Acne masks true beauty

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In the *Phantom of the Opera* when Christine, the damsel in distress, removes the phantom's mask, she not only reveals the physical scars of his disfigured face, but his psychological scars as well. Although not quite as dramatic, anyone with acne might experience similar psychological, if not exactly the same physical, damage.

Acne affects approximately 85% of the adolescent population, with boys more often the victims than girls. The incidence peaks at about age 18; however, it can persist into the 30s and beyond. Genetics play a key role in whether or not a person is susceptible to this common skin disorder.

The output of the male hormone androgen, unequally produced in both sexes, increases during puberty. Besides being responsible for certain male characteristics, androgens regulate the amount of oil produced by the sebaceous glands. Located in the dermis—the second of two layers that compose the skin—these oil-producing glands secrete sebum. A mixture of lubricating agents (triglycerides, squalene, and wax esters), sebum protects the skin and hair from dehydration.

The oil is distributed via tiny hair follicles found in this same stratum as the sebaceous glands. An "oil glut," either from excess sebum or as part of a sensitive reaction to normal sebum production, can clog the follicle. Bacteria (*Propionibacterium acnes*) normally found in these tiny ducts may combine with excessive amounts of keratin, a byproduct of old skin cells being sloughed to make room for new cells. This combination can inflame the duct, setting the stage for acne.

Common types of acne

Acne vulgaris, or simply acne, is classified in various ways, depending on certain characteristics. These tidy categories tend to overlap when real people come into the picture. Someone with acne can have more than one type, although one variety often predominates. The following descriptions represent the most common varieties and are not meant to be all inclusive.

Blackheads

The mildest form of acne is blackheads, or open comedones. While sebum and bacteria are found in blackheads, it's the skin pigment keratin—not dirt—that accounts for their dark appearance. These comedones may be flat or slightly raised. They can be as large as 5 mm in diameter. Because blackheads have an open pore on the skin's surface, inflammation rarely occurs.

Whiteheads

With whiteheads, or closed comedones, the trapped sebum can rupture the hair follicle. Bacteria normally residing here may weaken the follicle wall, making it easier for sebum to seep into the surrounding skin. This same bacteria may produce special enzymes that make the sebum more irritating to the surrounding skin once it escapes the follicle. If this happens, the chance for inflammation increases.

Papules

The result of such inflammation may be papules. These raised, red, tender pimples can be just as large in diameter as blackheads. Unlike whiteheads or blackheads, though, pimples contain a small amount of pus. Ironically, this pus is a byproduct of the body's attempt to ward off the infection responsible for the pimple in the first place.

Pustules, nodules, and cysts

Similar to papules, pustules contain more pus. Solid, raised lesions, nodules are often bigger than half a centimeter in diameter. Unlike pustules, nodules take root deeper in the dermis.

Movable, sometimes painful, pus-filled nodules are the hallmark of severe cystic acne. This type of acne also is most likely to leave scars if not treated properly.

Controlling the situation on your own

Unfortunately, no acne cure currently exists. But that doesn't mean the situation remains hopeless. Those factors that cause acne—oil and bacteria—can be controlled with over-the-counter (OTC) or prescription preparations.

Persons with mild acne might try one of the OTC preparations containing benzoyl peroxide before

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seeing a dermatologist. Although other products are available, such as sulfur and salicylic acid (often found in medicated cleansing pads), benzoyl peroxide is used most often.

Most benzoyl peroxide products range in concentrations from 2% to 10%. The higher concentrations don't necessarily ensure better or quicker results. Five percent benzoyl peroxide usually is just as effective as 2% or 10%.

Actually, the higher the concentration, the greater the chance of irritation. But, concentration isn't the only factor contributing to irritation. Whether or not benzoyl peroxide comes in a gel, lotion, or cream might determine how much, if any, irritation occurs. Gels tend to be used more for oilier skin, whereas creams and lotions might be better for more sensitive skin.

Benzoyl peroxide kills the inflammation-inducing bacteria, which prevents new pimples from forming. As a drying agent, it helps control the "oil glut" associated with acne. It also works as an exfoliating agent, allowing old skin to "shed" or flake. This exfoliation opens the pores, enabling oil to reach the surface where excess sebum can be washed away.

As with all acne treatments, patience is a virtue. Four to six weeks may pass before a person may notice improvement.

