Luscious Lips

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Luscious lips are considered a sign of female beauty. While lip fashion may change over time, the definition of beautiful lips is constant. Well-proportioned lips should begin at one pupil and extend to the opposite pupil. Lipsticks can be used to elongate the lips and correct suboptimal proportions. They also can be used to add shine, attract attention, and coordinate colors. Lip cosmetics have been used since 7000 BC when the Sumerians adorned the lips of their male and female royalty. The art of lip adornment was passed through generations from the Egyptians to the Syrians to the Babylonians to the Persians to the Greeks to the Romans to present-day civilizations. Usually plant materials, such as hybrid saffron or brazilwood, were used to obtain a reddish color. The earliest true lipsticks consisted of beeswax, tallow, and pigment.

Modern lipstick was introduced in the 1920s when the "push-up" holder, still used today, was invented. Lipsticks can create or assist in the treatment of lip conditions. This article focuses on the various types of lip products and their value in dermatology.

Lipstick Formulation

Lipstick is an extruded rod of color dispersed in a blend of oils, waxes, and fats packaged in a roll-up tube. The ratio of the oils and waxes is varied by the cosmetic chemist to arrive at the final attributes of the product. For example, a lipstick designed to camouflage lip imperfections must be long-wearing. Elevating the wax concentration, reducing the oil concentration, and increasing the pigment concentration can increase the length of time the color remains on the lips. Lipsticks also can be used to treat nonactinic cheilitis by providing higher lip emolliency. This formulation would be composed with a low wax and high oil concentration to produce a smooth, creamy lip feel.

Waxes are used to adhere the lip color to the lip. The waxes commonly incorporated into lipstick formulations are white beeswax, candelilla wax, carnauba wax, ozokerite wax, lanolin wax, ceresin wax, and other synthetic waxes. Usually lipsticks contain a combination of these waxes carefully selected and blended to achieve the desired melting point. Oils are then added to soften the wax and add shine to the lips. The oils that can be used include castor oil, white mineral oil, lanolin oil, hydrogenated vegetable oils, or oleyl alcohol. The oils also are necessary for dispersion of the pigments.

Various types of coloring agents are used in lipsticks in addition to the waxes and oils previously discussed. Recently, the safety of these coloring agents has been questioned, since a consumer watchdog group announced that several red lipsticks possessed detectable lead levels. The colors used in all cosmetics, including lipsticks, must be approved by the US Food and Drug Administration. The US Food and Drug Administration divides certified colors into 3 groups: Food, Drug, and Cosmetic (FD&C) colors; Drug and Cosmetic (D&C) colors; and External Drug and Cosmetic colors (External D&C). Only the first 2 groups can be used in lipsticks. The External Drug & Cosmetic colors can only be used in locations where they are not likely to enter the mouth.

Companies that manufacture lip cosmetics purchase their individual ingredients from suppliers. The cosmetic company typically receives a certificate indicating that the ingredient purchased meets certain standards. On top of this safeguard, most companies also perform internal testing to insure ingredient purity. There are many checks and balances to prevent the inadvertent contamination of cosmetics.

Specialty Lipsticks

There are a variety of lipsticks designed for unique consumer needs. Because lipsticks can be used for camouflaging, moisturizing, and photoprotection, there are formulations specifically designed for each need. An evaluation of these specially-formulated products is

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important, because the dermatologist is likely to encounter patients who can supplement their lip therapy with proper lipstick selection.

Long-Wearing Lipsticks

Individuals who have a lip deformity or problems with lipstick bleeding due to upper and lower lip rhagades may find a long-wearing lipstick helpful. Basically the lipstick stays in place once applied and does not migrate because it stains the lip. These lipsticks should be used in persons who are undergoing lip filler enhancement where not all of the lines can be filled or when the lines cross from the perioral skin onto the vermillion.

