Skin Care and Conditions: Fact or Fiction?

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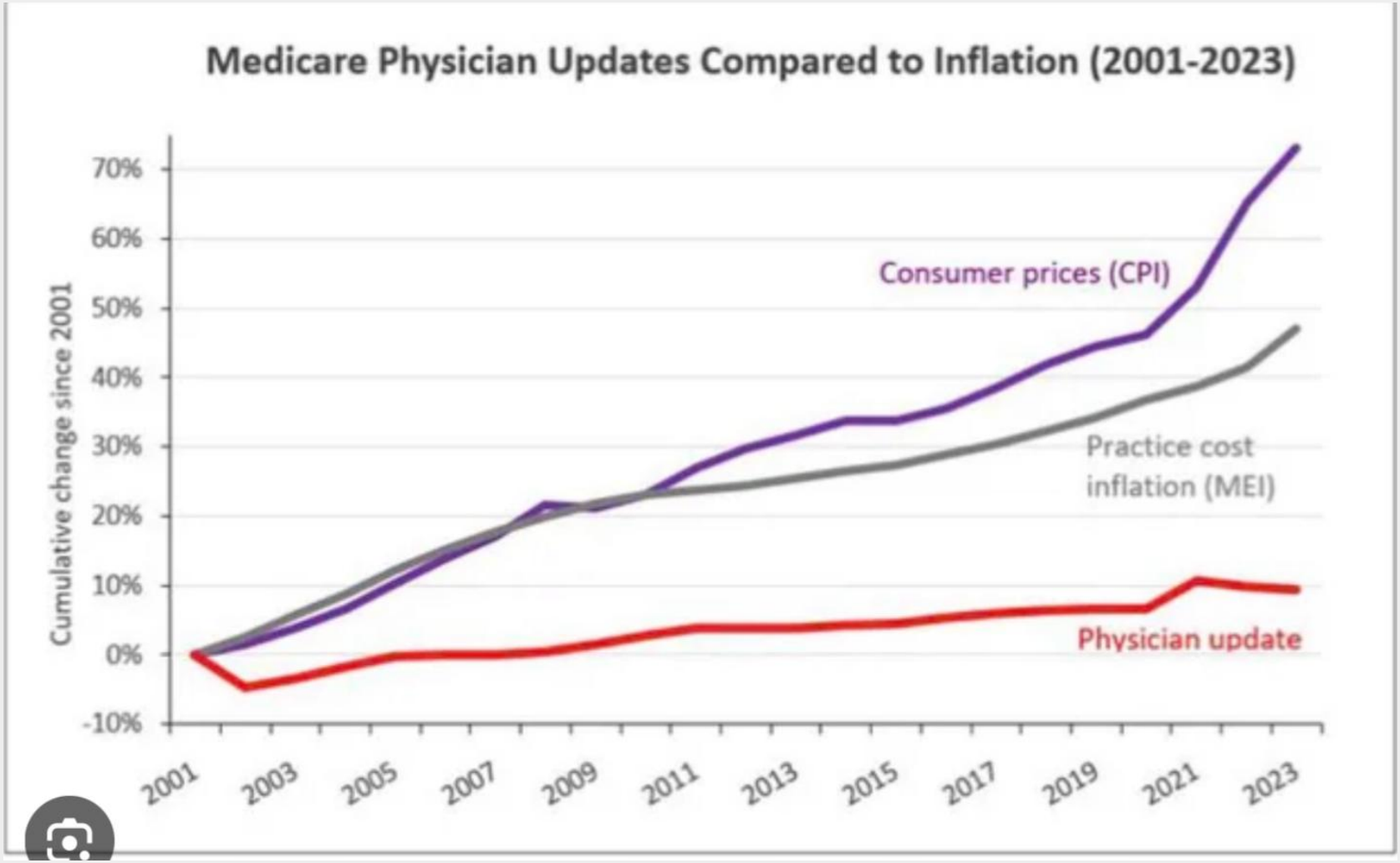
Derm Institute of West Michigan
MOA 2025


Medicare Physician Updates Compared to Inflation (2001-2023)
Cumulative change since 2001
70%
60%
50%
40%
30%
20%
10%
0%
-10%
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021
2023
Consumer prices (CPI)
Practice cost inflation (MEI)
Physician update

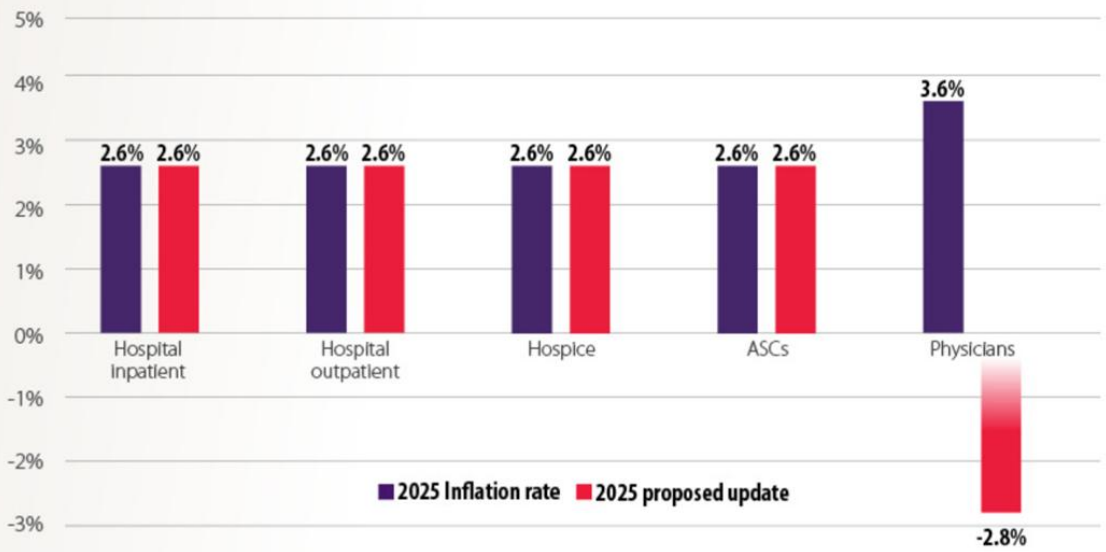
Medicare payment updates are proposed for nearly all providers in 2025 EXCEPT physicians.

Proposed Medicare provider updates for 2025

Note:
Hospital inpatient, hospice, hospital outpatient and ASC inflation rates reflect market basket less a productivity adjustment.

Physician fee schedule inflation rate is the Medicare Economic Index, which has a productivity adjustment.

Potential adjustments for quality performance omitted for all provider types.