Cleanliness is next to godliness

Soap and water alone cannot prevent acne. However, cleansing twice a day with a nonirritating facial soap plays a key role in treatment. It not only helps control oil but also may help loosen the comedones.

Because oily skin doesn't stop at the hairline, frequent shampooing is advisable along with keeping hair away from the forehead.

Like most things in life, too much of a good thing proves unwise. Vigorous rubbing only stimulates additional oil production. Abrasive pads or granular cleansers can aggravate existing pimples. Therefore, it's best to stay with that old standby—a soft washcloth—for cleansing.

Seeking professional assistance

If acne seems to be getting worse, and blemishes won't heal or appear to be leaving scars behind despite OTC treatment, it's time to seek professional help. Sometimes psychological factors will cause an acne sufferer to visit a physician. Self-consciousness due to acne can cause a person to withdraw socially or simply become obsessed with his or her

appearance. Because a dermatologist has more treatment options at his or her disposal, another avenue of hope prevails for the self-conscious acne sufferer.

A few of the more common therapies are included here for informational purposes. Only a dermatologist or physician experienced in treating acne can determine the appropriate therapy based on individual circumstances.

Topical medications

Topical tretinoin (Retin A) helps reduce and prevent comedones. Sometimes benzoyl peroxide is added to this treatment regimen if papules and pustules exist or if tretinoin alone proves ineffective. (While OTC and prescription benzoyl peroxide are very similar, some prescription preparations contain an antibiotic for added effectiveness.)

Peeling and itching occur frequently with tretinoin. However, a recently introduced, milder strength formula may prove less irritating. Sensitivity to sunlight may occur during therapy. If that happens, a sunblock, with a sun protection factor (SPF) of 15, which won't clog pores (noncomedogenic), may be needed. Often acne becomes worse before becoming visibly better about two months into treatment.

If tretinoin A and benzoyl peroxide fail, the latter might be replaced with topical clindamycin phosphate or erythromycin. Both of these antibiotics prevent bacterial growth and reduce inflammation with less of a chance for skin irritation.

Sometimes topical medicines don't do the job effectively, or a patient may experience undesirable side effects, such as excessive skin irritation. Also, it may be difficult to apply topical preparations to acne that covers the back, chest, or shoulders. In these instances, the physician may prescribe oral or systemic drugs.

Oral agents

Used alone or with topical preparations, oral antibiotics (tetracycline, erythromycin, minocycline, clindamycin) provide additional ammunition for the assault on acne. Antibiotic therapy can last months, if not longer. Even though oral antibiotics may be used with a relatively high degree of safety, some problems may ensue, including photosensitivity, stomach cramps, nausea, and vaginal infections in women.

Isotretinoin (Accutane) is the strongest medicine to date for treating stubborn, severe cystic scarring acne that has not responded to other treatment. Because it's so potent, isotretinoin requires close

physician supervision. All other acne medication should be discontinued prior to isotretinoin therapy.

This drug has been associated with birth defects. Therefore, women of child-bearing age must undergo a pregnancy test before therapy begins as well as each month treatment continues. Women must use an effective means of birth control before and during treatment.

In addition to causing birth defects, isotretinoin may increase serum cholesterol levels in some persons. Cholesterol levels may be monitored at regular intervals during the initial treatment phase. Facial peeling, cracked or chapped lips, nose and eye dryness, headaches, and low back pain and joint stiffness are some of the side effects associated with use of this drug.

Despite these and other problems, isotretinoin is the closest thing to a cure for acne today. Under the care of a physician experienced in using isotretinoin, an acne sufferer can experience significant improvement and even complete clearing within four to five months. Isotretinoin's results last long after therapy is discontinued.

Hormone therapy

In some women, acne flares up about a week before their menstrual period begins. Researchers believe a fluctuation in the sex hormones estrogen and progesterone may contribute to this outbreak. In an effort to stabilize the hormones and hence control acne, some dermatologists may prescribe an oral contraceptive. (Some oral contraceptives with high progesterone levels actually contribute to acne outbreaks.)

However, the newer oral contraceptives contain lower doses of estrogen and may not work as well in clearing up acne. Pills with higher estrogen content carry certain risks, including an increased incidence of coronary heart disease. These and other side effects should be discussed with a physician before opting for this approach.

After the healing

Especially in the more severe types of acne, scarring may occur even after the lesions disappear. Sometimes plastic surgery—dermabrasion, collagen implants, or a chemical peel—may be warranted.

