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Industry News

FDA launches tool to improve management of antibiotic use. December 13, 2017. Healio Dermatology.

<https://www.healio.com/internal-medicine/pharmacology/news/online/%7B94e1718d-123d-4676-8b98-73881dc1e839%7D/fda-launches-tool-to-improve-management-of-antibiotic-use>

The FDA announced the launch of a new website that streamlines its approach to updating critical information regarding antibiotics and antifungal drugs, according to a press release. The website was created by the FDA to help health care professionals make more informed prescribing decisions to enhance patient care and prevent antimicrobial resistance, according to the release. The website will provide physicians with information about bacterial or fungal infections and their likelihood to respond to specific drugs, according to the FDA. “Antimicrobial resistance remains one of our most pressing public health challenges,” Scott Gottlieb, MD, commissioner of the FDA, said in the release. “While we’re continuing our policy efforts to encourage the development of new drugs and limit the use of antibiotics in livestock, we also need to take new steps to encourage more appropriate use of these treatments in patient care.” The new tool eliminates the old process that unnecessarily delayed updated information from antimicrobial susceptibility tests (AST) from reaching physicians because the information had to be reviewed and approved by the FDA on a case-by-case basis, according to the FDA. Under the new approach, the FDA can update susceptibility test interpretive criteria, or “breakpoints,” for multiple drugs with the same active ingredient while concurrently sharing that information on a specific FDA webpage, according to the release. If companies disagree with the recognized standard, they will be able to submit data to support alternative breakpoints, according to the release. The process for drug manufacturers will also be more efficient and timely, as they will only have to reference the FDA website containing the breakpoint information, according to the FDA. “When you’re treating critically ill patients, you want as much information as possible about the pathogen your patient is fighting and the susceptibility of that pathogen to various treatments,” Gottlieb said. “Prescribing a drug that’s only going to be met with resistance from the bacteria or fungus it’s intended to treat doesn’t help that patient, and it has broader public health consequences that cannot be ignored.” “Under the old approach, it took too long to update each individual drug’s labeling with information needed for susceptibility testing and it was clear a more centralized approach was needed,” he continued. “Our new tool is aimed at making this process more efficient and informed.”

New Medical News

Long-term administration of oral macrolides for acne treatment increases macrolide-resistant propionibacterium acnes. Nakase K, Okamoto Y, Aoki S, Noguchi N. J Dermatol. 2017 Dec 13. doi: 10.1111/1346-8138.14178. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29235673>

Macrolide-resistant *Propionibacterium acnes* are frequently isolated from patients with acne vulgaris, and the most resistant isolates (>90% resistance) have the 23S rRNA mutation. An increase in resistant *P. acnes* with this mutation is thought to be caused by the inappropriate use of antimicrobials. Therefore, we studied the mutation frequency of macrolide resistance in *P. acnes* in vitro. When *P. acnes* mutants were exposed to clarithromycin after being incubated in broth without antimicrobials, resistant mutants with the 23S rRNA mutation were not isolated. However, the mutants were obtained at the frequency of 10^{-6} after being pre-incubated with 0.03 µg/mL of

antimicrobials. This is the estimated epidermal concentration of clarithromycin after p.o. administration. The resistant mutants had the 23S rRNA mutations A2058G, A2059G and C2611G. When pre-incubated with clarithromycin, C2611G mutants which showed resistance to clarithromycin were obtained 32.1% more often than pre-incubated with clindamycin ($P < 0.01$). By contrast, when pre-incubated with clindamycin, A2058G mutants, which show high-level resistance to both clarithromycin and clindamycin, were more frequently obtained than pre-incubated with clarithromycin (87.5%, $P < 0.01$). No difference in the isolation rate of A2059G mutants, which show high-level resistance to macrolides but low-level resistance to clindamycin, was found with either treatment. These results indicate the possibility that long-term use of oral macrolides for acne treatment facilitate the increase of macrolide-resistant *P. acnes*.