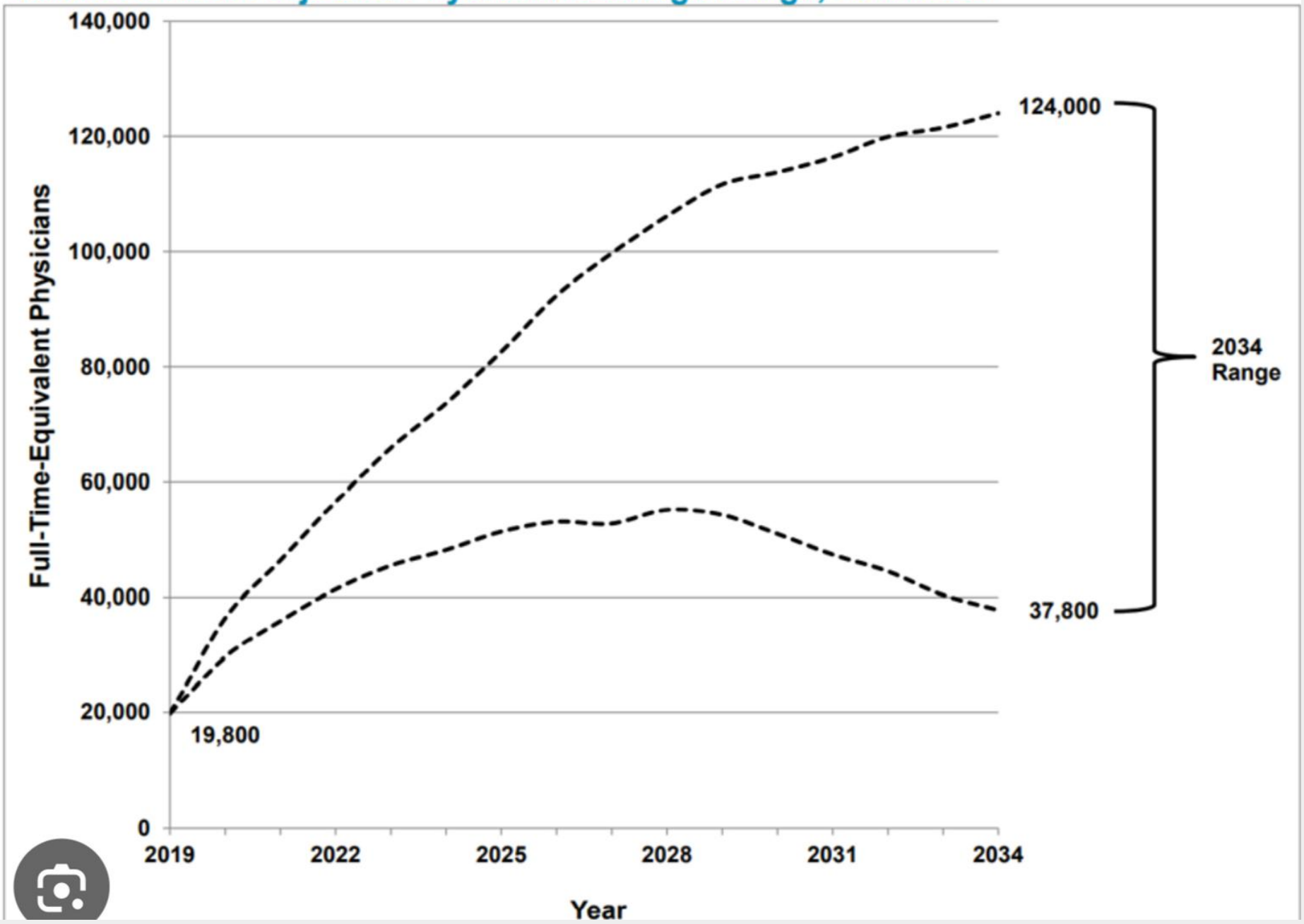


AMA
AMERICAN MEDICAL ASSOCIATION

Updated July 2024

We need to fix Medicare physician payment NOW.

Exhibit 2: Total Projected Physician Shortage Range, 2019-2034



Call To Action!

- Join MSMS - strength in numbers!
- Donate to your state-level and national-level political action committees (PACs)
- Enroll in your state and national-level advocacy alert emails. They will guide you went to send letters to legislators
- Have some free time? Go to the advocacy day and get your voice heard!
- Scan and donate today


REPRESENTATIVE
Hillary J. Scholten, J.D.
Michigan
1317

Why This Lecture Matters

- Patients are bombarded with misinformation (social media, marketing, anecdotes)
- Myths drive delayed care, wasted money, unnecessary fear
- Primary care is the front line for dermatology questions
- Goal: equip PCPs with evidence-based clarity

Agenda

Cosmetic & consumer myths

Medical condition myths

Cosmetic & Consumer Myths

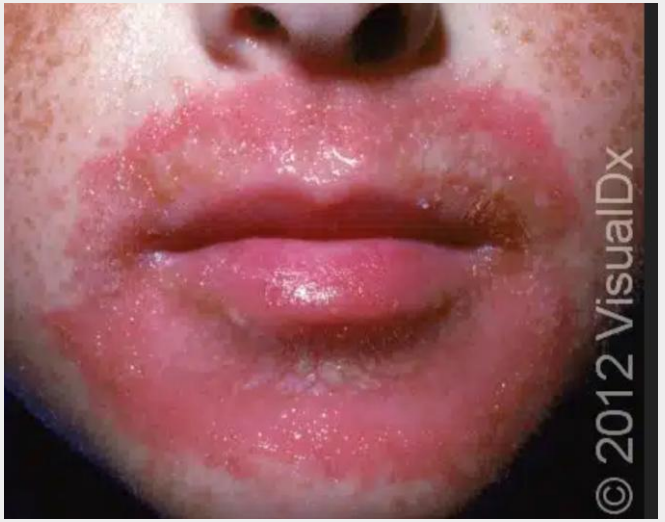
Fact or Fiction?

"Natural skincare is always safer."

FACT

FICTION

Myth: Natural Skincare is Always Safer



Reality: Natural Skincare

- Natural ≠ safe — botanicals frequently cause allergic contact dermatitis
- OTC skincare is FDA-regulated for safety & contaminants
- Claims that parabens, petrolatum, mineral oil, silicones, sulfates cause cancer are unsupported by human data
- Safety = dose, purity, testing — not the word 'natural'

Zug 2009, Contact Dermatitis; Petry 2017, Toxicol Lett

Fact or Fiction?

"Sunscreen use causes cancer or systemic toxicity."

FACT

FICTION

Myth: Sunscreen is Toxic / Causes Cancer

- **Best spf ingredients: titanium/zinc oxide**
  - Chemical free
  - Reflect UV rays completely
  - provide best protection + best for melasma

- **Chemical sunscreens: better than sun!**
  - avobenzone and oxybenzone are known allergens
  - Absorb high-energy UV and convert to low-energy
  - Less effective in melasma
  - Organic, so can absorb

No in vivo data supports toxinogenic claims

Sunscreen Prevents Skin Cancer & Photoaging

- Nambour RCT: daily SPF reduced invasive melanoma ~73%
- Same trial: ↓ all melanomas ~50% and ↓ SCC incidence; BCC unaffected
- Bottom line: sunscreen prevents skin cancer

Reduced Melanoma After Regular Sunscreen Use: Randomized Trial Follow-Up

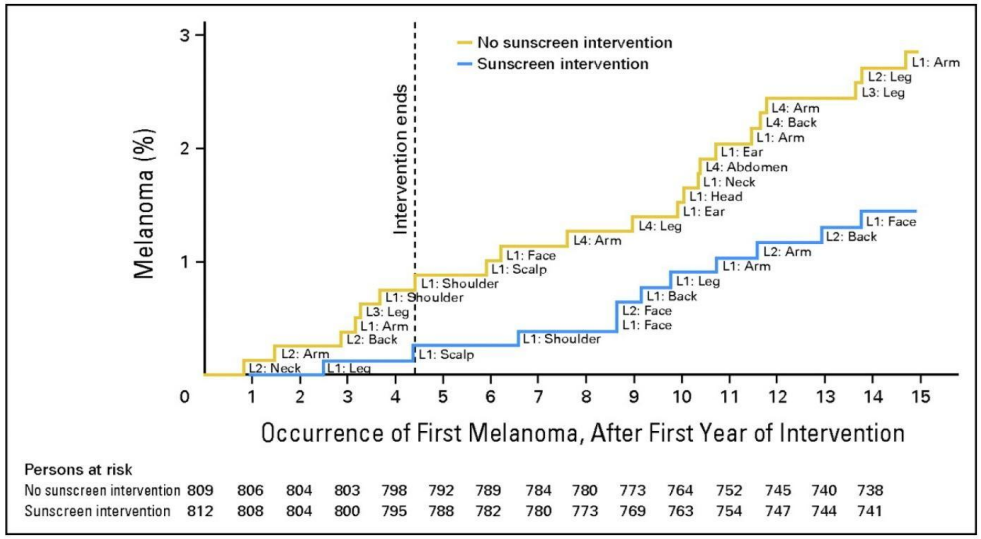


Fig 2. Occurrence of first primary melanoma by level of invasion and anatomic site in the two sunscreen treatment groups.

