

Finding the Balance: Why Every Dose Counts for CDI Prevention



Treating acute bacterial infections is essential and frequently life-saving work. Concurrently, protecting the gut microbiome from unnecessary disruption is increasingly recognized as a key facet of comprehensive patient care. Many clinicians already routinely balance these dual priorities, identifying the clinical "tipping point" during daily ward rounds—that moment when an infection is securely controlled and the focus can safely shift to minimizing further antimicrobial exposure.

Stop “Just in Case” Dosing

STOPPING therapy promptly once stability is achieved is an important act of patient protection.

100% EFFICIENCY

THERAPY EXTENSION
LAST DAY DOSE
EXTRA DAY

Prompt De-escalation

Broad-Spectrum Coverage

Narrow-Spectrum Targeting

Narrowing the antimicrobial spectrum as soon as susceptibility data or clinical progress permits.

Evidence-Based Durations

Duration Optimizer

EXCESS DURATION

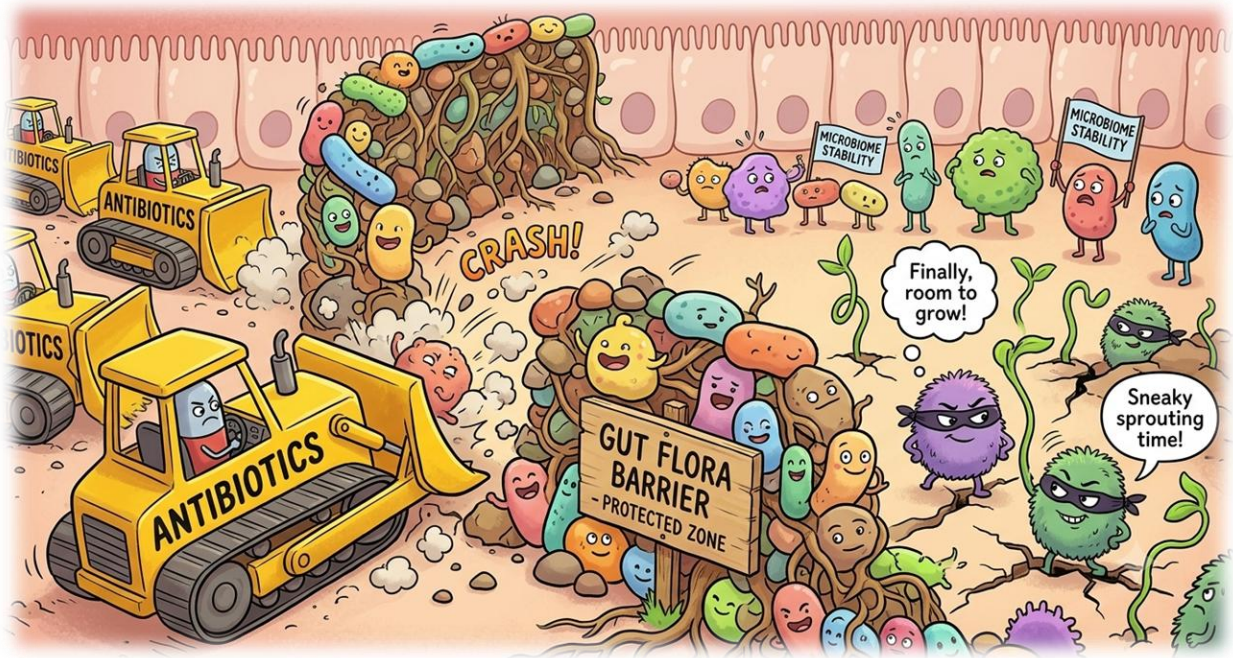
100% Optimized

MAXIMUM BENEFITS

WEEK 1 TREATMENT PLAN

MINIMAL EXPOSURE

Utilizing shorter, guideline-supported treatment courses to deliver maximum therapeutic benefits with minimal exposure.



