Raybum(30) | 1985 | Laboring | Cefazolin | USA | 5 | 124 | PubMed | U | U | U | U | LR | LR | wound infection and endometritis | Do not specify | during the surgery |
| C-section | Sullivan(31) | 2007 | Elective | Cefazolin | USA | 7 | 175 | PubMed | LR | LR | U | LR | LR | LR | wound infection and endometritis | 6 weeks | 15 minutes before skin incision |
| C-section | Thigpen(32) | 2005 | Laboring | Cefazolin | USA | 18 | 153 | PubMed | U | U | U | U | LR | LR | wound infection and endometritis | 6 weeks | prior to skin incision |
| C-section | Wax(33) | 1997 | Laboring | Cefazolin | USA | 1 | 49 | PubMed | LR | LR | U | U | U | U | wound infection and endometritis | 6 weeks | prior to skin incision |
| C-section | Yildrim(34) | 2009 | Elective | Cefazolin | Turkey | 11 | 194 | PubMed | U | U | U | U | U | U | wound infection and endometritis | 6 weeks | 10-45 minutes before skin incision |
| C-section | Jyothirmayi(35) | 2013 | Both | Cefazolin | India | 7 | 553 | Cochrane library | LR | LR | LR | LR | LR | U | wound infection and endometritis | 6 weeks | 30-60 minutes before skin incision |
| Colorectal | Anders(36) | 1984 | Unknown | Cefoxitin | Netherlands | 4 | 50 | Cochrane | U | U | LR | U | U | HR | report only wound infections | Not available from translation | Not available from translation |
| Colorectal | Antonelli(37) | 1985 | Elective | Cefoxitin | Italy | 2 | 40 | Cochrane | LR | HR | U | U | U | HR | sepsis, wound sepsis, peritonitis | 4-6weeks | 30 minutes before surgery |
| Colorectal | Armengaud(38) | 1986 | Both | Cefoxitin | France | 5 | 30 | Cochrane | U | HR | LR | U | U | LR | report only wound infections | 21 days | Do not specify |
| Colorectal | Cainzos(39) | 1986 | Elective | Cefoxitin | Spain | 7 | 30 | Cochrane | LR | HR | LR | U | U | LR | wound infection, intra-abdominal infection, septicemia | 28 days | prior to skin incision |
| Colorectal | Coppa(40) | 1988 | Elective | Cefoxitin | USA | 21 | 141 | Cochrane | U | U | LR | U | U | LR | wound infections, intra-abdominal abscess | Do not specify | induction of anesthesia |
| Colorectal | De La Hunt(41) | 1986 | Elective | Cefoxitin | UK | 9 | 40 | Cochrane | U | HR | HR | U | U | HR | wound infections, intra-abdominal abscess | Do not specify | induction of anesthesia |
| Colorectal | Diez(42) | 1996 | Elective | Cefoxitin | Spain | 4 | 46 | Cochrane | LR | U | HR | U | U | HR | wound infection, intra-abdominal infection, peritonitis, septicemia | 30 days | induction of anesthesia |
| Colorectal | Espin-Basany(43) | 2005 | Elective | Cefoxitin | Spain | 10 | 100 | Cochrane | U | U | LR | U | U | LR | wound infections, intra-abdominal abscess | 30 days | Before skin incision |
| Colorectal | Georgoulis(44) | 1983 | Elective | Cefoxitin | Greece | 4 | 41 | Cochrane | LR | U | HR | U | U | HR | wound infections, intra-abdominal abscess | 5 days | 1 hour prior to incision |
| Colorectal | Itani(45) | 2006 | Elective | Cefotetan | USA | 104 | 334 | Cochrane | U | U | HR | U | U | HR | wound infections, intra-abdominal abscess | 4 week follow up assessment (21-60 days after surgery) | 1 hour prior to incision |
| Colorectal | Ivarsson(46) | 1982 | Elective | Cefoxitin | Sweden | 10 | 55 | Cochrane | U | U | HR | U | U | HR | wound infections, intra-abdominal abscess | 30 days | 1.5 to 2 hours before surgery |
| Colorectal | Jagelman(48) | 1987 | Elective | Cefoxitin | USA | 5 | 43 | Cochrane | U | U | LR | U | U | HR | wound infections, intra-abdominal abscess | 4 weeks after hospital discharge | 1 hour prior to incision |
| Colorectal | Jagelman a(47) | 1988 | Elective | Cefotetan | USA | 28 | 164 | Cochrane | U | U | LR | U | U | HR | wound infections, intra-abdominal abscess | 30 days after discharge | 30 to 60 minutes before incision |
| Colorectal | Jagelman b(47) | 1988 | Elective | Cefoxitin | USA | 11 | 74 | Cochrane | U | U | LR | U | U | HR | wound infections, intra-abdominal abscess | 30 days after discharge | 30 to 60 minutes before incision |
| Colorectal | Jones RN(49) | 1987 | Elective | Cefoxitin | USA | 1 | 36 | Cochrane | U | U | HR | U | U | LR | presence of purulent material drained from the surgical incision or the peritoneal cavity | 30 days after procedure | 30 minutes before incision |