Green 2011, JCO; Green 1999, Lancet

Fact or Fiction?

"Collagen supplements are beneficial for anti-aging."

FACT

FICTION

Myth: Supplements Alone Transform Skin Health

Reality: Collagen Peptides *May* Be Beneficial

Effects of Oral Collagen for Skin Anti-Aging: A Systematic Review and Meta-Analysis

Szu-Yu Pu [1], Ya-Li Huang [2], Chi-Ming Pu [3 4], Yi-No Kang [5 6 7 8], Khanh Dinh Hoang [9], Kee-Hsin Chen [5 10 11 12 13 14], Chiehfeng Chen [2 5 6 15]

Abstract

This paper presents a systematic review and meta-analysis of 26 randomized controlled trials (RCTs) involving 1721 patients to assess the effects of hydrolyzed collagen (HC) supplementation on skin hydration and elasticity. The results showed that HC supplementation significantly improved skin hydration (test for overall effect: Z = 4.94, $p < 0.00001$) and elasticity (test for overall effect: Z = 4.49, $p < 0.00001$) compared to the placebo group. Subgroup analyses demonstrated that the effects of HC supplementation on skin hydration varied based on the source of collagen and the duration of supplementation. However, there were no significant differences in the effects of different sources ($p = 0.21$) of collagen or corresponding measurements ($p = 0.06$) on skin elasticity. The study also identified several biases in the included RCTs. Overall, the findings suggest that HC supplementation can have positive effects on skin health, but further large-scale randomized control trials are necessary to confirm these findings.

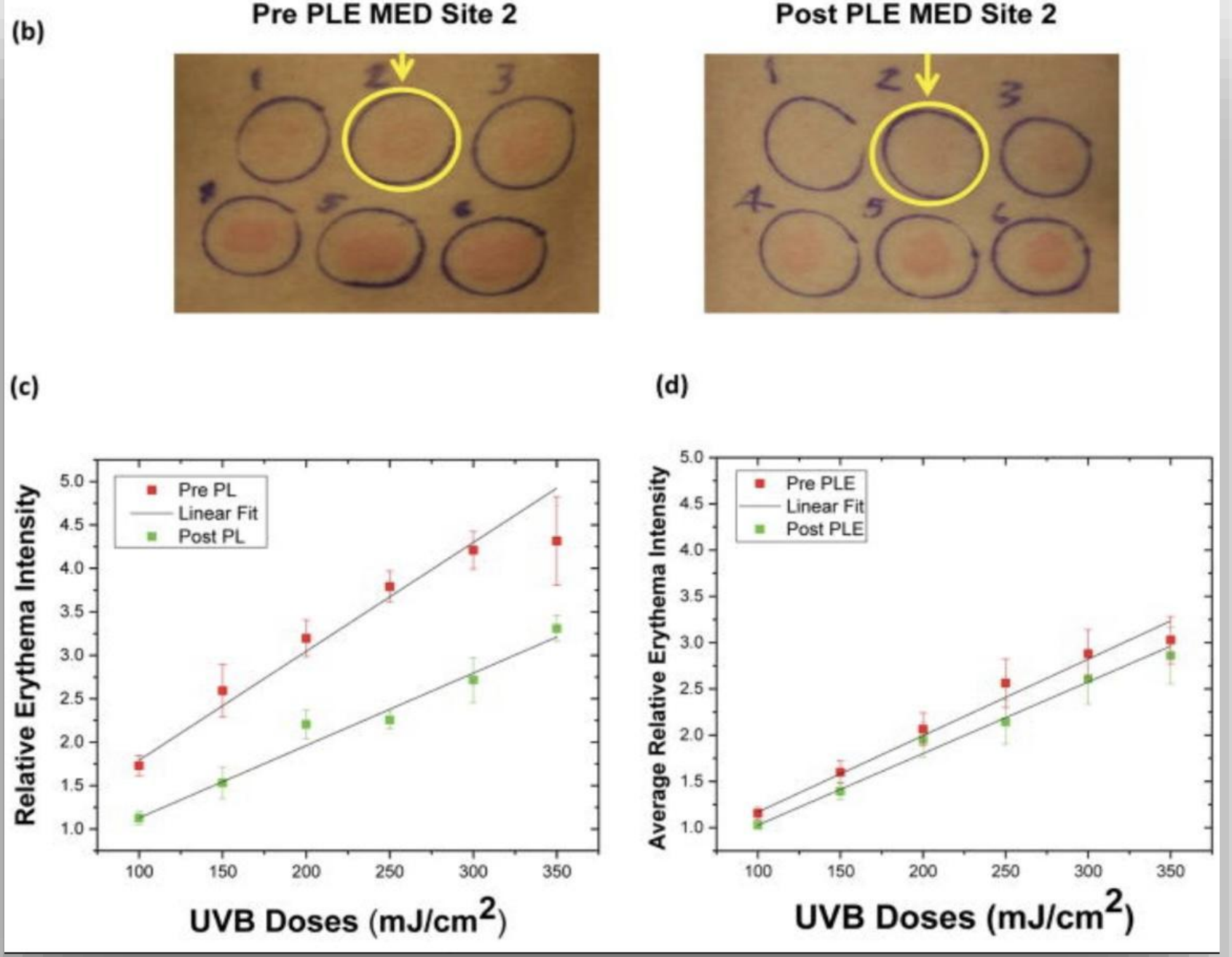
Keywords: anti-aging; meta-analysis; oral collagen; skin; systematic review.

Pu 2023, Nutrients

The impact of oral Polypodium leucotomos extract on ultraviolet B response: A human clinical study

Indermeet Kohli [1], Rubina Shafi [2], Prescilia Isedeh [1], James L Griffith [1], Mohammed S Al-Jamal [1], Narumol Silpa-Archa [1], Bradford Jackson [2], Mohammed Athar [2], Nikiforos Kollias [3], Craig A Elmets [2], Henry W Lim [1], Iltefat H Hamzavi [4]

Conclusion: The results suggest that PLE can potentially be used as an adjunctive agent to lessen the negative photobiologic effects of UVB.


(b)
Pre PLE MED Site 2
Post PLE MED Site 2
(c)
(d)
Relative Erythema Intensity
Pre PL
Linear Fit
Post PL
UVB Doses (mJ/cm2)
Average Relative Erythema Intensity
Pre PLE
Linear Fit
Post PLE
UVB Doses (mJ/cm2)

Clinical Trial > N Engl J Med. 2015 Oct 22;373(17):1618-26. doi: 10.1056/NEJMoa1506197.

A Phase 3 Randomized Trial of Nicotinamide for Skin-Cancer Chemoprevention

Authors: Andrew C. Chen, M.B., B.S., Andrew J. Martin, Ph.D., Bonita Choy, M.Med., Pablo Fernández-Peñas, Ph.D., Robyn A. Dalziell, Ph.D., Catriona A. McKenzie, M.B., B.S., Richard A. Scolyer, M.D., **+6** , and Diona L. Damian, Ph.D.

Published October 22, 2015

N Engl J Med 2015

Results: At 12 months, the rate of new nonmelanoma skin cancers was lower by 23%.

Conclusions: Oral nicotinamide was safe and effective in reducing the rates of new nonmelanoma skin cancers and actinic keratoses in high risk patients.

Fact or Fiction?

“Red light therapy reverses aging.”

