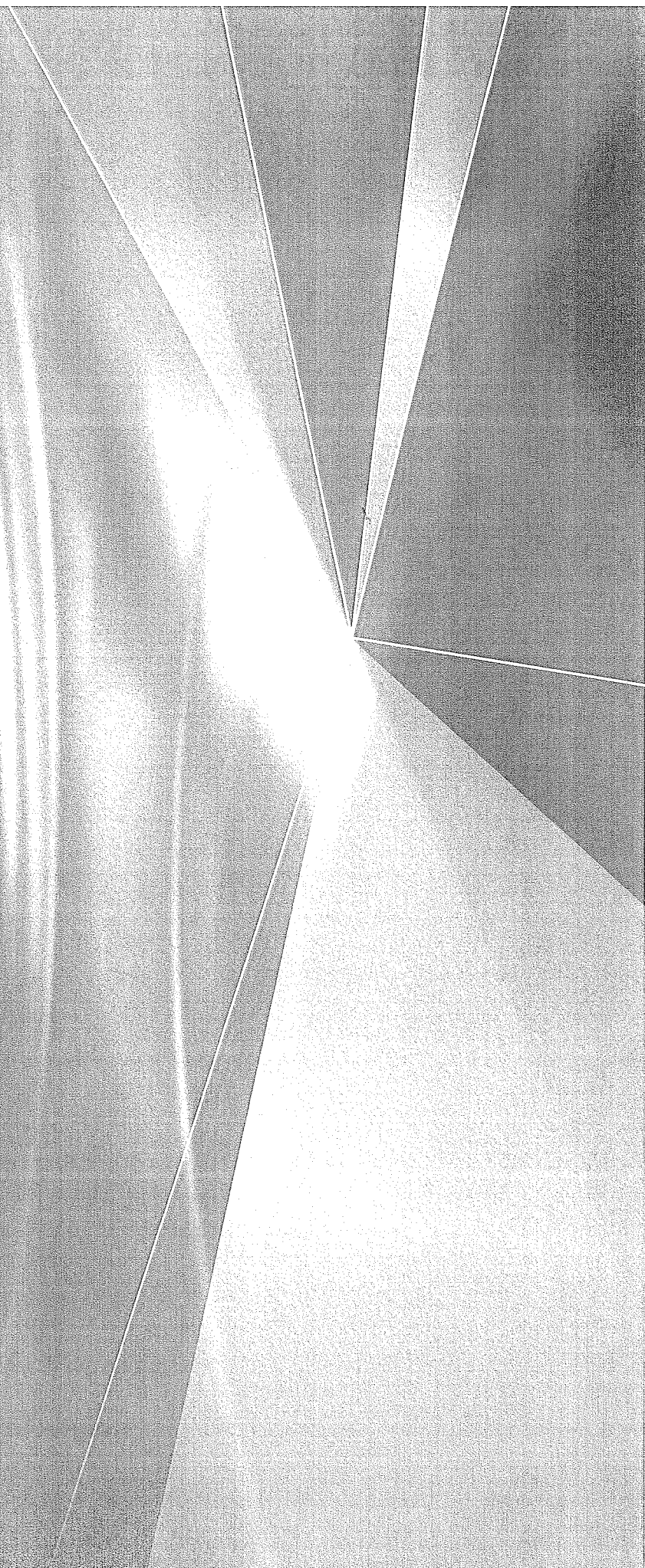




**Medtronic**

# Dental Bone Grafting Options

A review of bone grafting options for patients needing more bone to place dental implants