| Colorectal | Kaiser(50) | 1983 | Elective | Cefoxitin | USA | 7 | 56 | Cochrane | U | HR | LR | U | U | HR | wound infections, intra-abdominal abscess | Do not specify | with on-call medications-within 2 hours before surgical incision |
| Colorectal | Kow(51) | 1995 | Both | Cefoxitin | Australia | 18 | 154 | Cochrane | LR | HR | HR | U | U | HR | report only wound infections | observed during the fourth to sixth post-operative week | induction of anesthesia |
| Colorectal | McDonald(52) | 1983 | Elective | Cefoxitin | UK | 14 | 52 | Cochrane | U | U | LR | U | U | HR | wound infections, intra-abdominal abscess | 30days | induction of anesthesia |
| Colorectal | Menzel(53) | 1993 | Elective | Cefoxitin | Germany | 14 | 126 | Cochrane | U | HR | LR | U | U | HR | wound infections, intra-abdominal abscess | Within 30days | induction of anesthesia |
| Colorectal | Milsom(54) | 1998 | Elective | Cefotetan | USA | 40 | 156 | Cochrane | U | HR | HR | U | U | LR | wound infections, intra-abdominal infections, bacteremia | 30 days post-op | within 4 hours |
| Colorectal | Morton(55) | 1989 | Elective | Cefotetan | UK | 47 | 278 | Cochrane | LR | HR | HR | U | U | HR | wound infection, intra-abdominal infection, septicemia | 42 days post-op | induction of anesthesia |
| Colorectal | Mosimann(56) | 1987 | Elective | Cefoxitin | France | 2 | 37 | Cochrane | LR | HR | LR | U | U | HR | wound infections, intra-abdominal abscess | >28 days | 30 to 60 minutes before incision |
| Colorectal | Panichi(57) | 1982 | Elective | Cefoxitin | Italy | 1 | 23 | Cochrane | U | U | LR | U | U | HR | report only wound infections | Fifth post-operative day | induction of anesthesia |
| Colorectal | Periti a(58) | 1989 | Elective | Cefoxitin | Italy | 32 | 206 | Cochrane | U | HR | HR | U | U | HR | wound infections, intra-abdominal abscess | Do not specify | beginning of surgery |
| Colorectal | Periti b(58) | 1989 | Elective | Cefotetan | Italy | 20 | 197 | Cochrane | U | HR | HR | U | U | HR | wound infections, intra-abdominal abscess | Do not specify | beginning of surgery |
| Colorectal | Peruzzo(60) | 1987 | Elective | Cefoxitin | Italy | 0 | 41 | Cochrane | U | HR | LR | U | U | HR | wound infection | Do not specify | 30 minutes prior to incision |
| Colorectal | Rorbaek-Madsen(61) | 1988 | Elective | Cefoxitin | Denmark | 20 | 177 | Cochrane | LR | HR | HR | U | U | HR | wound infection, intra-abdominal infection, septicemia | 30 days | 15 minutes prior to incision |
| Colorectal | Skipper(62) | 1992 | Elective | Cefotetan | UK | 14 | 68 | Cochrane | U | HR | HR | U | U | HR | wound infections, intra-abdominal abscess, other complications | 30 days | induction of anesthesia |
| Colorectal | Stellato(63) | 1990 | Elective | Cefoxitin | USA | 4 | 48 | Cochrane | LR | HR | HR | U | U | LR | wound infection, intra-abdominal infection, septicemia | Do not specify | induction of anesthesia |
| Colorectal | Utley(64) | 1984 | Unknown | Cefoxitin | New Zealand | 3 | 13 | Cochrane | U | HR | U | U | U | LR | report only wound infections | 6-8weeks | Before skin incision |
| Colorectal | Winker(65) | 1983 | Elective | Cefoxitin | Germany | 2 | 30 | Cochrane | U | U | LR | U | U | HR | wound infection, intra-abdominal infection, septicemia | 26-42 days | 30minutes before surgery |
| Colorectal | Lumley(66) | 1992 | Both | C+M | Australia | 7 | 96 | PubMed | LR | U | U | U | LR | LR | report only wound infections | 30 days | induction of anesthesia |
| Colorectal | McDermott(67) | 1981 | Elective | C+M | Australia | 0 | 22 | PubMed | HR | LR | LR | LR | LR | LR | wound infection, intra-abdominal infection, septicemia | four weeks post-op | 1 hour before surgery |
| Colorectal | Thomas(68) | 1985 | Elective | C+M | UK | 10 | 60 | PubMed | U | U | U | U | U | LR | wound infection, intra-abdominal infection, septicemia | six weeks post-op | induction of anesthesia |
| Colorectal | Hershman (69) | 1987 | Elective | Cefotetan | UK | 22 | 75 | PubMed | U | U | LR | U | HR | HR | wound infection, intra-abdominal infection, septicemia | 6 weeks | induction of anesthesia |