FACT

FICTION

Reality: Red Light Therapy Beneficial in Conjunction with Tried and True

RED & AMBER LIGHT WRINKLE REDUCER?

Randomized Controlled Trial > Photobiomodul Photomed Laser Surg. 2023 Feb;41(2):48-56.
doi: 10.1089/photob.2022.0114.

Photobiomodulation Reduces Periocular Wrinkle Volume by 30%: A Randomized Controlled Trial

Lidiane Rocha Mota [1], Ivone da Silva Duarte [2], Thais Rodrigues Galache [1], Katia Maria Dos Santos Pretti [1], Orlando Chiarelli Neto [3], Lara Jansiski Motta [1], Anna Carolina Ratto Tempestini Horliana [1], Daniela de Fátima Teixeira da Silva [1], Christiane Pavani [1]

Objective: Study aimed to evaluate red and amber light emitting diode protocols for facial rejuvenation at the same light dose.

Method: split face, randomized, clinical trial with 137 women ages 40-65yrs. old.

Results: significant reduction in wrinkle volume after red & amber PBM. No improvement in hydration but both showed improvements in participants quality of life.

Conclusion: PBM both red and amber wavelengths are effective tools to reduce wrinkle volume (30%)

AD ANNALS of DERMATOLOGY anndermatol.org

► Ann Dermatol. 2021 Nov 4;33(6):553–561. doi: 10.5021/ad.2021.33.6.553

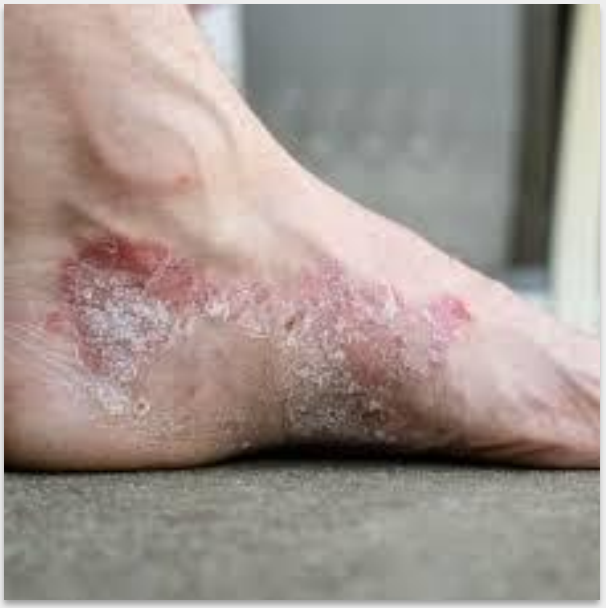
Hair Growth Promoting Effects of 650 nm Red Light Stimulation on Human Hair Follicles and Study of Its Mechanisms via RNA Sequencing Transcriptome Analysis

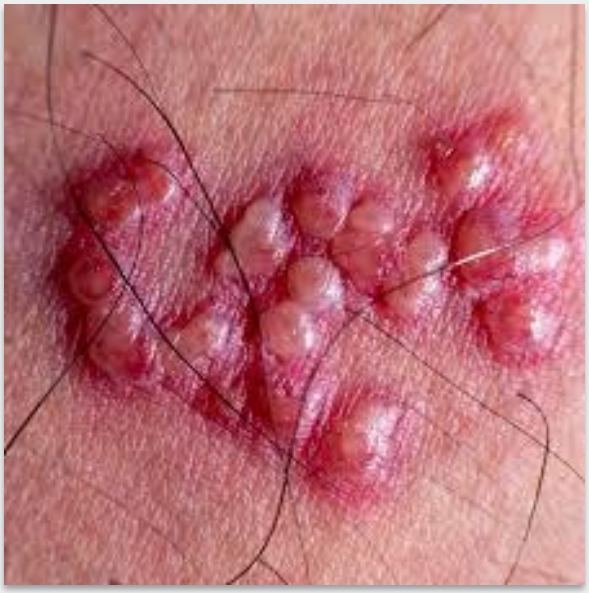
Kai Yang [1], Yulong Tang [2], Yanyun Ma [2 3], Qingmei Liu [4], Yan Huang [2], Yuting Zhang [2], Xiangguang Shi [4], Li Zhang [1], Yue Zhang [4], Ji'an Wang [4], Yifei Zhu [4], Wei Liu [5], Yimei Tan [6], Jinran Lin [4], Wenyu Wu [1 4]

Results * Red light promoted the proliferation of human hair follicles in the experimental cultured tissue model.

Conclusion * The effect of 650-nm red light on ex vivo hair follicles and the transcriptome set which implicats the role of red light in promoting hair growth and reversing of miniaturization process of AGA were identified.

Dermatologic Conditions





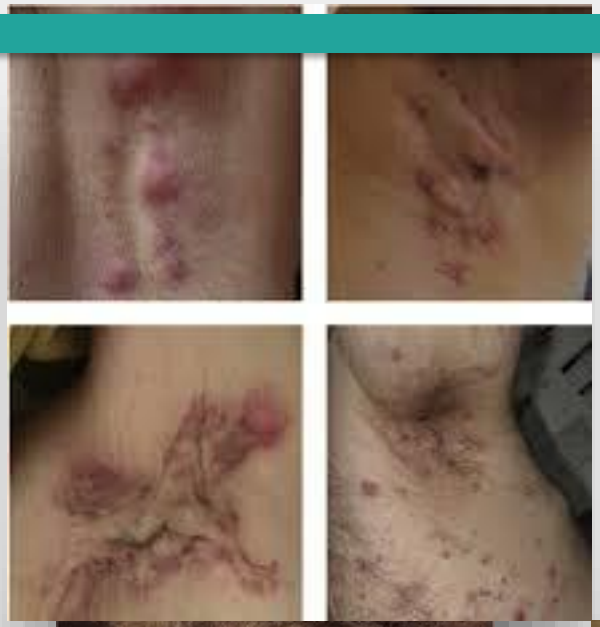
Fact or Fiction?

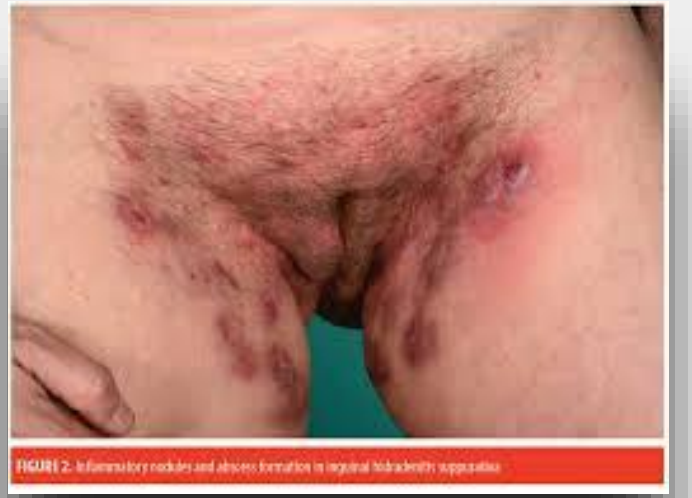
"Hidradenitis Suppurativa is a result of obesity and poor hygiene."