Dermabrasion involves planing or "sanding" the skin down to the level of the scar. The raw pink skin revealed heals within weeks. The goal of chemical peeling is the same as dermabrasion. Instead of "sanding" the skin, a chemical peel uses a form of carboic acid to burn off a layer of skin. A scab forms

and falls off days later. The new smooth skin may look dark or raw, and it can take months before the skin returns to normal color.

As with any surgery, infection can occur. It is important to stay out of the sun until this new skin heals. Fair-complected individuals tend to make better candidates for dermabrasion and chemical peels. Discoloration or blotchiness occurs more often with darker complexions.

Unlike the previously described procedures, collagen implants plump up the depressed scar to the level of the surrounding skin. A few weeks after the initial treatment, an additional collagen injection may be required. Likewise, months or even years after initial treatment, additional injections may be necessary to maintain the elevation.

Aggravating factors:

Separating fact from fiction

While medical science can do much for acne, shunning those things known to aggravate this skin disorder makes sense. With that in mind, let's examine some actual and *perceived* instigators:

Cosmetics

In our youth-oriented society, any product that promises wrinkle-free skin proves popular. Women in their mid-20s and younger are using moisturizers in an early attempt to stall the signs of aging. For the acne-prone woman, such a practice usually is ill-advised.

Moisturizers seal in existing sebum found in all skin types. However, acne-prone skin already has too much oil. Preventing this existing sebum from escaping only compounds the problem. Yet, because dry skin often is associated with acne treatment, some moisturizing may be necessary. In that case, one that doesn't clog pores or contain greasy ingredients is best.

But, just because a product says it's "oil free" doesn't mean it won't clog pores. Ingredients to watch out for include: fatty alcohols (cetyl, myristyl, stearyl), synthetic emollient esters (cetyl lactate, propylene glycol dicaprylate/dicaprate), and synthetic fatty detergents (PEG-40 stearate, laneth-10 acetate). Yet, even though "oil-free" moisturizers may contain some oil, they are better for the skin than those that are formulated with mineral or vegetable oil.

Moisturizers aren't the only culprits, though. Some foundations or makeup bases may contain synthetic fatty acid derivatives, such as derivative isopropyl myristate, that inhibit cell exfoliation.

However, those with neutralized or stearified fatty acids are less likely to cause breakouts than nonstearified fatty acids. Likewise, water-based makeup and those with nonoily wetting agents, such as polysaccharides, provide an alternative for acne-prone women.

While hairspray, styling gel, and mousse aren't normally thought of as cosmetics, these grooming products can contribute to breakouts, especially along the hairline. Avoiding their use altogether affords the best protection against such breakouts. If that's not possible, try to avoid direct contact with the skin.

Keeping with personal grooming, shaving can irritate existing facial pimples. Men should shave as seldom as possible. Warm water and soap will soften the beard enough so that not too much pressure needs to be exerted when using the safety razor. A fresh blade works better than a dull one. Another option is an electric razor, again using a light touch.

Local friction

Tight shirt collars or a football helmet strap snugly resting under the chin can aggravate acne, too. Any confining clothes or athletic equipment creates heat and perspiration, both prime "breeding ground" for acne. (These culprits might explain, in part, why breakouts happen more often during humid weather.)

Similarly, frequently placing the hands on the face for long periods should be avoided. And, picking or scratching existing pimples is a no-no. This only increases the chance of inflammation, scarring, and infection. Blackheads should be removed only under a physician's guidance.

Diet

Whether or not certain foods—potato chips, chocolate, soda—actually aggravate acne remains uncertain. Even among physicians, the diet debate rages on. Perhaps the best guide to follow is to enjoy what are usually considered junk foods only occasionally. If a connection seems to exist between a specific food and a flare-up, avoid it. A well-balanced diet certainly can't hurt, either.

Sex

Acne sufferers will be glad to know that sexual behavior has no bearing on the severity or frequency of breakouts.

Stress

Like the diet dilemma, stress has not been unequivocally linked with flare-ups. But because

emotions and physical well-being often are interrelated, stress might be considered a *possible* instigator.

Perhaps the most difficult obstacle to overcome is the acne sufferer's self-consciousness: the feeling that others see only the physical blemishes. While modern medicine can help attain an improved physical appearance, it's up to the individual to let his or her true beauty emerge.