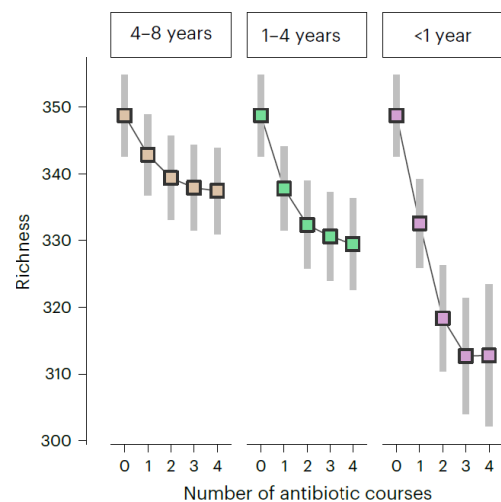
CDI is a Disease of Dysbiosis

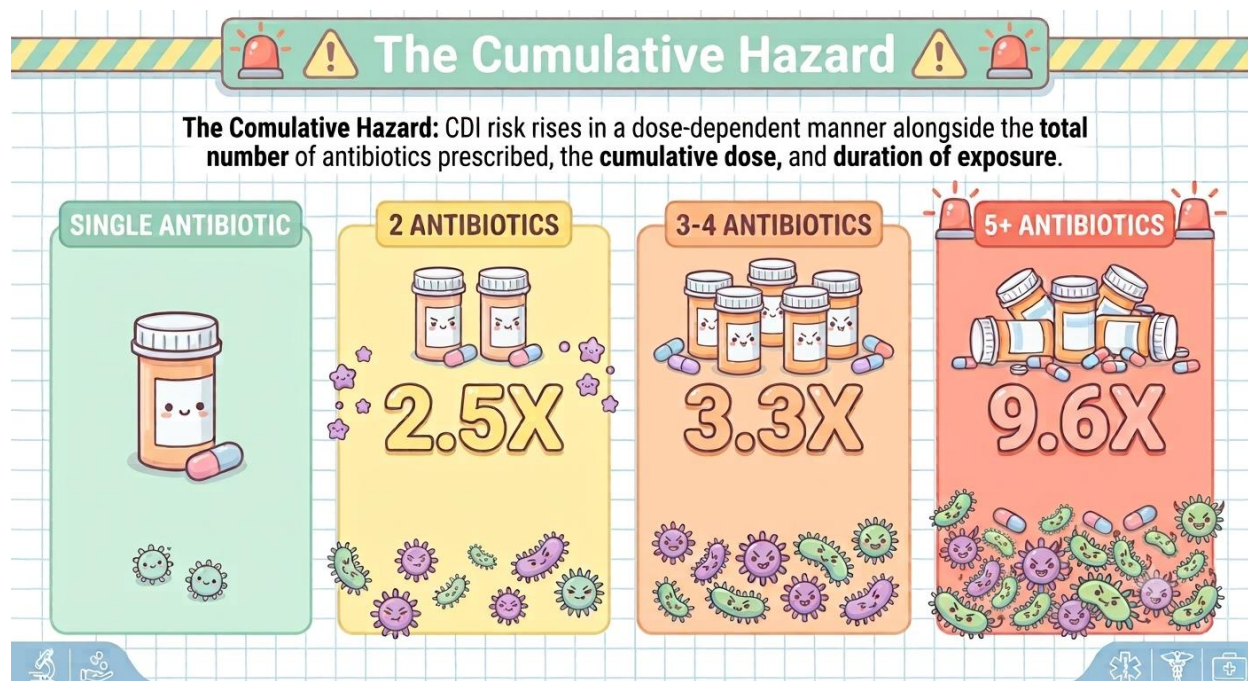
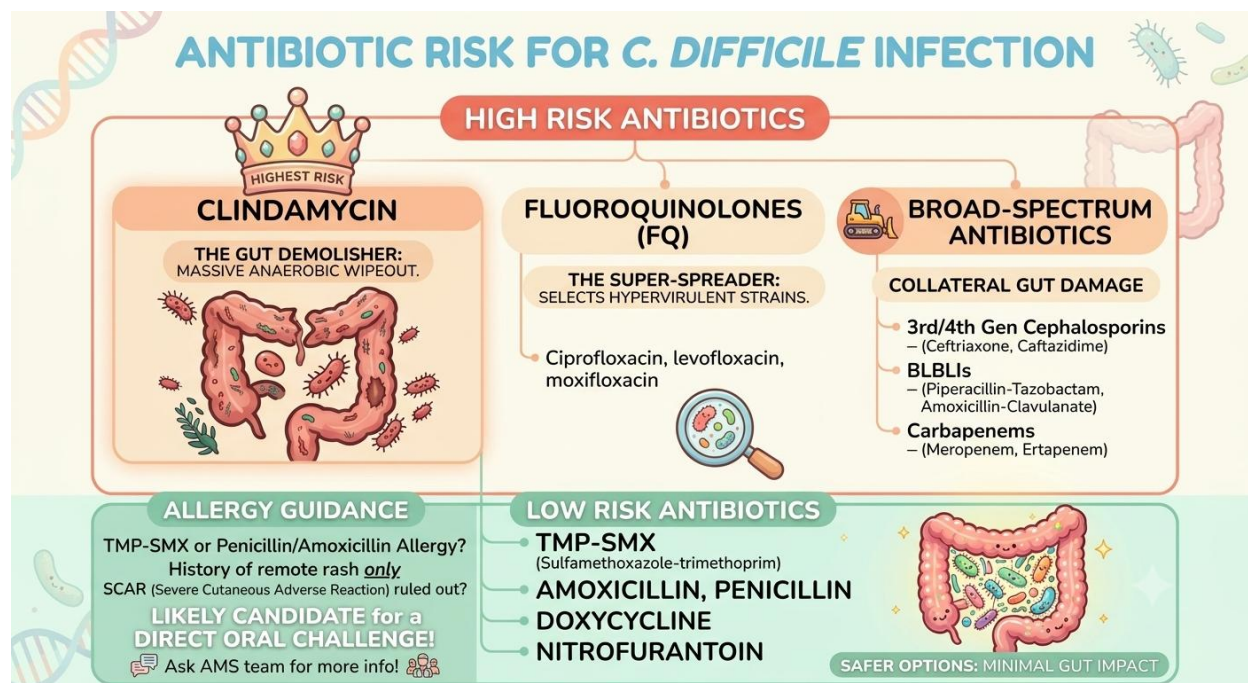
- While *Clostridioides difficile* is a Gram-positive, spore-forming bacterium responsible for severe, toxin-mediated colitis, the root cause of the infection is dysbiosis.
- When antibiotics destroy the natural flora barrier, resilient *C. difficile* spores germinate and proliferate unchecked, turning an opportunistic threat into active colitis.