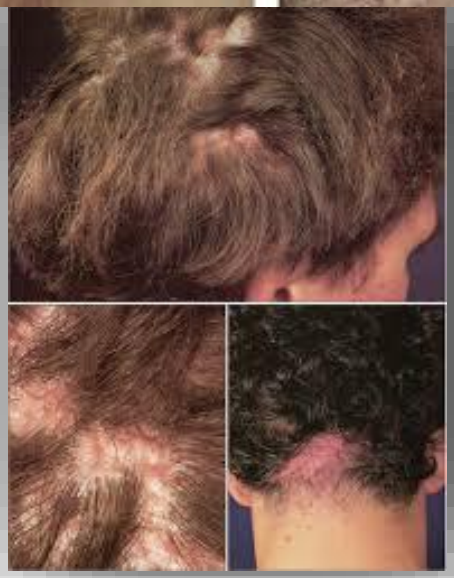
FACT

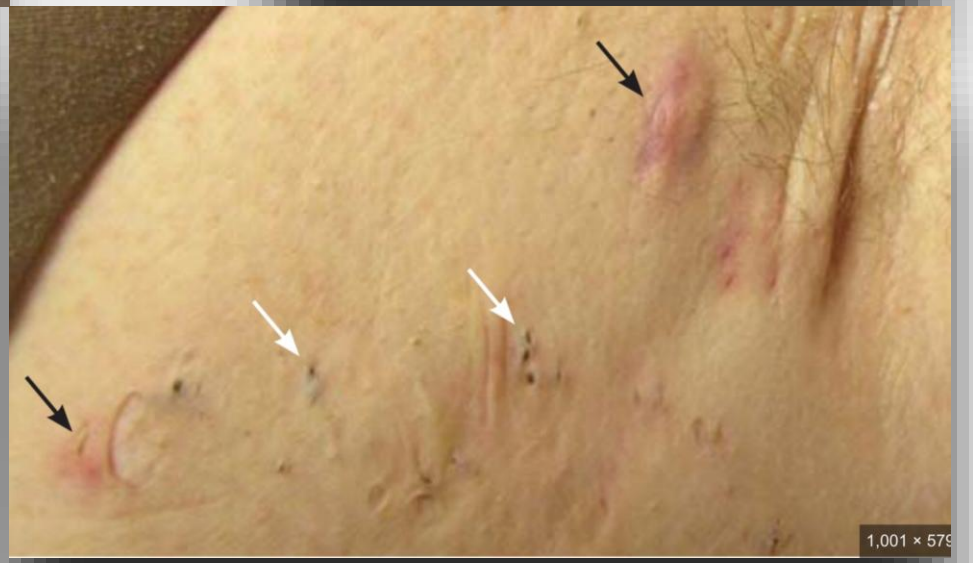
FICTION

Myth: HS Is Caused by Poor Hygiene and Obesity









Reality: Chronic Inflammatory Condition with Genetic Link

- HS = follicular-occlusion inflammatory disease
- Obesity/smoking worsen severity but are not root causes
- Early Dx + medical therapy reduce tunnels/scars; avoid I&D alone
- Associated with other comorbidities, such as ankylosing spondylitis, IBD, cardiovascular risks
- Early treatment is imperative

Alikhan 2019, JAAD

Fact or Fiction?

"Pediatrics with eczema just outgrow it."

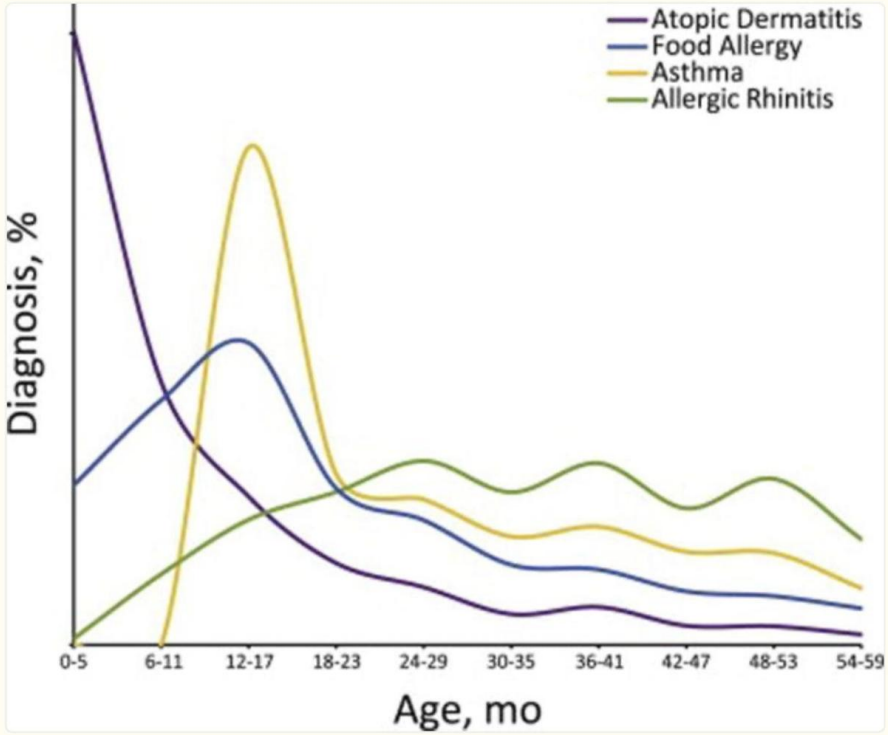
FACT

FICTION

Myth: Undertreated AD poses no long-term harm

The Atopic March

Figure 1.



Open in a new tab

Age at diagnosis of common allergic conditions.

Hill et al. 2018. The atopic march: critical evidence and clinical relevance

Allergy
EUROPEAN JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY
EAACI
ORIGINAL ARTICLE | Open Access

Evaluation of dupilumab on the disease burden in children and adolescents with atopic dermatitis: A population-based cohort study

Serena Yun-Chen Tsai [1], Jonathan M Gaffin [2], Elena B Hawryluk [1], Hana B Ruran [3 4], Lisa M Bartnikas [4 5], Michiko K Oyoshi [5 6], Lynda C Schneider [4 5], Wanda Phipatanakul [4 5], Kevin Sheng-Kai Ma [1]

- 3575 pediatric patients with AD treated with dupilumab were matched to 3575 patients treated with other systemic agents.
- dupilumab cohort was associated with a lowered risk of new onset comorbidities. * asthma * allergic rhinitis * infections * respiratory tract infection * psychiatric disorders * anxiety * sleep disturbance * neurologic and developmental disorders * ADD
- Treatment with dupilumab compared to systemic agents resulted in reductions in AD-related comorbidities in pediatric patients.

A mixed longitudinal study of physical growth in children with atopic dermatitis

Aparna Palit[1] , Sanjeev Handa[2] , Anil Kumar Bhalla[3] , Bhushan Kumar[2]
[1] Department of Dermatology, Venereology and Leprosy, BLDEA's SBMP Medical College, Hospital & Research Centre, Bijapur, Karnataka, India
[2] Department of Dermatology, Venereology & Leprology, Postgraduate Institute of Medical Education and Research, Chandigarh, India
[3] Department of Pediatrics, Postgraduate Institute of Medical Education and Research, Chandigarh, India

Conclusion: Growth retardation was observed among children with a more severe form of the disease. Height of the affected children was compromised mostly, though a tendency for catch-up growth was observed. Severe forms of atopic dermatitis may impair a child's linear growth temporarily.

