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# Antibiotics or no antibiotics for acute diverticulitis, that is the question!

## CLINICAL QUESTION

**Do antibiotics change clinical outcomes for patients with acute uncomplicated diverticulitis?**

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## BOTTOM LINE

**For non-septic immunocompetent patients with acute uncomplicated diverticulitis, antibiotics do not alter early complication or recurrence rates.**

## EVIDENCE

- Enrolled patients: Immunocompetent, symptoms compatible with acute, uncomplicated diverticulitis (confirmed on CT) without being septic/critically ill. Randomized to ~7 days antibiotics (cephalosporin/metronidazole or amoxicillin/clavulanic acid) or no antibiotics/placebo.
- Systematic review (3 RCTs, 1329 patients):<sup>1</sup>
  - 30-day complications (abscess, perforation, obstruction, fistula): 1.5% versus 1.3% (no-antibiotics): Not statistically different.
  - Long term (2-11 year) risk of recurrence: ~24% both groups.
- 3 largest, highest-quality RCTs:
  - 623 hospitalized adults from Sweden with first or recurrent acute uncomplicated diverticulitis:<sup>2</sup>
    - At 1 year, no statistical differences in:

- Complications during hospitalization (examples: abscess/perforation): 1.0% versus 1.9% (no-antibiotics).
  - Median hospital stay (3 days each).
  - Recurrence (~16% each).
- At 11 years (~90% of patients):<sup>3</sup>
  - No difference in recurrences (~31%), or surgery for diverticulitis (~5%).
- 528 adults from the Netherlands with first diverticulitis episode:<sup>4</sup>
  - At 6 months, no statistical differences in:
    - Median time to recovery: 12 versus 14 days (no antibiotics).
    - Complicated diverticulitis: 2.6% versus 3.8% (no antibiotics).
    - Readmission rates: 12% versus 18% (no antibiotics).
  - At 24 months (~90% of patients):<sup>5</sup>
    - No difference in recurrences (~15%), complications, or surgery.
- 480 adults from Spain in the emergency department with diverticulitis.<sup>6</sup>
  - At 3 months, no statistical differences in:
    - Hospitalization: 5.8% versus 3.3% (no-antibiotics).
    - Emergency surgery: None.
- Limitations: Some RCTs unblinded.<sup>2,6</sup>

## CONTEXT

- Guidelines suggest against routine use of antibiotics in immunocompetent, non-medically frail patients with diverticulitis.<sup>7,8</sup>
- Diverticulitis rates are increasing (especially in <50 years).<sup>9</sup>
  - Genetic factors appear to be involved in ~50% of cases.<sup>8</sup>
  - Nuts, seeds, or popcorn do not appear to influence diverticulitis.<sup>10</sup>
- The risk of colorectal cancer:<sup>11</sup>
  - Uncomplicated: ~0.5% (similar to asymptomatic controls).
  - Complicated: ~8%.
- Complicated diverticulitis risk: Highest in first episode.<sup>9</sup>
- Recurrence:<sup>9</sup>
  - After 1st episode ~17%.
  - After 2nd episode ~44%.

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