Long-wearing lipsticks employ indelible coloring agents to stain the lip. Indelible coloring agents include bromo acids, such as fluoresceins, halogenated fluoresceins, and related water-insoluble dyes. The most commonly used indelible coloring agent is acid eosin, a tetrabromo derivative of fluorescein. Acid eosin, also known as bromo acid or D&C Red No. 21, is naturally colored orange, but changes to a red salt at a pH of 4. Conditions present on the lip change the orange lipstick to a vivid red indelible stain that is long-lasting. This accounts for the red color of all long-wearing lipsticks.

The biggest problem with long-wearing lipsticks is that they dry the lips and precipitate cheilitis. For this reason long-wearing lipsticks should not be used in persons with dry lips, as the lip xerosis will worsen with continued use of a lip stain. It also is possible to develop an irritant contact dermatitis to bromo acid–containing lipsticks. In patients who have unexplained lip dryness and irritation, it may be worthwhile to recommend the discontinuation of long-wearing lip products.

Lip Balms

An important variant of a lipstick is a lip balm. Lip balms do not contain pigment and are not used for decoration of the lips, but rather to provide moisturization of the lips and protection from the sun and cold. These products form a moisture-resistant film over the lips and act as an occlusive moisturizer to prevent water loss from the transitional mucosa. They usually contain a mixture of mineral oil, wax, and dimethicone. Lip balms also may contain organic sunscreens. Most lip balms have a sun protection factor (SPF) in the 15 to 30 range. Higher SPF lip balms are difficult to develop because the organic filter concentration would need to be increased and these filters have a horrible bitter taste. Yet, lip balms remain an excellent source of photoprotection in persons with actinic cheilitis, leukoplakia, or a history of UV-induced lip cancer.

The proposed 4-star rating system for UVA photoprotection unfortunately works poorly for lip products. Even though UVA protection is important for the lip transitional mucosa, no product could achieve a 3- or 4-star rating because the lip balm would taste so bad no one could stand to wear it on their lips. Determining a rating system for lip balm products is one of the controversial areas of the new sunscreen monograph.

There is a great deal of information on the Internet about the "addictive" potential of lip balms. Some consumers claim that they are addicted to lip balm, carry a tube in their pocket at all times, and must reapply the lip balm several times an hour. I did some informal inquiries into this phenomenon several years ago and determined that patients were not addicted to the lip balm, but rather the waxy feel of the lip balm on the lips. It was a sensory rather than functional addiction. The lip balm did not precipitate further lip dryness, but created a warm, moist feel immediately after application that disappeared as the product remained on the lips. This necessitated the frequent reapplication as the film dissolved.

Lip Gloss

Another popular product to moisturize the lips is lip gloss. Lip gloss is different than lip balm because it does not contain waxes, but only oils and dimethicone. Lip gloss is most popular among adolescents who may select lip gloss as their first cosmetic. It adds shine, smell, and taste to the lips, but not necessarily moisturization. Lip gloss migrates rapidly off the lip and is not a good choice in mature individuals. Additionally some of the oils may be comedogenic. The dermatologist should warn about the use of lip gloss in acne patients with refractory vermillion border comedones.

Lip gloss has seen a resurgence with the popularity of film-forming polymer lipsticks. The polymer dries to a hard pigmented film on the lips, but is extremely drying. To prevent cheilitis and add shine, many polymer lip products are copackaged with a lip gloss for frequent application, the next topic of discussion.

Polymer Film Lipsticks

Another method for enhancing the ability of a lip color to remain on the lips is through the creation of polymer films. Polymer film lipsticks are the newest introduction into the lipstick market. These lip products are packaged as 2-tube products where one end contains the lip color and the opposite end contains a lip gloss or balm. The pigmented polymer is applied first and allowed to dry, followed by the moisturizing gloss or balm. These products stay on until peeled or rubbed off.

For persons who need a long-wearing lip product for camouflage purposes, the polymer film lipsticks are wonderful. They form an opaque film, which can cover pigmentation or vascular abnormalities of the lip. Another layer of camouflage can be added by putting a creamy opaque lipstick on top for moisturization and shine.

