Polymethylmethacrylate

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Uses Dosage Directions Interactions Side effects Warnings

Pronunciation

(pol ee meth il meth AK ri late)

Pharmacologic Category

- Cosmetic Agent, Implant

Pharmacology

After implantation, the bovine collagen component dissipates over the course of 1 to 3 months, leaving behind the nonbiodegradable PMMA microspheres. The microspheres stimulate a local inflammatory reaction that is followed by the deposition of granulation tissue during the first few weeks after implantation. The connective tissue subsequently matures, and by three months after injection, PMMA microspheres are surrounded by newly formed collagen. The presence of new collagen accounts for the observed volume-filling effect (Cohen 2004; Lemperle 2010).

Use: Labeled Indications

Nasolabial folds and facial acne scars: Correction of nasolabial folds and moderate to severe, atrophic, distensible facial acne scars on the cheek in patients 21 years and older.

Contraindications

Hypersensitivity to polymethylmethacrylate, lidocaine, bovine collagen, or any component of the formulation; positive response to Bellafill Skin test; patients with severe allergies manifested by a history of anaphylaxis or history or presence of multiple severe allergies; patients undergoing or planning to undergo desensitization injections to meat products; patients with bleeding disorders; patients with susceptibility to keloid formation or hypertrophic scarring; use for lip augmentation and injection into the vermilion or the wet mucosa of the lip.

Dosing: Adult

Note: A skin test should be performed 4 weeks prior to treatment. Refer to the manufacturer's instructions for use for additional information on the interpretation of skin test results.

Nasolabial folds and facial acne scars: Intradermal: ≥21 years: Inject as needed for cosmetic result; injecting >3.5 mL per treatment site or 8.9 mL overall has not been established. Correction should be limited to no more than 100% of the skin defect during treatment. One or two touch-up implantations at intervals of at least 2 weeks may be required to achieve the desired effect.

Dosing: Geriatric

Refer to adult dosing.

Administration

Bring syringe to room temperature before injection. Injection area should be washed with soap and water then cleaned with alcohol or other antiseptic. Refer to manufacturer's instructions for use for comprehensive administration information.

Storage

Store in refrigerator. Do not freeze.

Drug Interactions

There are no known significant interactions.

Adverse Reactions

The following adverse drug reactions and incidences are derived from product labeling unless otherwise specified.

Incidences reported with acne scar treatment unless otherwise indicated.

1% to 10%:

Central nervous system: Fatigue (1%)

Dermatologic: Contact dermatitis (1%), pruritus (nasolabial fold [NLF] and acne scars: ≤1%; NLF: Occurred >48 hours after injection, duration ranged from 3 weeks to >3 months), skin rash (NLF and acne scars: ≤1%)

Hypersensitivity: Hyperesthesia (NLF: 2%; duration ranged from 4 weeks to unresolved at 26 weeks)

Local: Residual mass at injection site (NLF: 5% [1 month postinjection; duration ranged from 4 weeks to unresolved at 26 weeks], acne scars: <1% [many patients reported residual lumps/bumps up to 2 weeks postinjection]), injection site reaction (4%), tenderness at injection site (acne scars: 4%, NLF: <1% [occasional]), erythema at injection site (NLF: ≤4% [duration ranged from 5 weeks to unresolved at 26 weeks], acne scars: <1% [many patients reported erythema up to 2 weeks postinjection]), swelling at injection site (NLF and acne scars: ≤4%; NLF: duration ranged from 5 weeks to unresolved at 26 weeks), bruising at injection site (2%; many patients reported bruising up to 2 weeks postimplantation), pain at injection site (2%)

Neuromuscular & skeletal: Arthralgia (1%)

Respiratory: Nasopharyngitis (3%), sinusitis (1%)

<1%, postmarketing, and/or case reports: Abscess, acneiform eruption, acne vulgaris, actinic keratosis, areata alopecia (NLF; some occurrences reported ≥3 months after injection), atopic dermatitis, bacterial infection, blurred vision, burning sensation, chest congestion (mild), cutaneous papilloma, exacerbation of herpes labialis, flu-like symptoms, granuloma (NLF; duration ranged from 10 weeks to unresolved at 26 weeks), herpes zoster, hordeolum, implant-site complication (NLF; enlargement of implant; duration ranged from 10 weeks to unresolved at 26 weeks), influenza, limb pain, meningitis, otic infection, pharyngitis, puncture wound (NLF; puncture area visible; duration 13 weeks), seborrheic dermatitis, skin discoloration at injection site, squamous cell carcinoma of skin, syncope, telangiectasia (NLF; occasional, some occurrences reported ≥3 months postinjection), xeroderma

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Warnings/Precautions

Concerns related to adverse effects:

• Intravascular injection: Inadvertent intravascular injection of dermal fillers may cause embolization, vessel occlusion, ischemia, or infarction resulting in vision impairment or blindness, cerebral hemorrhage or ischemia, skin necrosis, and damage to underlying facial structures. Treatment should be discontinued and patient promptly evaluated if exhibiting any signs or symptoms of intravascular injection.

• Skin effects: Hyperpigmentation, keloid formation, or hypertrophic scars may occur after dermal filler injections.

Disease-related concerns:

• Acne scars: Safety and effectiveness have not been established in patients with non-distensible atrophic acne scars, ice pick scars, or sinus tract scars.

• Connective tissue disorder: Safety has not been established in patients with connective tissue disorder.

Concurrent drug therapy issues:

• Anticoagulant/antiplatelet agents: Use within 3 weeks after administration has not been studied.

• Immunosuppressive therapy: Concomitant use with immunosuppressive therapy has not been established.

• Other dermal response procedures: Laser treatment, chemical peeling, or similar procedures may elicit an inflammatory response at injection site.

• Other wrinkle therapies: Use within 6 months of other wrinkle therapies (eg, collagen, botulinum toxin) has not been studied.

Other warnings/precautions:

• Cold weather: Exposure to extreme cold weather should be minimized until initial swelling and redness have resolved.

• Photosensitivity: Excessive exposure to sun or UV lamp should be minimized until initial swelling and redness have resolved.

• Skin inflammation or infection: Treatment should be deferred if active inflammation (eg, cysts, pimples, rash, hives) or infection present at injection site(s).

• Skin testing: Skin testing must be performed; patients with a positive test, two equivocal tests, or demonstrating an anti-bovine collagen serum IgG level outside the normal range at baseline should not be treated.

Reproductive Considerations

Women of reproductive potential not using effective contraception were excluded from initial studies (Cohen 2004; Joseph 2015).

Pregnancy Considerations

Pregnant women were excluded from initial studies (Cohen 2004; Joseph 2015).

More about dermal filler topical

- Reviews (62)

Patient resources

Other brands

Radiesse, Evolence, Bellafill, Captique, ... +3 more

Related treatment guides

- Facial Wrinkles
- Facial Lipoatrophy
- Lip Augmentation

Further information

Always consult your healthcare provider to ensure the information displayed on this page applies to your personal circumstances.

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3.4 / 10

62 Reviews

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