The Lost Microbiome Diversity ⁽¹⁾

- Gut microbiome diversity is reduced with each additional antibiotic course.
- Disruptions to the abundance of gut species are not temporary; they can be detected **4 to 8 years after a single course of high-risk antibiotics** (such as clindamycin and fluoroquinolones).

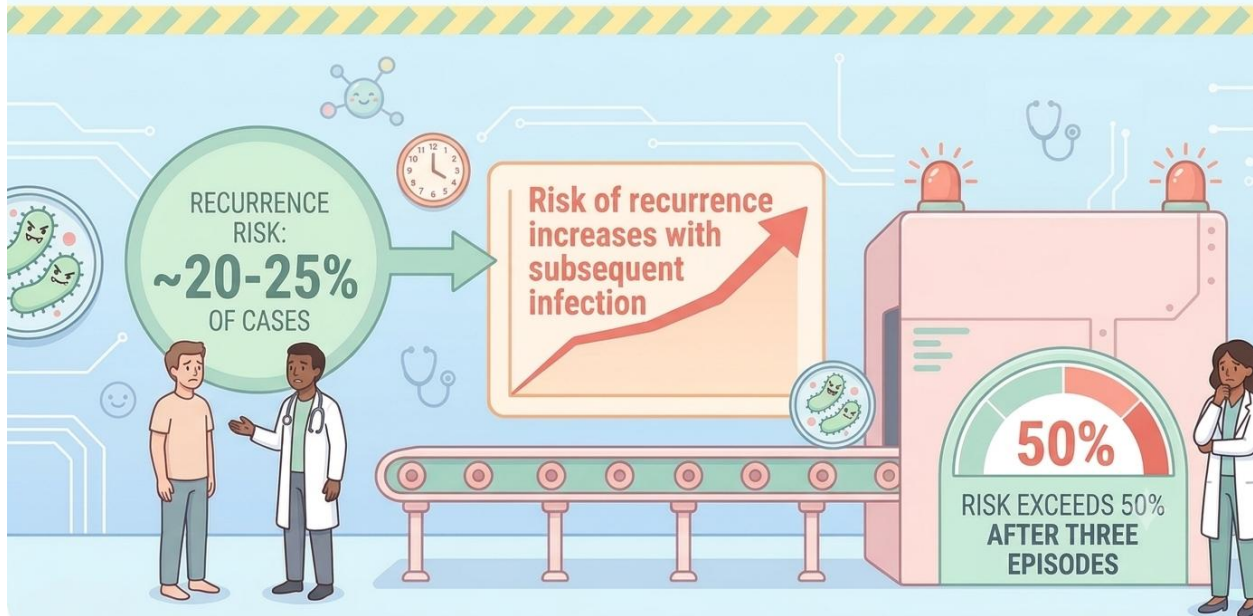
Antibiotic use and gut microbiome species diversity