Microneedling combined with platelet-rich plasma or trichloroacetic acid peeling for management of acne scarring: A split-face clinical and histologic comparison. El-Domyati M, Abdel-Wahab H, Hossam A. *J Cosmet Dermatol.* 2017 Dec 10. doi: 10.1111/jocd.12459. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29226630>

BACKGROUND: Minimally invasive procedures provide effective, safe, relatively long-lasting, and natural results without large damage to the skin. A combination treatment is considered an approach that includes at least 2 different and unrelated modalities. **OBJECTIVES:** This study aims to evaluate the use and effectiveness of some combined minimally invasive procedures for management of acne scarring. **PATIENTS/METHODS:** Twenty-four volunteers with post acne atrophic scars were randomly divided into 3 equal groups according to performed procedure on each side of the face (microneedling by dermaroller alone or combined with platelet-rich plasma [PRP] or trichloroacetic acid [TCA] 15% peeling) and received 6 bi-weekly sessions of treatment. Photography and punch biopsies were taken before and after 3 months of treatment for clinical, histological, and histometrical evaluation. **RESULTS:** Combined treatment of dermaroller and PRP or dermaroller and TCA 15% showed significant improvement when compared with dermaroller alone ($P = .015$ and $.011$ respectively). Epidermal thickness showed statistically significant increase in studied groups, mainly after dermaroller and TCA 15%. Moreover, the 3 studied groups showed more organized collagen bundles and newly formed collagen formation and markedly decreased abnormal elastic fibers. **CONCLUSIONS:** Based on the clinical, histometrical, and histochemical assessment, inspite that most volunteers showed significant improvement after treatment, however, the combined use of dermaroller and TCA 15% was more effective in post acne atrophic scars than the use of dermaroller and PRP or dermaroller only.

Investigational drugs in clinical trials for hidradenitis suppurativa. Theut Riis P, Thorlacius LR, Jemec GB. *Expert Opin Investig Drugs.* 2017 Dec 4:1-11. doi: 10.1080/13543784.2018.1412430. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29188733>

Hidradenitis suppurativa is a chronic skin disease with a significant unmet need for treatment options. Randomized controlled trials are few and only a single drug (adalimumab) has Hidradenitis as a registered indication. Areas covered: The clinicaltrials.gov and the EudraCT clinical trials register for reported trials on Hidradenitis Suppurativa was searched on the 22-06-2017. Trials for upcoming new drugs for HS are reported focusing on drugs in phase I and II trials. Expert opinion: Currently, MABp1, Secukinumab, CJM112, Apremilast and IFX-1 are being investigated in Phase I and II trials and offer theoretical and promising new treatment options. A trial with the drug MEDI8968 has been terminated with disappointing results. Metformin, Botulinum Toxin B, Provodine, Benzoyl Peroxide and

intralesional triamcinolone are being tested as well. Treatment of Hidradenitis remains a challenge and quality RTCs are needed. Studies indicates a range of potential targets for therapy such as interleukin-1 and interleukin-17, but 'broad-spectrum' immunosuppressants like phosphodiesterase-4 inhibitors are being examined as well. A range of outcomes, including Physician Global Assessment, Sartorius scores and hidradenitis suppurativa clinical response are used in these trials, making future meta-analysis of the data difficult.

Acne in late adolescence and risk of prostate cancer. Ugge H, Udumyan R, Carlsson J, et al. *Int J Cancer*. 2017 Dec 4. doi: 10.1002/ijc.31192. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29205339>

