

# Cost of a Bone Graft and Dental Implant Failure

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Bone grafts and subsequent dental implant therapy enjoy a high survival rate in the literature,<sup>1</sup> however, like any other regenerative and medical device, are subject to failure.<sup>2</sup> Currently, there are numerous articles in the dental literature that show surgical techniques and methods of treating or replacing failing/failed dental implants.<sup>3</sup> Unfortunately, there are only a few articles that exist that describe the exact cost of a dental implant failure.<sup>4</sup> To put a price tag on the true cost of a bone graft and/or dental implant failure, various indicators such as fixed cost, overhead, material costs, lost wages, time spent and negative experience by the patient must be analyzed.

## Fixed/Material Costs

**\$2,700 – \$6,200**

General Dental Practice      Specialty Practice

Fixed and Material Costs are determined by calculating how much it costs to keep an office running per hour, the total cost to place a bone graft, dental implant, and restore a dental implant. Depending on the fee schedule and insurance reimbursement, total billable production for a bone graft, dental implant, and dental crown can range from \$2,700 to \$6,200.<sup>6</sup>

## Lost Wages

**\$2,000 – \$7,500**

The average general dentist (single provider) in the United States generates \$500/hr and could be up to \$1,500/hr (single provider specialist). The estimated time it takes to place a bone graft, single fixture implant, restore it, then explant it when it fails, replace the implant and crown, along with all the follow-up visits, is estimated to be approximately 4-5 hours. Lost wages will be calculated to range from \$2,000 to \$7,500 dollars depending on the provider.<sup>7</sup>

 **Billable Fees**



 **Fixed/Material Costs**



 **Lost Wages**



 **One Bad Review**



**-\$3,800**

## Final Calculation

Taking the high and low billable fees, subtracting fixed & material costs, lost wages, and estimating the cost of a single bad review (using the low average of \$1,000): **the total cost of a single bone graft and implant failure can range from break-even to -\$2,400 in a general dentist's office.\*\* This number ranges from break-even to -\$3,800 in a specialty office.**

## Calculating the cost of a single negative review

According to one site, the formula for the cost of a single bad review for a year can be calculated.<sup>5</sup>

$$\frac{LC + RC \times CLV}{12(\text{mo})} = 1 \text{ Bad Review}$$

LC= Lost customer, RC= Referred customer, CLV= Customer lifetime value multiplied by 12 months.

## Patient Experience and Cost of a Bad Review

**\$1,000 – \$6,000**

Patients have reported various negative experiences when a bone graft and/or implant fail starting with pain, additional costs, lost time, time away from family, lost faith in the doctor and/or office, and negative psychological outcomes. This can often lead to negative reviews on websites or social media. For a dental practice, the numbers are estimated to range from \$1,000 to \$6,000.\*\*

**Geistlich**

<sup>1</sup> Howe, Mark-Steven, William Keys, and Derek Richards. "Long-term (10-year) dental implant survival: A systematic review and sensitivity meta-analysis." *Journal of dentistry* 84 (2019): 9-21.  
<sup>2</sup> Simonis, Pierre, Thomas Dufour, and Henri Tenenbaum. "Long-term implant survival and success: a 10-16-year follow-up of non-submerged dental implants." *Clinical oral implants research* 21.7 (2010): 772-777.  
<sup>3</sup> Froum SJ, Froum SH, Rosen PS. A Regenerative Approach to the Successful Treatment of Peri-implantitis: A Consecutive Series of 170 Implants in 100 Patients with 2- to 10-Year Follow-up. *Int J Periodontics Restorative Dent.* 2015 Nov-Dec;35(6):857-63. doi: 10.11607/prd.2571. PMID: 26509990.  
<sup>4</sup> <https://www.dentaleconomics.com/practice/article/14283993/the-cost-of-a-dental-implant-failure>  
<sup>5</sup> <https://www.revenuejump.com/blog/calculating-cost-negative-reviews/>  
<sup>6</sup> Killeen, Addison. *By the Numbers: A Guide to Buying and Running Your Dental Practice*. 2018.  
<sup>7</sup> Killeen, Addison, and Mark Costes. *Dental Office Operations Manual: Detailed Systems to Run Your Dental Practice*. KDP Publishing, an Imprint of Amazon, 2022.