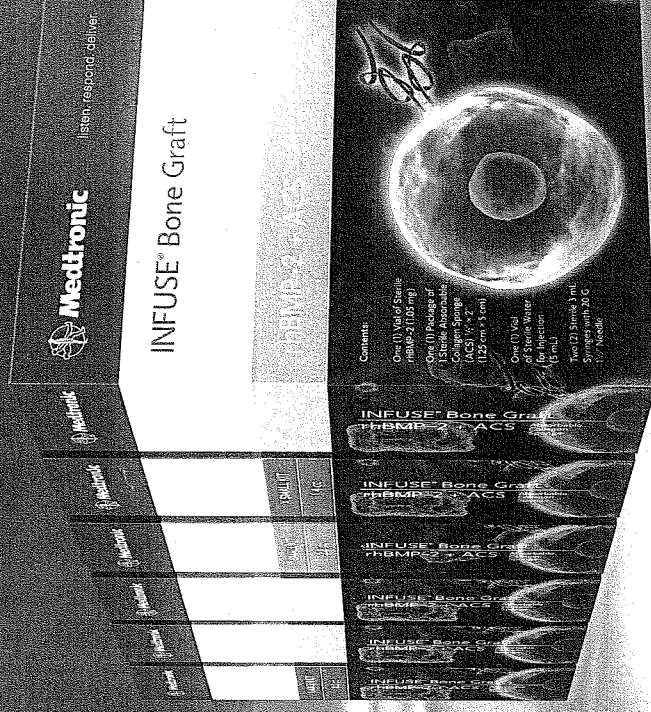


# INFUSE® Bone Graft

Eliminates the need for a second surgery to remove bone from your body

- Potential for decreased surgical time and reduced reliance on anesthesia
- No recovery time from second-site bone harvest

Proven, predictable bone growth for dental implant placement





# INFUSE® Bone Graft

Used in over 600,000 surgical procedures

## FDA approvals

- Spinal fusion indication (2002)
- Open tibial fracture indication (2004)
- Certain dental indications (2007)



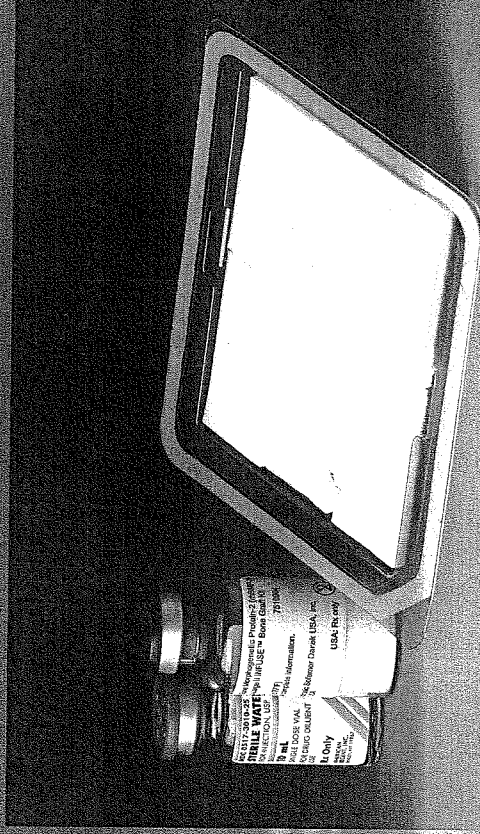
Vivian R.  
Sinus  
augmentation  
patient



# INFUSE® Bone Graft

## Consists of **two** parts

1. A protein found in everyone's body
2. A natural carrier for delivery:  
absorbable collagen sponge (ACS)
  - Releases protein over time
  - Provides scaffold for new bone to grow
  - Is absorbed and replaced by bone

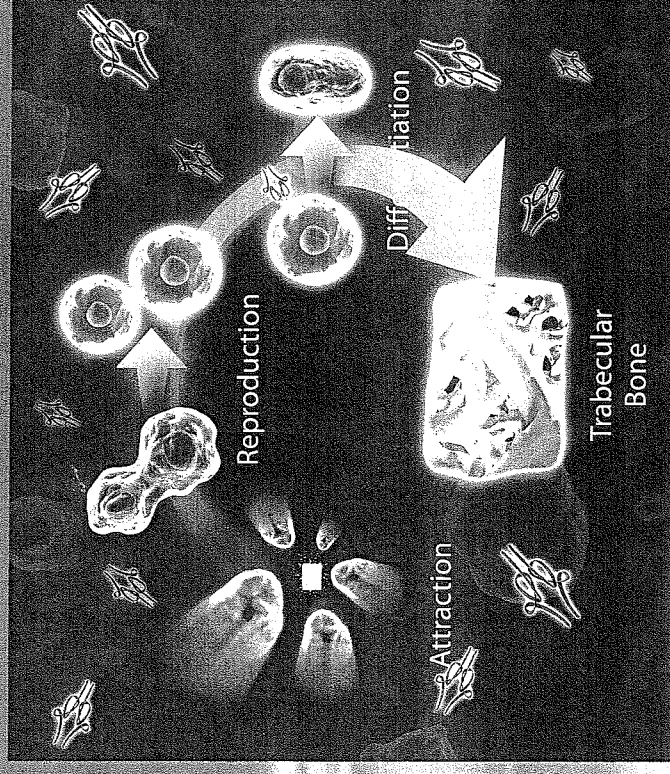


INFUSE + ACS



# How does INFUSE® Bone Graft work?

- Surgically placed where new bone growth is needed
- Attracts your body's own bone building cells (stem cells) to the site and over time, new bone is formed
- Bone grows where INFUSE® Bone Graft is placed, for predictable bone-growth results