Accumulating evidence suggest that *Propionibacterium acnes* may play a role in prostate carcinogenesis, but data are so far limited and inconclusive. The aim of this population-based cohort study was therefore to test whether presence of acne vulgaris during late adolescence is associated with an increased risk of prostate cancer later in life. We identified a large cohort of young men born in Sweden between 1952 and 1956, who underwent mandatory assessment for military conscription around the age of 18 (n= 243,187). Test information along with health data including medical diagnoses at time of conscription was available through the Swedish Military Conscription Register and the National Patient Register. The cohort was followed through linkages to the Swedish Cancer Register to identify the occurrence of prostate cancer until December 31st 2009. We used Cox regression to calculate adjusted hazard ratios (HR) and 95% confidence intervals (95% CI) for the association between acne in adolescence and prostate cancer risk. A total of 1,633 men were diagnosed with prostate cancer during a median follow-up of 36.7 years. A diagnosis of acne was associated with a statistically significant increased risk for prostate cancer (adjusted HR: 1.43 95%; CI: 1.06-1.92), particularly for advanced stage disease (HR: 2.37 95%; CI 1.19-4.73). A diagnosis of acne classified as severe conferred a 6-fold increased risk of prostate cancer (HR: 5.70 95% CI 1.42-22.85). Data from this large prospective population-based cohort add new evidence supporting a role of *P acnes* infection in prostate cancer.

Suppressed adiponectin levels and increased adiponectin response to oral glucose load in lean women with severe acne normalizes after isotretinoin treatment. Aydin K, Çetinözman F, Elcin G, et al. *Dermatology*. 2017 Dec 1. doi: 10.1159/000484168. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29190629>

BACKGROUND/AIM: Isotretinoin, the drug of choice for severe acne, might be associated with a decrease in insulin sensitivity. Adiponectin is an adipose tissue-derived protein that increases insulin sensitivity. In this study, we aimed to investigate adiponectin levels in postadolescent severe acne and the effect of isotretinoin on adiponectin levels. **METHODS:** Participants included 18 female patients with severe acne and 18 healthy women matched for age and body mass index (BMI). Acne patients completed a 6-month isotretinoin treatment. Anthropometric measurements, serum adiponectin, lipids, fasting glucose, fasting insulin, and homeostatic model assessment for insulin resistance (HOMA-IR) were determined, and a standard 2-h oral glucose tolerance test (OGTT) was performed in healthy women once and in patients with acne before and after treatment. **RESULTS:** At baseline, patients with acne had significantly lower serum adiponectin levels than controls. Isotretinoin treatment resulted in a significant increase in weight, BMI, and triglyceride and adiponectin levels. Glucose metabolism markers in patients with acne and controls were similar at baseline and did not change after treatment. Baseline OGTT in acne patients revealed an increased adiponectin response at 2 h, which was not present in healthy controls. Remarkably, this OGTT-induced adiponectin increment in acne patients was diminished after isotretinoin treatment. **CONCLUSION:** Adiponectin levels are differently regulated in women with severe acne and healthy controls in that circulating basal levels in

patients are suppressed and show an increase in response to oral glucose load. Suppression of baseline adiponectin ameliorates after 6 months of isotretinoin treatment, reaching levels similar to those of healthy controls.

A cross-sectional study of clinical factors associated with acne facial scarring in patients with active acne.

Dessinioti C, Zisimou C, Platsidaki E, et al. J Eur Acad Dermatol Venereol. 2017 Dec 1. doi: 10.1111/jdv.14726. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29194788>

Scarring may occur in 45% to 55% of acne patients, it may produce significant psychopathology, and it is challenging to treat. Identifying factors associated with acne scars may assist in their prevention strategy. We conducted a cross-sectional study to investigate clinical factors associated with acne facial scarring at first visit, including age, sex, smoking, family history of acne, and the history of previous acne treatments. Active acne on the face was graded by the Global Evaluation of Acne (GEA) scale (0-5), as previously described. The presence of acne scars (atrophic or hypertrophic) on the face, or macular erythema, was recorded. The hospital IRB approved the study. Statistical significance level was set at $P < 0.05$.

Human skin permeation studies with PPAR γ agonist to improve its permeability and efficacy in inflammatory processes.

