



## Shorter Antibiotic Durations in Diabetic Foot Osteomyelitis

The 2012 Infectious Diseases Society of America (IDSA) and 2019 International Working Group on the Diabetic Foot (IWGDF) guidelines recommend treating diabetic foot osteomyelitis for up to 6 weeks in those with residual infected bone after bone resection.<sup>1,2</sup> However, recent trials have begun to challenge the need for longer durations of antibiotic therapy in the setting of diabetic foot osteomyelitis (DFO). Are there opportunities for shorter durations of antibiotics?

### What do the new guidelines recommend?

A key update in the 2023 IWGDF/IDSA Guidelines on the Diagnosis and Treatment of Diabetes-related Foot Infections is the new recommendation for **3 weeks** of antibiotics after minor amputation or resection for diabetes-related osteomyelitis **with a positive bone margin culture or histology**. Longer durations (6 weeks) of antibiotics are recommended in patients withOUT bone resection or amputation.<sup>3</sup>

### What is the evidence?

In a 2020 randomized noninferiority pilot trial consisting of 93 patients, 3 weeks was compared with 6 weeks in patients with DFO who had residual bone infection after bone resection. In patients treated with 3 weeks of antibiotics, clinical remission assessed at 2 months after the end of treatment occurred in 84% of patients compared to 73% of those treated for 6 weeks. This trial demonstrated no difference in the incidence of clinical remission between the two groups ( $p=0.21$ ).<sup>4</sup> A larger randomized controlled trial is currently underway to confirm these findings (NCT04081792).

Older suggestions for 6 weeks, were not based on evidence, but rather animal models and clinical experience.<sup>1,2</sup>

**Key Takeaway:** Patients with DFO who undergo bone resection can receive a shorter course of 3 weeks of antibiotics despite having a positive bone margin.

### References

1. Lipsky BA, Berendt AR, Cornia PB, et al. 2012 Infectious Diseases Society of America clinical practice guideline for the diagnosis and treatment of diabetic foot infections. *Clin Infect Dis*. 2012 Jun;54(12):e132-73.
2. Lipsky BA, Senneville E, Abbas ZG, et al. Guidelines on the diagnosis and treatment of foot infection in persons with diabetes (IWGDF 2019 update). *Diabetes Metab Res Rev*. 2020 Mar;36 Suppl 1:e3280.
3. Senneville E, Albalawi Z, van Asten SA, et al. IWGDF/IDSA Guidelines on the Diagnosis and Treatment of Diabetes-related Foot Infections (IWGDF/IDSA 2023). *Clin Infect Dis*. 2023 Oct 2:ciad527.
4. Gariani K, Pham TT, Kressmann B, et al. Three Weeks Versus Six Weeks of Antibiotic Therapy for Diabetic Foot Osteomyelitis: A Prospective, Randomized, Noninferiority Pilot Trial. *Clin Infect Dis*. 2021 Oct 5;73(7):e1539-e1545.