1. Over the next year or two you will lose 40-60 percent of the bone where the tooth was.
2. Bone grafts help keep normal bone contours in place for a long time.
3. Implants can’t be done without adequate bone.
4. Bridges don’t look good without adequate bone.
5. It’s a lot easier to “preserve” the bone now than to “create” new bone later.
6. Doing the extraction and bone graft now in one surgery will prevent the need for a 2nd surgery later.
Simple Bone Grafting Steps.

1. Tooth is removed.
2. Grafting material is placed in the socket.
3. Sutures are placed in the gum issue to allow proper healing.

What to Expect After Grafting:
After the procedure, your body should begin the natural process of healing and forming new bone.

- Follow your doctor's instructions in caring for the grafted site and surrounding gum tissues.
- New bone will begin to form within the first few weeks after grafting.

Socket Preservation vs. Ridge Augmentation

- **7953 (Socket Preservation)**
  - Graft is placed same day as extraction
  - Includes graft material but not membrane

- **7950 (Ridge Augmentation)**
  - Graft *IS NOT* placed same day as extraction
  - Includes graft material but not membrane

Barrier Membrane Codes

- **4266**
  - resorbable

- **4267**
  - non-resorbable
    - (includes removal usually about 3-4 weeks later)

RECENT CASES
Pre-op x-ray. Post-op surgery.

Needs to protect the bone graft from loss for 3-4 weeks.

Teflon membrane
Glue Tape to help it seal.
Titanium reinforcement if needed.
Cephazolin (Ancef) antibiotic powder.

Tuck 4 mm under flap on buccal and lingual.
(Less may also work but could come out prematurely – especially if smooth.)

OsteoShield™ PTFE Non-Resorbable Membrane
- Best membrane on market for grafting sockets
  - Primary closure unnecessary
  - Virtually impervious to bacterial penetration
  - Ultimate esthetics
  - Ideal size for sockets
- $50 / Membrane

6 weeks post-op.

Thin bovine collagen membranes, like BioMend (8 weeks), BioMend Extend (18 weeks)....

Those numbers are for use with primary closure only!
For wide openings, either get primary closure

Or

use a different membrane.

7 months post-op.

Buccal plate missing. Soft membrane smashed into the bone graft when suturing – no width to the ridge.

Smashed Colla Plug. A membrane for small, protected areas.

OsteoShield™
Titanium-Reinforced Non-Resorbable Membrane

- Creates space for defects missing 1-3 bony walls
- Primary closure unnecessary
- Easily trimmed to fit

2 week collagen (Colla Tape) - A buffer and "insurance" against failure.
Three weeks post-op. Leakage under membrane. – no Colla-Tape used.

Titanium reinforced.

Mineralized allograft, thin collagen membrane, PeriAcryl.

9 days later, failed.

The day the membrane removed six weeks later (normally at 3-4 weeks).

One of the very best bone grafts if an implant is planned.

Osteoconductive, osteoinductive. (mineralized allograft + demineralized bone matrix)
Four months later...

Suggestions from Silverstein on socket preservation:
1. Antibiotic starting pre-op.
2. NSAID starting pre-op.
3. Thicker resorbable membrane designed to be exposed (acellular dermal matrix like "Dermis"). Soak in sterile saline/TCN (50cc/250mg) for 10 min. pre-op.
4. Post-op, soak with TCN solution as above.
5. Long-lasting resorbable sutures (PGA or Vicryl) – remove in two weeks.
6. Pre-op chlorhexidine rinse.
7. No toothpaste or crunchy food for three weeks.
8. Rinse 5 X/day with warm salt water.
9. No impingement by provisional.
10. Contraindicated to do in a smoker.

Other suggestions – extraction and graft:
1. 12b blade for gingiva around tooth.
2. Periotome or Woodson #1 (only on interproximal vertically into PDL)
3. Remove pathology and PDL remnants.
4. May want to decorticate socket walls with #2 rb or sharp curette for "RAP" (rapid acceleratory phenomenon).
5. Undermine full thickness flaps facial and lingual.
6. Slightly overfill with graft, don’t compact.
7. Extends membrane 5-6 mm under flaps.
Other suggestions – Suturing:

1. Place the membrane with a PE and cotton pliers.
2. Mattress or figure 8 suture.
3. 4.0 suture over graft, 5.0 suture for papillae.
4. Suture does not go through membrane.
5. 5-8 mm away from edge of soft tissue.
Socket Grafting and Alveolar Ridge Preservation

Not all extraction sites have the same clinical conditions.

- 5 walls – each with greater than 1.5mm of bone -- allows almost complete regeneration without grafting
  - Have stability
  - Have BMP
  - Have growth factors

What bone graft choices do we have?

- **Autograft**: the patient’s own bone
  - Osteogenic
- **Allograft**: graft material from another human being
  - Can have osteoinductive capability
- **Xenograft**: graft material from another mammal, i.e., bovine bone
  - Osteoconductive (volume expander, mineral source)
- **Alloplast**: synthetic bone material
  - Osteoconductive (volume expander, mineral source), excellent biocompatibility.

**The Misch Perspective: More Nit–Picky Than What Most Periodontists Do**

- Not all extraction sites have the same clinical conditions.
- 5 walls – each with greater than 1.5mm of bone -- allows almost complete regeneration without grafting
  - Have stability
  - Have BMP
  - Have growth factors

**USING**

“SOCKET PRESERVATION”

TO TREAT

SINUS PERFORATION

8 mm perforation
Sullivan-Schein, Patterson

Pure oxidized cellulose: no additives. Resorbs to saline and glucose.

**Commonly used antibiotics in bone grafts:**

- Ancef powder for IV (cefazolin): 25mg
- Clindamycin liquid for IV: 25mg
  - Clindamycin is a semisynthetic derivative of lincomycin
- Tetracycline powder: 25mg
  - or Doxycycline, 10mg

Mineralized allograft cancellous chips.

Membrane:
1. Dentisply
2. Osteogenics
3 week postop.

Do you need to re-enter for an implant?

- If so, how soon?
  - Four (to six) months is usually the soonest you can do it.

Do you want the graft hard in four (to six) months or don't you care about that?

If you care…
1. Autogenous
2. Cancellous mineralized allograft (cortical is 2 mo. longer.)
3. DFDB allograft
4. Tricalcium phosphate (TCP)

If you don't care about it turning hard in four (to six) months…

- BioGran, PerioGlass
- BioPlant (HTR)
- Most bovine bone
- Resorbable HA

Cutting Membrane

Placing Membrane