Silva-Abreu M, Espinoza LC, Rodríguez-Lagunas MJ, et al. Int J Mol Sci. 2017 Nov 28;18(12). pii: E2548. doi: 10.3390/ijms18122548. <http://www.mdpi.com/1422-0067/18/12/2548>

Rosacea is the most common inflammatory skin disease. It is characterized by erythema, inflammatory papules and pustules, visible blood vessels, and telangiectasia. The current treatment has limitations and unsatisfactory results. Pioglitazone (PGZ) is an agonist of peroxisome proliferator-activated receptors (PPARs), a nuclear receptor that regulates important cellular functions, including inflammatory responses. The purpose of this study was to evaluate the permeation of PGZ with a selection of penetration enhancers and to analyze its effectiveness for treating rosacea. The high-performance liquid chromatography (HPLC) method was validated for the quantitative determination of PGZ. Ex vivo permeation experiments were realized in Franz diffusion cells using human skin, in which PGZ with different penetration enhancers were assayed. The results showed that the limonene was the most effective penetration enhancer that promotes the permeation of PGZ through the skin. The cytotoxicity studies and the Draize test detected cell viability and the absence of skin irritation, respectively. The determination of the skin color using a skin colorimetric probe and the results of histopathological studies confirmed the ability of PGZ-limonene to reduce erythema and vasodilation. This study suggests new pharmacological indications of PGZ and its possible application in the treatment of skin diseases, namely rosacea.

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Prevalence of flp pili-encoding plasmids in cutibacterium acnes isolates obtained from prostatic tissue.

Davidsson S, Carlsson J, Mölling P, et al. Front Microbiol. 2017 Nov 16;8:2241. doi: 10.3389/fmicb.2017.02241. eCollection 2017. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5696575/>

Inflammation is one of the hallmarks of prostate cancer. The origin of inflammation is unknown, but microbial infections are suspected to play a role. In previous studies, the Gram-positive, low virulent bacterium *Cutibacterium* (formerly *Propionibacterium*) *acnes* was frequently isolated from prostatic tissue. It is unclear if the presence of the bacterium represents a true infection or a contamination. Here we

investigated *Cutibacterium acnes* type II, also called subspecies *defendens*, which is the most prevalent type among prostatic *C. acnes* isolates. Genome sequencing of type II isolates identified large plasmids in several genomes. The plasmids are highly similar to previously identified linear plasmids of type I *C. acnes* strains associated with acne vulgaris. A PCR-based analysis revealed that 28.4% (21 out of 74) of all type II strains isolated from cancerous prostates carry a plasmid. The plasmid shows signatures for conjugative transfer. In addition, it contains a gene locus for tight adherence (*tad*) that is predicted to encode adhesive Flp (fimbrial low-molecular weight protein) pili. In subsequent experiments a *tad* locus-encoded putative pilin subunit was identified in the surface-exposed protein fraction of plasmid-positive *C. acnes* type II strains by mass spectrometry, indicating that the *tad* locus is functional. Additional plasmid-encoded proteins were detected in the secreted protein fraction, including two signal peptide-harboring proteins; the corresponding genes are specific for type II *C. acnes*, thus lacking from plasmid-positive type I *C. acnes* strains. Further support for the presence of Flp pili in *C. acnes* type II was provided by electron microscopy, revealing cell appendages in *tad* locus-positive strains. Our study provides new insight in the most prevalent prostatic subspecies of *C. acnes*, subsp. *defendens*, and indicates the existence of Flp pili in plasmid-positive strains. Such pili may support colonization and persistent infection of human prostates by *C. acnes*.

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Calcifying acne: An unusual extraoral radiographic finding. Horgan T, McNamara C, Ireland A, et al. Case Rep Dent. 2017;2017:3514936. doi: 10.1155/2017/3514936. Epub 2017 Nov 2. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5688257/>

Calcinosis cutis is a condition of accumulation of calcium salts within the dermis leading to the formation of a calcified mass. This complication has been reported in acne vulgaris and other systemic metabolic disorders. This paper presents a rare case of calcinosis cutis in a 14-year-old male which was found at a routine orthodontic assessment.

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Immunohistochemical expression of cyclo-oxygenase 2 and liver X receptor- α in acne vulgaris.

