**Name of Policy:**
**Dermabrasion**

Policy #: 118
Category: Surgical

Latest Review Date: May 2010
Policy Grade: **Active Policy but no longer scheduled for regular literature reviews and updates.**

**Background/Definitions:**
As a general rule, benefits are payable under Blue Cross and Blue Shield of Alabama health plans only in cases of medical necessity and only if services or supplies are not investigational, provided the customer group contracts have such coverage.

The following Association Technology Evaluation Criteria must be met for a service/supply to be considered for coverage:

1. The technology must have final approval from the appropriate government regulatory bodies;
2. The scientific evidence must permit conclusions concerning the effect of the technology on health outcomes;
3. The technology must improve the net health outcome;
4. The technology must be as beneficial as any established alternatives;
5. The improvement must be attainable outside the investigational setting.

**Medical Necessity** means that health care services (e.g., procedures, treatments, supplies, devices, equipment, facilities or drugs) that a physician, exercising prudent clinical judgment, would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury or disease or its symptoms, and that are:

1. In accordance with generally accepted standards of medical practice; and
2. Clinically appropriate in terms of type, frequency, extent, site and duration and considered effective for the patient’s illness, injury or disease; and
3. Not primarily for the convenience of the patient, physician or other health care provider; and
4. Not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of that patient’s illness, injury or disease.
**Description of Procedure or Service:**
Dermabrasion is the surgical process by which the skin is resurfaced by planing or sanding, usually by means of a rapidly rotating abrasive tool such as a wire brush, diamond fraise, or serrated wheel. The epidermis then regenerates from the epidermal appendages located in the remaining dermis. This process begins within 24 hours of the procedure and is usually complete after 7-10 days. Dermal regeneration is a slower process but usually is complete within several months. The regenerated dermis demonstrates less elastosis and improved organization.

Destruction confined to the epidermis results in rapid healing without scarring, although some pigmentation change may occur if melanocytes are damaged. This superficial procedure has the disadvantage of producing less dramatic results but is very safe. Deeper wounding, extending into the papillary and sometimes reticular dermis, produces more dramatic results. However, deeper penetration eradicates a portion of the epidermal appendages, increasing healing time and making scarring more likely. Penetration into the reticular dermis entails a high risk of scarring. By the same token, dermabrasion of full-thickness scars results in full-thickness wounds. These heal by wound contraction and reepithelializations and have a much higher likelihood of wound problems and hypertrophic scarring. These types of lesions generally are best treated by full-thickness excision with a punch biopsy or scalpel.

Chemical peeling and laser resurfacing usually are applied globally to the face. Dermabrasion more often is used for specific areas of scarring. Dermabrasion is used for specific areas of the face more often than laser resurfacing or chemical peeling because dermabrasion does not injure melanocytes and is less likely to cause pigmentation changes. Laser resurfacing and chemical peeling, when applied to only a portion of the face, often leave lines of demarcation between treated and untreated regions, denoting damage to melanocytes in the treated areas.

**Policy:**
**Dermabrasion meets** Blue Cross and Blue Shield of Alabama’s medical criteria for coverage when performed to treat surgical or traumatic scarring, rhinophyma, chickenpox scars, and acne pits and scars. Acne pits and scars should be viewed under oblique lighting and should be narrow, pitted (ice pick scars), and cast a shadow on the face or shallow undulations, or crater-form depressions with angulated shoulders.

Extensive scarring extending down to and involving the subcutaneous tissue should not be dermabraded because no epithelial cells will remain to resurface the wound. Incidence of further scarring and pigmentation disturbances greatly increases in this situation. In these instances, the scars should be excised with a punch biopsy or scalpel and closed appropriately. **Dermabrasion performed after the punch biopsy and closure would meet medical criteria for coverage.**

**Dermabrasion does not meet** Blue Cross and Blue Shield of Alabama’s medical criteria for coverage and is considered cosmetic when performed to treat wrinkles, rhytids, and other symptoms of photo aging.

*Blue Cross and Blue Shield of Alabama does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether*
or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Cross and Blue Shield of Alabama administers benefits based on the members' contract and corporate medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

Key Points:
Dr. Abner Kurtin, a New York Dermatologist, first introduced dermabrasion in 1953. Dermabrasion requires simple tools and, in comparison to laser resurfacing, does not require specialized safety equipment for the surgeon or patient, with the exception of protective face shields for the surgeon and staff. The surgeon uses a rough wire brush, or a burr containing diamond particles, attached to a motorized handheld device to abrade a controlled depth of facial skin. The handpiece has a rapidly spinning tip to which multiple interchangeable abrading devices may be attached. These include sandpaper like burrs, curettes, diamond fraises, rasps, and wire brushes. The tip generally spins at a speed of 12,000-15,000 rpm. The surgeon can control the speed of the device with a foot pedal. Irregular or imperfect facial surfaces are abraded until the surgeon reaches the safest level to yield a smooth and even surface. The only danger in performing dermabrasion is abrading too deeply into the facial skin.

The results of dermabrasion depend on the coarseness of the abrading tip, the length of time applying the tip to the skin, and the pressure used to apply the tip. In general, the abrading tip is applied in smooth strokes to gradually remove the damaged outer layers of the skin until a smooth uniform surface of bleeding tissue remains. The skin is held taut and maintained in a stationary position by the non-operating hand. An alternate technique employs a freezing spray to create a hard skin surface to facilitate the abrasion.