(All material in the Patient health guide is reviewed by JAOA physician referees.)

References:

Acne. In the *American Medical Association Family Medical Guide*. Edited by Jeffrey R.M. Kunz and Asher J. Finkel. Random House, New York, 1987.

Acne. In *The Merck Manual of Diagnosis and Therapy*. Edited by Robert Berkow, et al. Ed 15. Merck Sharp & Dohme Research Laboratories, Rahway, NJ, 1987.

Acne after 30. By Ellen Benolt. *Forbes*, vol 136, pp 137-138, Oct 7, 1985.

Acne and cosmetic surgery. In the *Columbia University College of Physicians and Surgeons Complete Home Medical Guide*. Edited by Donald F. Tapley, et al. Crown Publishers, Inc, New York, 1985.

Acne products. In the *Handbook of Nonprescription Drugs*. Ed 8. The American Pharmaceutical Association, Washington, DC, 1986.

Acne vulgaris. In *Current Medical Diagnosis & Treatment 1988*. Edited by Steven A. Schroeder, Marcus A. Krupp, and Lawrence M. Tierney, Jr. Appleton & Lange, Norwalk, Conn, 1988.

An update on acne management. By Peter E. Pochi, Alan R. Shalita, and David A. Whiting. *Patient Care*, vol 23, pp 85-102, 121, Feb 28 1989.

Breakout! What's food got to do with it? By Annette Kornblum. *Health*, vol 17, pp 53-54, August 1985.

Cosmetic care of acne. By Frances Pascher. *Dermatology & Allergy*, vol 5, pp 38-42, July 1982.

Hope for acne victims (press release). American Academy of Dermatology, Evanston, Ill, 1987.

Interview with dermatologist Charles Hughes, DO, Colorado Springs, Col, March 14, 1989.

Lookin' good (pamphlet). Hoechst-Roussel Pharmaceuticals, Inc, Somerville NJ, 1984.

Management of acne vulgaris. By Martin Quan and Richard A. Strick. *American Family Physician*, vol 38, pp 207-218, August 1988.

On your way to a clear complexion (pamphlet). Westwood Pharmaceuticals Inc, Buffalo, NY, 1986.

Reactions to cosmetics (pamphlet). American Academy of Dermatology, Evanston, Ill, 1987.

Something can be done about acne (pamphlet). American Academy of Dermatology, Evanston, Ill, 1987.

Sun raises skin cancer risks. By Margaret Reich. *The Journal of the American Osteopathic Association*, vol 88, pp 813-817, June 1988.

When adults get acne. By David Groves. *McCall's*, vol 115, pp 79-79, August 1988.

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However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.) demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. [Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.]

In a 24-month toxicity study in rats, at dose levels approximately 8 to 48 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

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Pregnancy Category B: Reproduction studies have been performed in rats, rabbits and mice at doses up to 40 times the normal human dose and have revealed no evidence of impaired fertility or harm to the fetus due to 'Tagamet'. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproductive studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Lack of experience to date precludes recommending 'Tagamet' for use in children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken by patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache. Reversible confusional states [e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation], predominantly in severely ill patients, have been reported. Reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, has been reported. The incidence of impotence in large-scale surveillance studies at regular doses has not exceeded that commonly reported in the general population. Gynecomastia has been reported in patients treated for one month or longer. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and, very rarely, cases of aplastic anemia have also been reported. Increased serum transaminase has been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported. Increased plasma creatinine has been reported. Rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including anaphylaxis and hypersensitivity vasculitis, have been reported. Rare cases of bradycardia, tachycardia and A-V heart block have been reported with H₂-receptor antagonists. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported rarely. Rare cases of polymyositis have been reported, but no causal relationship has been established. Mild rash and, very rarely, cases of severe generalized skin reactions [e.g., Stevens-Johnson syndrome, epidermal necrolysis, erythema multiforme, exfoliative dermatitis and generalized exfoliative erythroderma] have been reported with H₂-receptor antagonists. Reversible alopecia has been reported very rarely.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only); and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquids: 300 mg./5 mL., in 8 fl. oz. (237 mL.) amber glass bottles and in single-dose units (300 mg./5 mL.), in packages of 10 (intended for institutional use only).

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Vials: 300 mg./2 mL. in single-dose vials, in packages of 10 and 30, and in 8 mL. multiple-dose vials, in packages of 10 and 25.

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