Bakry OA, El Faragy SM, El Kady NNED, Dawy HFA. J Clin Diagn Res. 2017 Sep;11(9):WC01-WC07. doi: 10.7860/JCDR/2017/28754.10577. Epub 2017 Sep 1. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5713839/>

INTRODUCTION: Acne Vulgaris (AV) is a common inflammatory disease of pilosebaceous units. Liver X Receptor- α (LXR- α) is a ligand activated transcription factor. It controls transcription of genes involved in lipid and fatty acid synthesis. Cyclo-oxygenase 2 (COX2) is a rate limiting enzyme in prostaglandin synthesis. It plays important role in inflammation. AIM: To evaluate the immunohistochemical expression of LXR- α and COX2 in acne vulgaris skin biopsies to explore their possible pathogenic role in this disease. MATERIALS AND METHODS: Sixty five subjects were included (45 cases with AV and 20 age and gender-matched healthy controls). Skin biopsies were taken from lesional and perilesional skin of cases and from site-matched areas of control subjects. The evaluation of LXR- α and COX2 was done using immunohistochemical technique. Data were collected, tabulated and statistically analyzed using a personal computer with "(SPSS) version 11" program. Chi-square test was used to study the association between qualitative variables. Mann-Whitney test was used for comparison between quantitative variables. Student's t-test was used for comparison between two groups having quantitative variables. Spearman's

coefficient was used to study the correlation between two different variables. Differences were considered statistically significant with $p < 0.05$. RESULTS: COX2 was upregulated in lesional skin compared with peilesional and control skin both in epidermis and pilosebaceous units ($p < 0.001$ for all). Higher epidermal COX2% was significantly associated with papulopustular acne ($p = 0.009$) and higher acne score ($p = 0.018$). Higher pilosebaceous units COX2% was significantly associated with papulopustular acne ($p = 0.04$). LXR- α was upregulated in lesional skin compared with peilesional and control skin both in epidermis and pilosebaceous units ($p < 0.001$ for all). Higher LXR- α % in epidermis and pilosebaceous units was significantly associated with papulopustular acne ($p = 0.01$ for both) and higher acne score ($p = 0.03$ for both). Significant positive correlation was detected between COX2% and LXR- α % in epidermis ($p = 0.001$, $r = 0.87$) and pilosebaceous units ($p = 0.001$, $r = 0.65$). CONCLUSION: Both LXR- α and COX-2 play a role in the pathogenesis of acne vulgaris through their effects on cellular proliferation, inflammation and lipid synthesis. Research for new therapeutic modalities based on their inhibition is needed. More understanding of the interaction between LXR- α , COX2 and acne lesions may lead to effective interference, possibly directed toward specific cell types or steps within inflammatory pathways.

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Clinical Reviews

Price discrepancies among mobile medication applications for common dermatologic prescriptions: observational cost analysis. Dobkin HE, Zirwas M. J Am Acad Dermatol. 2017 Dec;77(6):1181-1182. doi: 10.1016/j.jaad.2017.07.017. <https://www.ncbi.nlm.nih.gov/pubmed/?term=29132854>

To the Editor: Prescription medication cost has been on the rise in the United States, outpacing inflation and increasing medication nonadherence. Mobile applications and discount programs have arisen in response to this problem, but limited data exists regarding whether these entities actually reduce costs, whether cost savings are similar across entities, or whether cost savings are consistent over time. This observational cost analysis assessed 3 prominent mobile medication applications: GoodRx, Blink Health, and SingleCare. One of the authors of the study created a list of 21 of his most commonly prescribed dermatologic medications ([Table I](#)). The lowest price of each medication was researched on the 3 applications on May 10, 2017, and then again on June 10, 2017. Prices that could only be obtained by paying for a membership in a pharmacy chain's discount program were excluded. The pricing of the 21 medications from the 3 applications on May 10, 2017, and June 10, 2017, along with the overall GoodRx pricing analysis, can be found in [Tables I](#) and [II](#). Not a single medication had an identical price between the 3 applications during the study. Blink Health medications cost an average of 2.82 times the amount of GoodRx medications on May 10, 2017, and 2.84 times the amount on June 10, 2017. SingleCare medications cost an average of 1.55 times the amount of GoodRx medications on May 10, 2017, and 1.52 times the amount on June 10, 2017. Month-to-month changes in prices were common on all 3 apps. The pricing variability across the 3 mobile medication applications shows evident medication pricing discrepancies and a trend suggesting GoodRx is the superior application for finding the cheapest medication costs among the 3 applications studied. One of the authors of this study routinely uses the mobile applications of this study alongside patients to determine the lowest price option before the patient leaves the clinic. Qualitatively, this has increased patient-doctor trust and dramatically decreased phone calls from patients or the need for prior authorizations. Although not a mobile application, the online pharmacy GenRx, has been another innovation for providing dermatologic medications at very low costs for patients.⁵ [GenRx has only a limited number of medications \(approximately 25 as of June 2017\), all of which are](#)