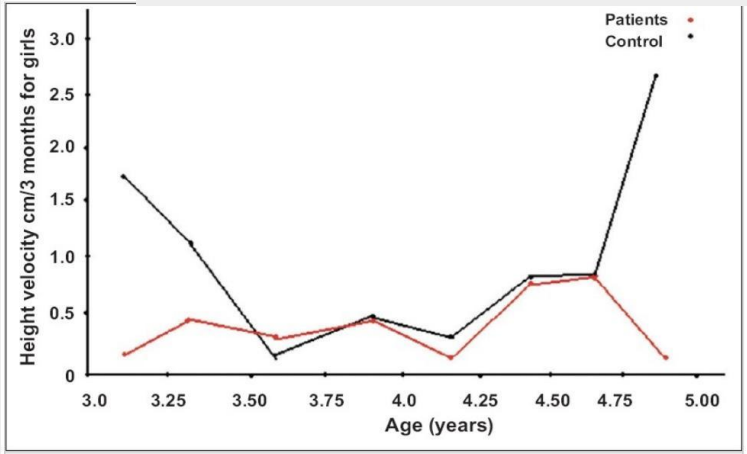


Figure 2: Rates of height increases (cm/3 months) of female patients and controls

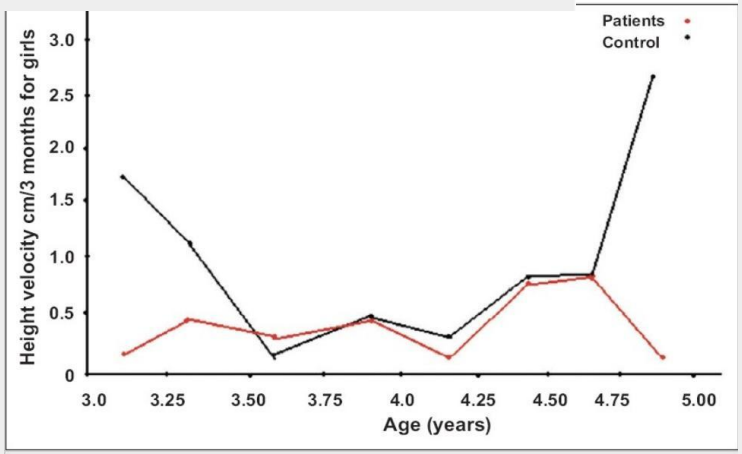


Figure 2: Rates of height increases (cm/3 months) of female patients and controls

Chen 2025, JAAD; Tsai 2024, Allergy

> J Am Acad Dermatol. 2025 Aug 18:S0190-9622(25)02646-5. doi: 10.1016/j.jaad.2025.08.020. Online ahead of print.

Decreased Risk of Reduced Linear Growth Among Children with Atopic Dermatitis Receiving Dupilumab: A Cohort Study

Tai-Li Chen [1], Sheng-Hsiang Ma [2], Wei-Fan Ou [3], Chih-Chiang Chen [4], Chen-Yi Wu [5]

- The study included 745,046 pediatric individuals.
- Children with AD exhibited significantly increased risk of reduced height compared to matched controls.
- Treatment with Dupilumab was associated with significantly lower risk of falling below the 5th, 25th, & 50th height percentiles.
- Strongest associations observed in males, children over 6 years, and those of BMI >20.

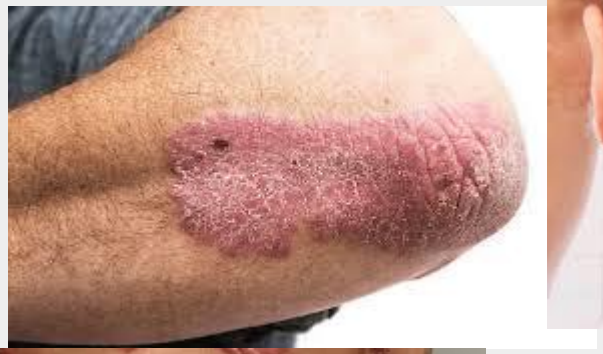
Fact or Fiction?

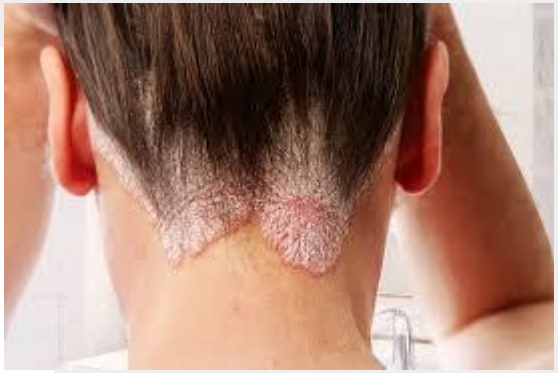
"Biologics for psoriasis increase serious infection risk, and should be used as last-line treatment"