INFUSE® Bone Graft Mechanism of Action



# For what procedure is INFUSE® Bone Graft approved?

## Sinus Lift (Sinus Augmentation)

Existing bone in maxillary sinus cavity may be insufficient for dental restoration

### INFUSE® Bone Graft

1. Placed into the upper jaw to promote bone growth in the floor of the sinus cavity
2. To anchor dental implants to allow for dental restoration

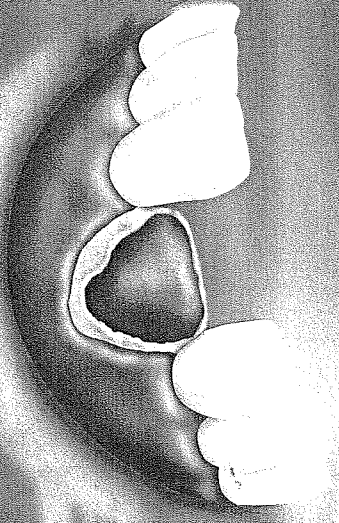




# For what procedure is INFUSE® Bone Graft approved?

## Localized Alveolar Ridge Augmentation

- Involves placing INFUSE® Bone Graft directly into the empty socket where a tooth's roots once were
- Helps create the natural shape of the gums and jaw that may have been lost following tooth extraction





# Benefits of INFUSE® Bone Graft

Eliminates the need for a second surgical site to remove bone from your body

- Potential for decreased surgical time and reduced reliance on anesthesia
- No recovery time from second-site bone harvest

Proven, Predictable bone growth for dental implant placement



# Bone from human source (allograft)

- Human, non-vital (dead) bone harvested from a cadaver that is tested, cleaned and processed for transplantation
- Though highly tested and processed, the chance for disease transmission exists
- Cannot produce new bone on its own (unlike autograft or INFUSE® Bone Graft)
- Serves as a framework or scaffold over which bone from the surrounding bony walls may grow to fill the defect or void
- Compared to autograft, allograft may not remodel and be replaced by patient's own bone<sup>1</sup>





# Bone from animal source (xenograft)

- Similar to allograft, non-vital highly processed and sterilized bone derived from another species (animal bone)
- Also serves as a framework or scaffold over which bone from the surrounding area may grow to fill defect
- Like allograft, lacks autograft's bone-forming properties; does not cause bone to form
- Therefore, bone regeneration may take longer when using patient's own bone and outcome may be less favorable
  - May take years for graft material to remodel and be replaced by patient's own bone<sup>2</sup>





# What to expect after treatment with INFUSE® Bone Graft

- Potential for prolonged swelling due to cellular activity (chemotaxis)
- Similar function to autogenous bone without the associated life disturbance of autogenous grafting
- Proven, predictable bone to support dental implants



# Resources for Patients

- [www.aaoms.org](http://www.aaoms.org)

The official Web site of the American Association of Oral and Maxillofacial Surgeons. Here you will gain a better understanding of the many ways these surgical specialists can aid your oral and overall health.

- [www.perio.org](http://www.perio.org)

The official Web site for periodontists specializing in the prevention, diagnosis, and treatment of periodontal diseases and in the placement of dental implants.

- [www.infusebonegraft.com](http://www.infusebonegraft.com)

This Web site contains product information, ongoing clinical research, news, and articles about bone morphogenetic proteins, your oral health, and patient stories.







1. Lynch SE, Marx RE, Nevins M, Wisner-Lynch LA, eds. Tissue Engineering, Applications in Oral and Maxillofacial Surgery and Periodontics. Hanover Park, IL: Quintessence Publishing; October 31, 2007.

2. Jensen OT, ed. The Sinus Bone Graft. 2nd edition. Hanover Park, IL: Quintessence Publishing; March 30, 2006.

[www.infusebonegraft.com](http://www.infusebonegraft.com)

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