dermatology specific and manufactured by the drug company PruGen. However, any prescriptions for these medications that are sent to GenRx are filled at no cost to patients who have insurance, regardless of if the medication is covered by the patient's insurance or not, and at a cost of US \$25 to patients who do not have insurance. PruGen clearly reduces out-of-pocket costs for patients, but because GenRx does bill the patient's insurance, it is unclear what the effect on overall health spending is. It is evident that using the available apps and GenRx reduces out-of-pocket costs for patients. GoodRx appears to offer the overall greatest savings among the most popular apps, while GenRx offers the maximum possible out-of-pocket savings for the limited medications covered.

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State-of-the-art lasers and light treatments for vascular lesions: from red faces to vascular malformations.

Valdebran M, Martin B, Kelly KM. *Semin Cutan Med Surg.* 2017 Dec;36(4):207-212. doi: 10.12788/j.sder.2017.044. <https://www.ncbi.nlm.nih.gov/pubmed/29224039>

Notable milestones in the treatment of vascular lesions have been achieved over the past century. Many cutaneous vascular lesions can be successfully treated with light based devices. In this review, we will discuss the treatment of port-wine birthmarks, lymphatic malformations, infantile hemangiomas, rosacea, venous lakes, pyogenic granulomas, cherry angiomas, and angiofibromas using lasers, total reflection amplification of spontaneous emission of radiation, intense pulsed light, and photodynamic therapy. In addition, for several of these diagnoses, we will review medical therapies that can be combined with light-based devices to provide enhanced results.

Evaluation of the effects of acne vulgaris on quality of life in Turkey by using TAQLI.

Gokalp H, Bulur I, Kaya Erdoğan H, et al. *J Cosmet Dermatol.* 2017 Dec;16(4):485-490. doi: 10.1111/jocd.12294. Epub 2016 Nov 4. <https://www.ncbi.nlm.nih.gov/pubmed/29197171>

BACKGROUND: Acne vulgaris (AV) is a chronic, inflammatory skin disease that may cause various psychiatric and/or psychological problems. **OBJECTIVE:** In this study, we aimed to determine the effect of AV on the quality of life in the Turkish population using the Turkish Acne Quality of Life Index (TAQLI). **METHODS:** A total of 960 patients with AV who attended the dermatology department were included in the study. Acne severity was determined using the global acne classification system. TAQLI was used to evaluate the effect of acne on quality of life. **RESULTS:** The 960 patients consisted of 673 (70.1%) females and 287 (29.9%) males. There were 536 (55.8%) patients under the age of 20, 386 (40.2%) aged 20-30, and 38 (4.0%) over 30. Acne duration varied between 1 and 20 years, and the mean duration was 2.95 ± 2.53 years. The mean TAQLI value of all patients was 20.8 ± 9.5 . The mean TAQLI value was statistically significantly higher in female patients, in patients with an acne duration of more than 2 years, and in those with very severe acne. However, no statistically significant difference was found between the age groups. **CONCLUSION:** We observed that the quality of life in patients with AV was affected, and this effect was more significant in female patients, patients with severe acne and longer acne duration. We believe that the psychiatric/psychological effects should be followed up closely in this group of patients.