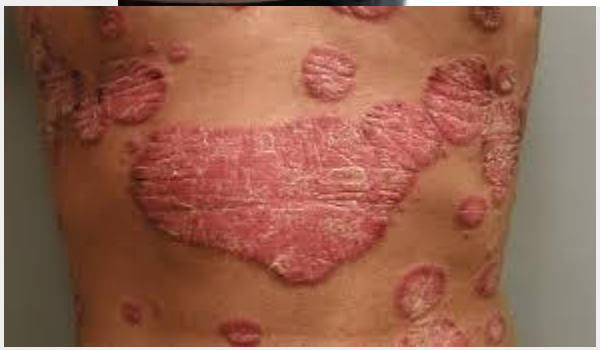
FACT

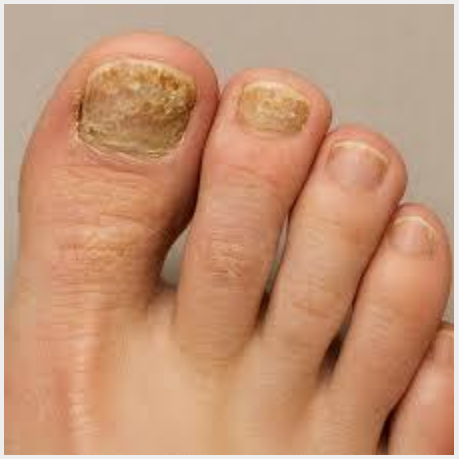
FICTION

Myth: Biologics increase risk of serious infections and are immunosuppressants

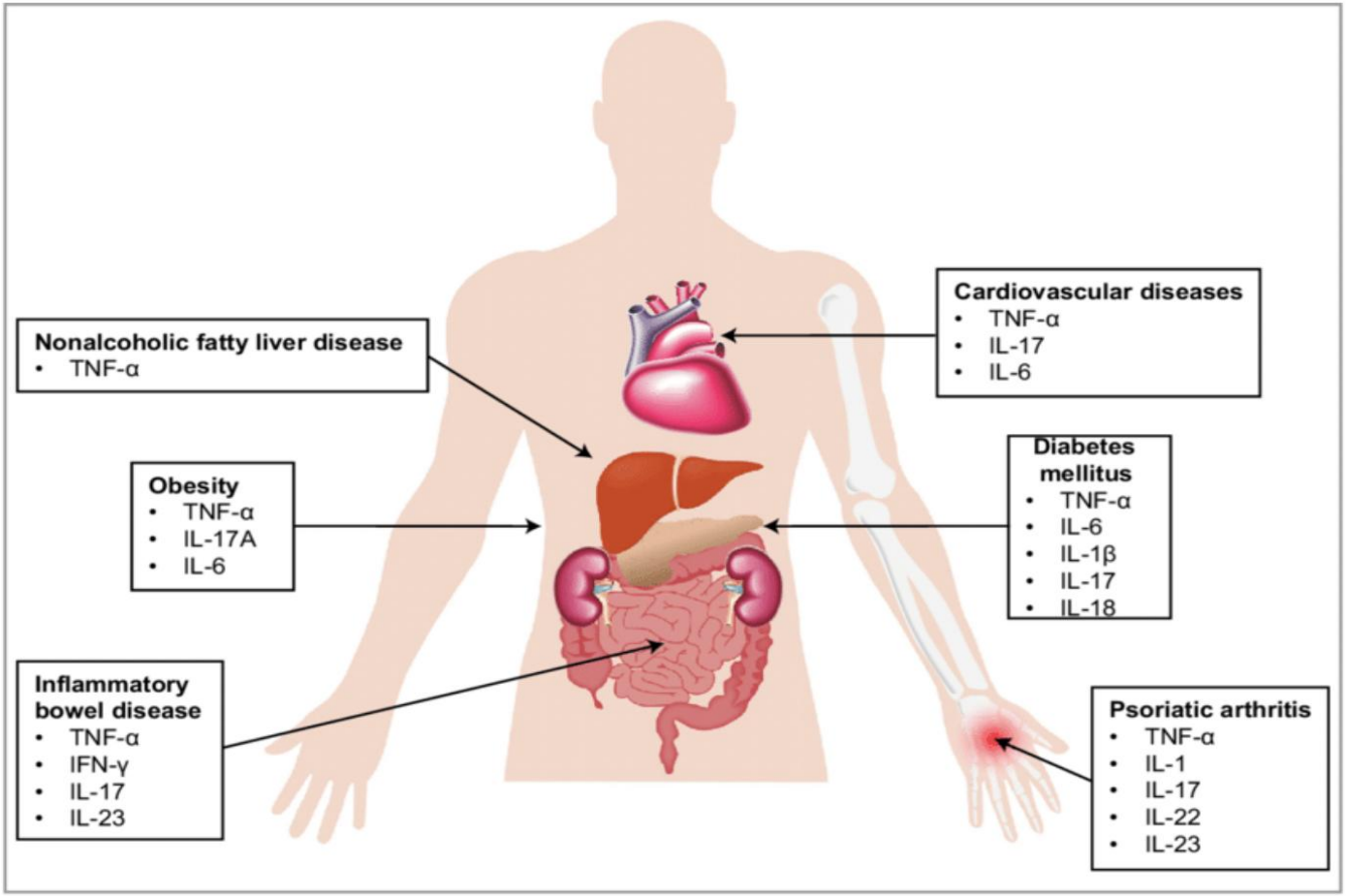








Reality: Uncontrolled psoriasis is detrimental



Psoriasis. Comorbidities and key inflammatory cytokines. IFN, interferon; IL, interleukin; TNF, tumour necrosis factor.

Reality: Biologics have been shown to increase lifespan

Negative impact of comorbidities on all-cause mortality of patients with psoriasis is partially alleviated by biologic treatment: A real-world case-control study

Saba Riaz, MD, BSc,[a] Sepideh Emam, PhD,[a] Ting Wang, MSc,[b] and Robert Gniadecki, MD, PhD, DMSci[a]

Biological, as opposed to classic antipsoriatic drug or apremilast, treatment mitigates the risk of death and cardiovascular disease in psoriasis

Khalaf Kridin [1], Katja Bieber [2], Artem Vorobyev [3], Eva Lotta Moderegger [3], Henning Olbrich [3], Marlene A Ludwig [4], Bernard Gershater [2], Gema Hernandez [5], Henner Zirpel [6], Diamant Thaci [6], Ralf J Ludwig [7]

Yiu 2016, JAMA Derm; Yiu 2018, J Invest Dermatol

Don’t let your patients’ fear biologics!

- Newer targeted therapies **do not** increase risk of infection!
- Despite FDA, IL-17 and IL-23s not involved in TB reactivation
- No need to stop IL-17 or IL-23s in cases of surgery, infections.
- IL-17s and IL-23s have 0 long-term negative effects, only benefits

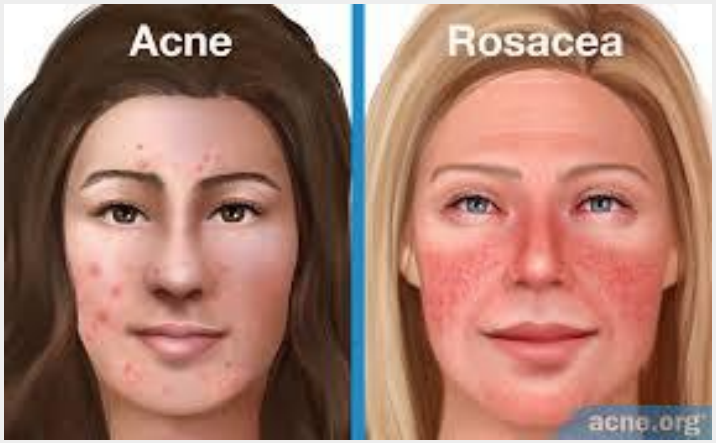
Fact or Fiction?

"Doxycycline 40 mg daily causes resistance and alters gut flora."

FACT

FICTION

Myth:Doxycycline 40 mg Causes Resistance



Reality: Subantimicrobial Dosing

- 40 mg = anti-inflammatory; below antimicrobial threshold
- FDA cautions: >40 mg increases resistance risk; 50–100 mg = antibiotic range
- Avoid 50 mg dosing, the most dangerous dose!

FDA Oracea label; RACGP; Valentín 2011

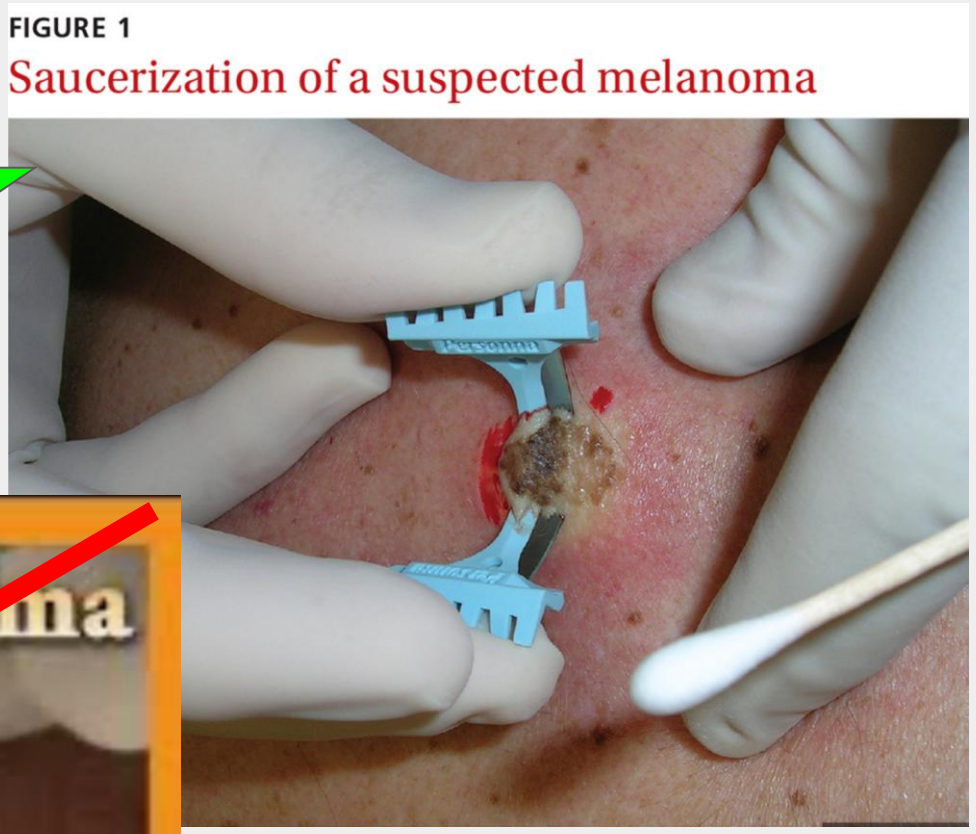
Fact or Fiction?