| Colorectal | Tudor(70) | 1988 | Emergency or complicated | Cefotetan | UK | 18 | 75 | PubMed | U | U | U | U | U | U | wound infection, intra-abdominal infection, septicemia | 4 weeks after hospital discharge | start of operation |
| Colorectal | Fabian(71) | 1984 | Elective | Cefoxitin | USA | 3 | 27 | PubMed | LR | U | LR | LR | LR | LR | wound infection, intra-abdominal abscess | Do not specify | 1 hour before surgery |
| Colorectal | Hares(72) | 1981 | Elective | Cefoxitin | UK | 10 | 37 | PubMed | LR | U | U | U | LR | U | wound infection, intra-abdominal infecton, septicemia | Do not specify | induction of anaesthesia |
| Colorectal | Jewesson(73) | 1997 | Elective | Cefoxitin | Canada | 12 | 39 | PubMed | LR | LR | LR | LR | LR | LR | wound infection, intra-abdominal infecton, septicemia | 30 days | 30 minutes before incision |
| Colorectal | Perrott(74) | 1985 | Elective | Cefoxitin | South Africa | 4 | 27 | PubMed | U | U | U | U | U | LR | wound infection, intra-abdominal infecton, septicemia | Between 4 and 8 weeks after surgery | beginning of surgery |
| Colorectal | Periti(59) | 1993 | Unknown | Cefotetan | Italy | 67 | 434 | Cochrane | U | HR | HR | U | U | HR | wound infection, intra-abdominal infecton, peritonitis | Do not specify | induction of anaesthesia |
| TRBP | Briffaux(75) | 2009 | Elective | Ciprofloxacin | France | 1 | 139 | Cochrane | LR | U | LR | LR | HR | HR | UTI, sepsis | 15 days | 2 hours before |
| TRBP | Cam(76) | 2008 | Elective | Ciprofloxacin | Turkey | 2 | 130 | Cochrane | LR | U | LR | LR | HR | HR | UTI, sepsis | 2 weeks | 60 minutes before |
| TRBP | Kapoor(77) | 1998 | Elective | Ciprofloxacin | USA | 6 | 227 | Cochrane | LR | U | LR | LR | LR | LR | UTI, sepsis | 15 days | before the biopsy |
| TRBP | Schaeffer(78) | 2007 | Elective | Ciprofloxacin | Multi country | 13 | 239 | Cochrane | LR | LR | LR | LR | LR | LR | UTI, sepsis | 7-21 days | 2-3 hours before |
| TRBP | Argyropoulos(79) | 2007 | Elective | Levofloxacin | Greece | 1 | 300 | PubMed | U | U | U | U | U | U | UTI, sepsis | Unknown | 30-60 minutes before |
| TRBP | Aus(80) | 1996 | Elective | Ciprofloxacin | Sweden | 19 | 491 | PubMed | U | U | LR | U | U | U | UTI, sepsis (from abstract) | Full text Not accessible | Full text Not accessible |
| TRBP | Isen(81) | 1999 | Elective | Ofloxacin | Turkey | 0 | 42 | PubMed | U | U | LR | U | U | U | UTI, sepsis | 7-10 days | 60 minutes before |
| TRBP | Kanjanawo  ngdeengam(82) | 2009 | Elective | Ciprofloxacin | Thailand | 2 | 47 | PubMed | U | LR | LR | U | U | U | UTI, sepsis | 7 days | 30-60 minutes before |
| TRBP | Mari(83) | 2007 | Elective | Prulifloxacin | Italy | 4 | 210 | PubMed | U | U | U | U | HR | HR | UTI, sepsis | Did not specify | 3 hours before |
| TRBP | Miyazaki(84) | 2016 | Elective | Levofloxacin | Japan | 2 | 230 | PubMed | LR | LR | LR | U | LR | U | UTI, sepsis | 2-4 weeks | 2 hours before |
| TRBP | Peters (85) | 2003 | Elective | Ciprofloxacin | Germany | 0 | 198 | PubMed | U | U | U | U | U | U | UTI, sepsis (from abstract) | Full text Not accessible | Full text Not accessible |
| TRBP | Roach (86) | 1991 | Elective | Ciprofloxacin | USA | 2 | 28 | PubMed | HR | HR | LR | U | U | U | UTI, sepsis (from abstract) | Full text Not accessible | Full text Not accessible |
| TRBP | Sabbagh (87) | 2004 | Elective | Ciprofloxacin /Levofloxacin | Canada | 1 | 181 | PubMed | LR | U | U | U | U | U | UTI, sepsis | 7 days | 60 minutes before |
| TRBP | Herranz Amo F(88) | 1996 | Elective | Perfloxacin | Spain | 0 | 44 | PubMed | U | U | U | U | U | U | UTI, sepsis (from abstract) | Full text Not accessible | Full text Not accessible |
| TRBP | Tobias-Machado(89) | 2003 | Elective | Ciprofloxacin | Brazil | 0 | 64 | Cochrane library | U | U | U | LR | U | U | UTI, sepsis | 13 days | 2 hours before |

AC= Allocation concealment

BOA= Blinding of outcome assessment

BP= Blinding of participants

C+M= cefazolin plus metronidazole

HR= High Risk

IOD= Incomplete outcome data

LR= Low Risk

RSG= Random sequence generation

SR= Selective reporting

U= Unclear