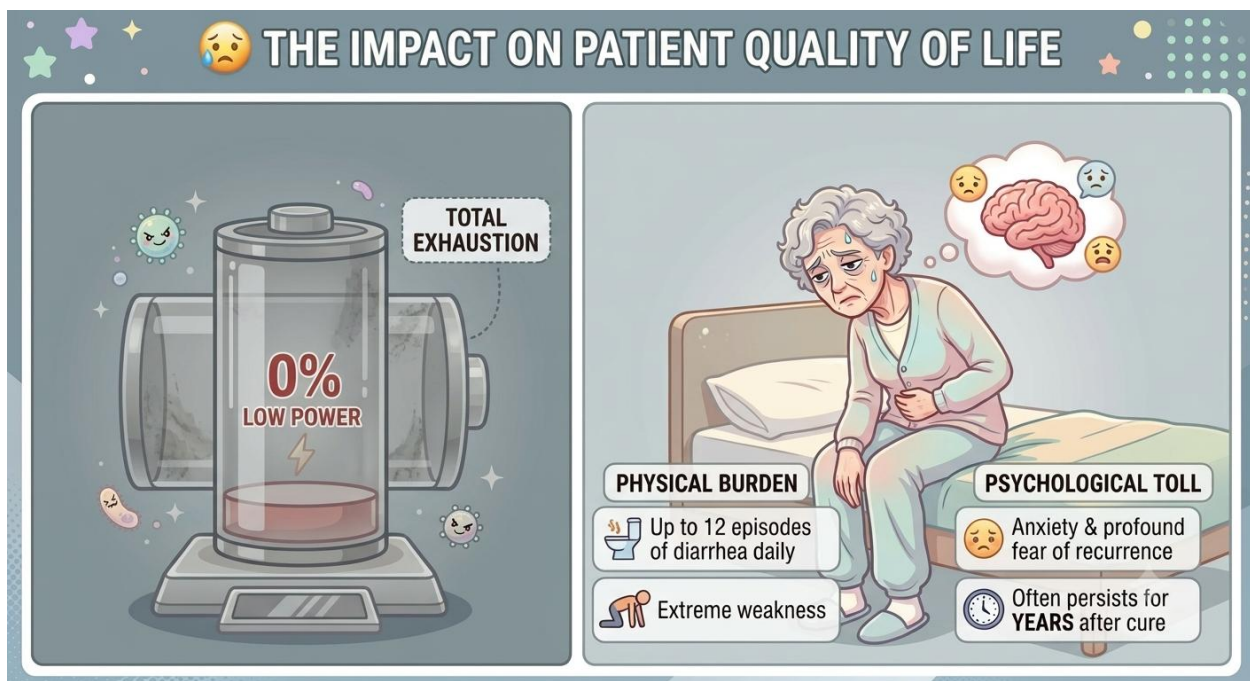


- Compared to patients receiving a single antibiotic, the risk of developing CDI is 2.5 times higher for those receiving two, 3.3 times higher for three or four, and 9.6 times higher for five or more. ⁽²⁾

The Recurrence Trap



- CDI recurrences happen in 20–25% of cases. The risk of recurrence increases with each subsequent infection, exceeding 50% after three episodes. ⁽³⁾



- Patients experience symptoms that significantly impact their quality of life. The psychological toll, including anxiety and a profound fear of recurrence, often persists for years. ⁽⁴⁾



- Of the \$281.4 million that CDI cost the Canadian healthcare system in 2012, 92% was driven directly by extended hospital stays and readmissions. This massive financial drain occurs because each infection would lead patients to remain hospitalized for an additional 3 to 20 days. ⁽⁵⁻⁷⁾

References

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