The polymer lip products can be used to artistically draw on the lips if they are asymmetric or too small. The polymer film sticks well to any skin surface, but the best results are obtained when combined with a lip liner. The lip liner forms an even edge that can be painted over with the polymer film applicator. As opposed to lipsticks that are rubbed from a waxy stick, polymer film lip products are stroked across the lips with an angled sponge brush. This requires a steady hand for successful application.

Lip Liners

As mentioned previously, the new polymer lip products are best combined with a lip liner. Lip liners are thin extruded pigmented rods encased in wood or placed in an automatic pencil-type holder. Their formulation is similar to lipsticks, except that stiffer waxes with higher melting points are used with minimal oil. This creates an extremely hard rod that applies a thick layer of pigment to the lips. Lip liners are used to define the outer edge of the lips and are valuable in reconstructing a normal lip contour. The thick wax layer applied around the lips also prevents creamier lip products from bleeding. Lip liner is usually selected 1 to 2 shades darker than the lipstick.

Lip liners are indispensable in persons who require lip definition or lip enhancement. They can nicely aid in lip definition for women who have undergone lip augmentation with fillers. Lip liner also can be used to temporarily draw lip proportions prior to filler injections to be sure that the patient is comfortable with the proposed lip size.

Opaque Lipsticks

Opaque lip cosmetics can be used over polymer lip products to prevent inevitable lip dryness. An opaque lip cosmetic also is preferred in patients who require lip camouflaging. The opaqueness is due to incorporation of high titanium dioxide levels in the lipstick. Titanium dioxide provides the best coverage of all the white pigments, including zinc oxide. It must be ground to a fine powder to enable smooth application of the lipstick. It also adds color brightness to lip cosmetics and is used to create pastel shades. Opaque lipsticks are the best lip protection for women with actinic cheilitis. They can nicely protect the lip transitional mucosa after cryosurgery or lip advancement for reconstruction following lip cancer surgery.

Tooth-Whitening Lipsticks

Another new category of lipsticks is tooth-whitening lipsticks. These are sold primarily in drug stores. The name may be misleading, however, since the lipstick does not actually whiten the teeth like the popular tooth-whitening kits containing peroxide. These lipsticks have a bluish-red color that makes the teeth appear white due to the color contrast.

Lip Cosmetics and Allergic Contact Dermatitis

Lipstick can be a cause of allergic contact dermatitis. The lipstick ingredients reported to cause allergic contact dermatitis include: ricinoleic acid,[1] benzoic acid,[2] lithol rubine BCA (Pigment Red 57:1),[3] microcrystalline wax,[4] oxybenzone,[5] propyl gallate,[6] and C18 aliphatic compounds.[7]

The most common cause of allergic contact dermatitis in lipstick is castor oil. Castor oil is found in all lipsticks. It is used to dissolve bromo acid dyes[8-10]; however, the bromo acid dye eosin (D&C Red No. 21) also is a cause.[11] If a patient has recurrent allergic contact dermatitis to many different types and brands of lipstick, castor oil allergy is almost always the problem. Many of these women still want to wear lipstick. A polymer lipstick is an excellent alternative as these products do not contain castor oil.

Summary

Lipsticks are useful for cosmetic adornment, but also can be used by the dermatologist to facilitate the healing of a variety of lip conditions. For example, actinic cheilitis can be minimized by using a sunscreen-containing lip balm or an opaque lipstick. Remember that an opaque lipstick has an unlimited SPF, since the transitional lip mucosa is completely protected. Lip abnormalities can be minimized by selecting a polymer lip product combined with a lip liner. Finally patients who experience problems with lip swelling following the use of lipsticks may be allergic to castor oil. Lipsticks and lip balms are to the lips what hand cream is to the hands. Both are important therapeutic adjuvants in the treatment of dermatologic disease.

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