Postinflammatory hyperpigmentation: epidemiology, clinical presentation, pathogenesis and treatment.

Kaufman BP, Aman T, Alexis AF. *Am J Clin Dermatol.* 2017 Dec 8. doi: 10.1007/s40257-017-0333-6. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29222629>

Postinflammatory hyperpigmentation (PIH) is a reactive hypermelanosis that develops following cutaneous inflammation. Common causes of PIH include intrinsic skin conditions (e.g., acne and eczema) as well as external insults to the skin, such as burn injuries and dermatologic procedures. PIH more commonly occurs in individuals with darker skin, for whom it is often a source of significant psychological distress. Several therapeutic modalities are available for the treatment of PIH, including topical agents, chemical peels, and energy-based devices. We review the epidemiology, clinical presentation, pathogenesis, and treatment of PIH.

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Examining the potential preventative effects of minocycline prescribed for acne on the incidence of severe mental illnesses: A historical cohort study.

Herrero-Zazo M, Brauer R, Gaughran F, et al. *J Psychopharmacol.* 2017 Dec 1:269881117743483. doi: 10.1177/0269881117743483. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29215319>

BACKGROUND: Animal studies suggest that the antibiotic and microglial activation inhibitor, minocycline, is likely to have a protective effect against the emergence of psychosis but evidence from human studies is lacking. The aim of this study is to examine the effects of exposure to minocycline during adolescence on the later incidence of severe mental illness (SMI). **METHODS:** A historical cohort study using electronic primary care data was conducted to assess the association between exposure to minocycline during adolescence and incidence of SMI. The Incidence Rate Ratio (IRR) was measured using Poisson regression adjusted for age, gender, time of exposure, socioeconomic deprivation status, calendar year and co-medications. **RESULTS:** Early minocycline prescription (n=13,248) did not affect the incidence of SMI compared with non-prescription of minocycline (n=14,393), regardless of gender or whether or not the data were filtered according to a minimum exposure period (minimum period: IRR 0.96; 95% CI 0.68-1.36; p=0.821; no minimum period: IRR 1.08; 95% CI 0.83-1.42; p=0.566). **CONCLUSIONS:** Exposure to minocycline for acne treatment during adolescence appears to have no effect on the incidence of SMI.

The role of zinc in the treatment of acne: A review of the literature.

Cervantes J¹, Eber AE¹, Perper M¹, et al. *Dermatol Ther.* 2017 Nov 28. doi: 10.1111/dth.12576. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29193602>

Acne vulgaris is a chronic disease of the pilosebaceous units presenting as inflammatory or noninflammatory lesions in individuals of all ages. The current standard of treatment includes topical formulations in the forms of washes, gels, lotions, and creams such as antibiotics, antibacterial agents, retinoids, and comedolytics. Additionally, systemic treatments are available for more severe or resistant forms of acne. Nevertheless, these treatments have shown to induce a wide array of adverse effects, including dryness, peeling, erythema, and even fetal defects and embolic events. Zinc is a promising alternative to other acne treatments owing to its low cost, efficacy, and lack of systemic side effects. In this literature review, we evaluate the effectiveness and side-effect profiles of various formulations of zinc used to treat acne.

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Diet and rosacea: the role of dietary change in the management of rosacea. Weiss E, Katta R. *Dermatol Pract Concept.* 2017 Oct 31;7(4):31-37. doi: 10.5826/dpc.0704a08. eCollection 2017 Oct. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5718124/>

Dietary change may play a role in the therapy of rosacea. Certain foods and beverages may act as "triggers" for rosacea exacerbations. These may be divided into heat-related, alcohol-related, capsaicin-related, and cinnamaldehyde-related. One potential pathogenic mechanism may be via the activation of transient receptor potential cation channels, which result in neurogenic vasodilatation. Further research is needed on the role of the gut skin connection in rosacea. Epidemiologic studies suggest that patients with rosacea have a higher prevalence of gastrointestinal disease, and one study reported improvement in rosacea following successful treatment of small intestinal bacterial overgrowth. While further research is required in this area, patients may be advised on measures to support a healthy gut microbiome, including the consumption of a fiber-rich (prebiotic) diet.