As the outer layers of the epidermis are removed, no bleeding occurs. This is because the epidermis contains no blood vessels. Once the dermoepidermal junction is breached and the plane of dermabrading reaches the papillary dermis, a uniform bleeding from punctate sites over a smooth, shiny surface occurs.

Once the level of planing reaches the deeper papillary dermis, bleeding becomes more voluminous and the surface has a rougher appearance. Although each site bleeds only minimally, the multitude of bleeding sites can result in considerable blood loss. Once the reticular dermis is entered, bleeding becomes brisk and confluent. This layer is even rougher than the deep papillary dermis and represents exposed dermal collagen. The risk of hypertrophic scarring, delayed wound healing, and pigmentary changes are highest when dermabrasion is carried this deeply. Erythema generally subsides within 90 days, but postinflammatory hyperpigmentation may occur. Patients at increased risk include those taking oral contraceptive pills, exogenous estrogens, or other photosensitizing medications. Application of topical hydrocortisone lotion and/or a short course of systemic steroids may lead to earlier resolution of erythema. Other treatment options include trans-retinoic acid, glycolic acid, or hydroquinone. Accompanying pruritus may be treated with oral antihistamines. The skin typically is sensitive to the sun following dermabrasion, and this also may be a source of hyperpigmentation. Patients must use
sunscreen daily for 6-12 months following dermabrasion. Patients also should be instructed in the appropriate application of camouflage makeup.

Hypopigmentation is the result of melanocyte destruction or inhibition. Being of neural crest cell origin, these cells do not possess the ability to regenerate or divide. Hypopigmentation has been encountered most frequently when using phenol as the peeling agent, and this has led many to abandon phenol in favor of other agents. Hypopigmentation is more noticeable in more darkly pigmented patients. Hypopigmentation may be difficult to assess until erythema has subsided, and, unfortunately, it is permanent at this point. Pigmentary changes are much less likely with dermabrasion than with alternative techniques such as chemical peeling or laser resurfacing.

Delayed healing may lead to hypertrophic scarring, which is the most severe complication following dermabrasion. Hypertrophic scarring requires close follow-up care and aggressive early treatment. Topical or intralesional steroids, silicone sheeting, pressure application, and scar massage may improve outcome. Pulsed-dye vascular lasers have been used with some success during the erythematous phase of hypertrophic scarring. Scar excision or further dermabrasion may be necessary for unsatisfactory results. Infectious complications are unusual but should be treated aggressively with oral and topical antibiotics.

Dermabrasion can be combined with other techniques to maximize the results. Scar elevation is when a depressed scar is “punched,” from the dermis, and raised to a level slightly higher than the surrounding skin. After a period of several weeks, dermabrasion can then be performed to create a smooth skin surface. Another technique is punch grafting. Deeper, wider, ice pick scares can be trephined using various sized punches. The tissue is discarded and replaced with similarly sized punch grafts from normal skin in the postauricular area. These grafts are left to heal and then dermabrasion is performed.

**November 2008 Update**
A literature search revealed no new studies that would alter the coverage statement of this policy.

**May 2010 Update**
No new peer-reviewed literature was identified that would alter the coverage statement of this policy.

**Key Words:**
Dermabrasion, laser resurfacing, scar resurfacing, CO₂ resurfacing

**Approved by Governing Bodies:**
FDA approved
**Benefit Application:**
In general, Blue Cross and Blue Shield of Alabama defines reconstructive surgery as: any surgery done primarily to restore or improve the way the body works or correct deformities that result from disease, trauma, or birth defects.

Coverage is subject to member’s specific benefits. Group specific policy will supersede this policy when applicable.

ITS: Home Policy provisions apply
FEP contracts: No special consideration
Pre-certification requirements: Not applicable

**Current Coding:**
CPT codes:

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<th>Description</th>
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<td>15780</td>
<td>Dermabrasion; total face (e.g., for acne scarring, fine wrinkling, rhytids, general keratosis)</td>
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<td>15781</td>
<td>; segmental, face</td>
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**References:**

**Policy History:**
Medical Policy Group, December 2001 (2)
Medical Policy Group, May 2003
Medical Policy Administration Committee, May 2003
Available for comment June 12-July 28, 2003
Medical Policy Group, November 2004
Medical Policy Group, May 2006 (1)
Medical Policy Group, November 2008 (1)
Medical Policy Group, May 2010 (1) No updates to the policy at this review
Medical Policy Group, September 2012 (3): Active Policy but no longer scheduled for regular literature reviews and updates.

This medical policy is not an authorization, certification, explanation of benefits, or a contract. Eligibility and benefits are determined on a case by case basis according to the terms of the member’s plan in effect as of the date services are rendered. All medical policies are based on (i) research of current medical literature and (ii) review of common medical practices in the treatment and diagnosis of disease as of the date hereof. Physicians and other providers are solely responsible for all aspects of medical care and treatment, including the type, quality, and levels of care and treatment.

This policy is intended to be used for adjudication of claims (including pre-admission certification, pre-determinations, and pre-procedure review) in Blue Cross and Blue Shield’s administration of plan contracts.