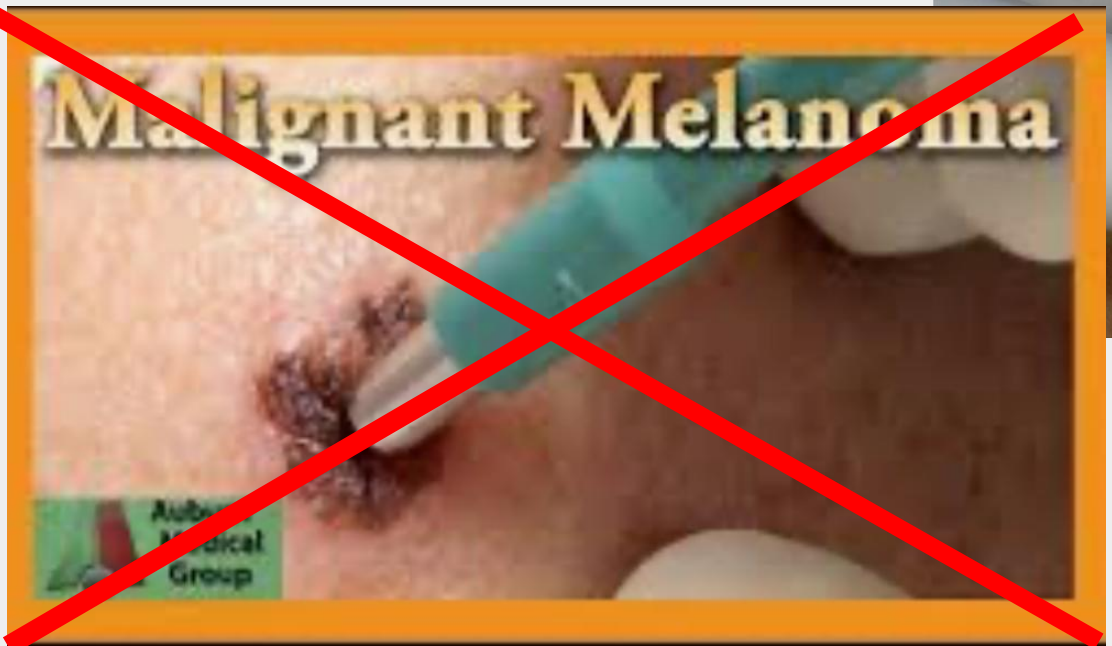
"Punch biopsy is the best for suspected melanoma."

FACT

FICTION

Myth: Punch Biopsy Will Diagnose Accurately





Reality: Deep Shave Best Practice

- Preferred: narrow excisional or deep shave/saucerization (1–3 mm margins)
- Partial punch risks missing an invasive component
- Always send to dermatopathology - reading skin requires proper training!

- Rashes are just as hard to diagnose under the microscope as they are clinically

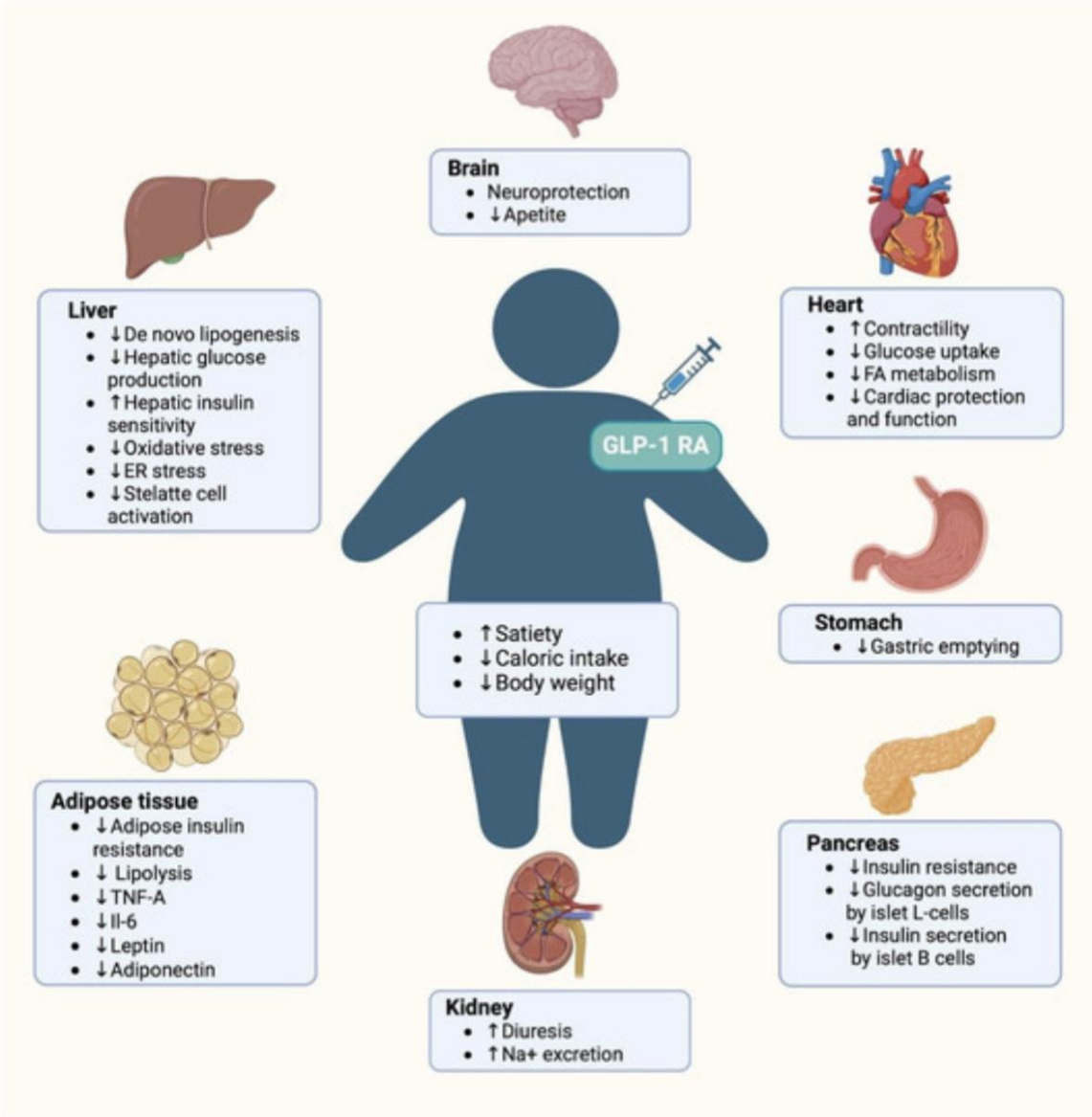
Fact or Fiction?

"GLP-1 medications may improve HS and psoriasis outcomes."

FACT

FICTION

Myth: GLP-1s Only Affect Weight & Diabetes



Reality: GLP-1s and Skin Disease

- Emerging HS cohorts: fewer flares and pain with semaglutide (obesity)
- Psoriasis observational data: ↓ severity and ASCVD events
- On-going studies supporting the improvement in inflammation and longevity of patients suffering from chronic inflammatory diseases

Krajewski 2024, J Clin Med

Cosmetic & Consumer Myths

- Natural isn't always better!
  - High potential for ACD
  - Likely not FDA regulated = potential for natural cancer-causing ingredients, allergens and lack of efficacy
- Sunscreen >>>>>>>>>>>> sun exposure
  - Choose titanium/zinc
  - Pair with polypodium leucomotus + niacinamide
- Collagen Supplements = ? Doesn't hurt
- Red Light therapy = ? Great in conjunction with tried and true treatment

Skin Conditions

- HS is inflammatory; destigmatize and treat early
- Doxy 40 mg is subantimicrobial; avoid 50 mg to decrease resistance risk
- Biologics improve systemic health and survival, don't be afraid!
- AD can impact a young person's entire future; early referral help
- GLP-1s show early promise for HS and psoriasis
  - Watch for stronger RCTs to define their role

Refer to a trusted derm EARLY for PsO, HS, and AD!

Thank You / Q&A

- *Kristi B. Hawley, DO, FAAD*
- *Derm Institute of West Michigan*
- *drkbh@derminstitutecfwmi.com*

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Cosmetic & Consumer Myths

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Medical Condition Myths

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