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Patient Counseling/Communication

Social media creates anxiety for teenagers with acne. Publish date: December 13, 2017 MDedge. *Cutis.*

<http://www.mdedge.com/cutis/article/154328/acne/social-media-creates-anxiety-teenagers-acne?channel=171>

Adolescents with acne experience anxiety over using social media, according to a recent online survey of teenagers in the United States. The results of the survey, conducted by Harris Poll on behalf of Cutanea Life Sciences, Inc, demonstrate the negative impact of acne on body image and self-esteem. Of 1010 teens surveyed (age range, 15–19 years), 86% said they have had acne, and a majority of respondents said that acne has a negative effect on their body image and attractiveness (71%) as well as their self-esteem (67%). Fifty-one percent of respondents who use social media said it makes having acne harder and 72% agreed most teenagers with acne are self-conscious about showing their acne on social media. As a result, 68% reported that most of their peers with acne edit or alter their photographs on social media, and 58% have offered to take a photograph to avoid being in a picture.

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Which skin type is prevalent in Korean post-adolescent acne patients?: A pilot study using the Baumann Skin Type Indicator. Lee YB, Park SM, Bae JM, et al. *Ann Dermatol.* 2017 Dec;29(6):817-819. doi: 10.5021/ad.2017.29.6.817. Epub 2017 Oct 30. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5705376/>

Dear Editor: Acne is a common condition. Although acne is primarily associated with adolescents, it also affects many adults. Adult females are particularly susceptible to acne and to its negative impact on quality of life. Patients with post-adolescent acne represent an increasingly significant population of acne patients requiring special therapy. However, many post-adolescent acne patients are not well informed of suitable cosmeceuticals for acne. These patients may unnecessarily spend significant time and money consuming cosmetics. For several decades, dry, oily, combination, or sensitive skin types were considered the four fundamental types of skin. On the basis of the four traditional skin types, acne patients were considered as oily and sensitive skin types. However, the choice

of cosmeceuticals and ongoing pharmacological therapy for acne patients should be considered only after evaluating the skin type of individual patients and the ongoing pharmacological therapy. Otherwise, inadequate cosmetics and/or incorrect procedures may worsen acne. Williams and Layton reported that sebum secretion might be higher among adult women with persistent acne compared to those without acne. However, Choi et al. and Youn et al. reported that the sebum excretion was not associated with the development of acne in Korean adults. Until now, the prevalent skin type of Korean post-adolescent acne patients was not well known. We aimed to evaluate the skin type of post-adolescent female acne patients compared to normal control using the Baumann Skin Type Indicator.

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Acne across Europe: an online survey on perceptions and management of acne. Szepietowski JC, Wolkenstein P, Veraldi S, et al. *J Eur Acad Dermatol Venereol*. 2017 Dec 1. doi: 10.1111/jdv.14719. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29194802>

BACKGROUND: Acne is common among young people. **OBJECTIVE:** To describe the burden, management and sources of advice, of acne in a representative sample of young people in Europe. **METHODS:** This cross-sectional survey was conducted in a representative sample of individuals aged 15-24 years from Belgium, Czech and Slovak Republics, France, Italy, Poland and Spain (n=3099). **RESULTS:** Most individuals considered their acne (all severity stages) to be no/minor problem, although 29.7% considered it a major problem/burden. Over-the-counter (OTC) topical treatments were used more frequently than prescribed treatments. Acne was diagnosed by physicians in 47.6% of cases; other health professionals (nurses, pharmacists) or patients accounted for the remainder of diagnoses. Physicians were the source of acne information in just over one-quarter of cases (27.0%). The vast majority of advice was from friends/family and the internet. **CONCLUSION:** Almost one-third of young people consider acne to be a major problem/burden. Fewer than half of acne diagnoses are made by a physician and acne is often self-managed using OTC treatments.