

## What's New In Ped Derm, & What is Connected To Obesity?

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Marriott Sable Oaks, S. Portland, ME  
5/6/17

## What's New In Ped Derm, & What is Connected To Obesity

### Objectives

1. Recognize neonatally the at risk infantile hemangiomas deserving propranolol consideration
2. Know the new medications for atopic dermatitis
3. Identify cutaneous diseases linked to obesity

## What's New in Ped Derm

1. Infantile Hemangiomas we should treat
2. Atopic Dermatitis (AD)
  - ❖ Medications
  - ❖ Evaluation
3. Skin Disease Assoc with Obesity

## Infantile Hemangiomas (IH)

- Vascular Anomalies: Proliferations
- Most common benign tumor of infancy
- Affect 3-10% infants under age 1
- Differential: Vascular Malformations
- Treatment for @ risk IH: Propranolol

**Leaute-Labreze C, et al.  
(2008)  
N Engl J Med. 358 (24):2649-51**

**Propranolol for Severe Hemangiomas of Infancy**

**TO THE EDITOR:** Despite their self-limited course, infantile capillary hemangiomas can impair vital or sensory functions or cause disfigurement. Corticosteroids are the first line of treatment for problematic infantile capillary hemangiomas<sup>1,2</sup>; other options include interferon alfa<sup>3</sup> and vincristine.<sup>4</sup> We have observed that propranolol can inhibit the growth of these hemangiomas. Our preliminary data from 11 children are summarized in Table 1 in the Supplementary Appendix, available with the full text of this letter at www.nejm.org.

The first child had a nasal capillary hemangioma. Despite corticosteroid treatment, the lesion was stabilized but obstructive hypertrophic myocardiopathy developed, so the patient was treated with propranolol. The day after the initiation of treatment, the hemangioma changed from intense red to purple, and it softened. The curi-

conal orbital involvement, as well as an intracervical mass causing compression and tracheal and esophageal deviation (see the Supplementary Appendix). Ultrasonography showed increased cardiac output, and treatment with propranolol, at a dose of 2 mg per kilogram of body weight per day, was initiated. Seven days later, the child was able to open his eye spontaneously, and the mass near the parotid gland was considerably reduced in size. Prednisolone was discontinued at 4 months of age, without any regrowth of the hemangioma; at 9 months of age, the eye opening was satisfactory, and no major visual impairment was noted.

After written informed consent had been obtained from the parents, propranolol was given to nine additional children who had severe or disfiguring infantile capillary hemangiomas (see Table 1 in the Supplementary Appendix). In all

**Propranolol for IH**

**Leaute-Labreze C, et al.  
(2008) N Engl J Med. 358 (24):2649-51**



**ORIGINAL ARTICLE**

**A Randomized, Controlled Trial of Oral Propranolol in Infantile Hemangioma**

C. Léauté-Labréze, P. Hoeger, J. Mazereeuw-Hautier, L. Guibaud, E. Baselga, G. Posiunas, R.J. Phillips, H. Caceres, J.C. Lopez Gutierrez, R. Ballona, S.F. Friedlander, J. Powell, D. Perek, B. Metz, S. Barbarot, A. Maruani, Z.Z. Szalai, A. Krol, O. Boccara, R. Foelster-Holst, M.I. Febrer Bosch, J. Su, H. Buckova, A. Torrello, F. Cambazard, R. Grantzow, O. Wargon, D. Wyrzykowski, J. Roessler, J. Bernabeu-Wittel, A.M. Valencia, P. Przewrattil, S. Glick, E. Pope, N. Birchall, L. Benjamin, A.J. Mancini, P. Valeres, P. Souteyrand, I.J. Frieden, C.I. Bertul, C.R. Mehta, S. Prey, F. Boralevi, C.C. Morgan, S. Heritier, A. Delarue, and J.-J. Voisard

**ABSTRACT**

**BACKGROUND**

Oral propranolol has been used to treat complicated infantile hemangiomas, although data from randomized, controlled trials to inform its use are limited.

**METHODS**

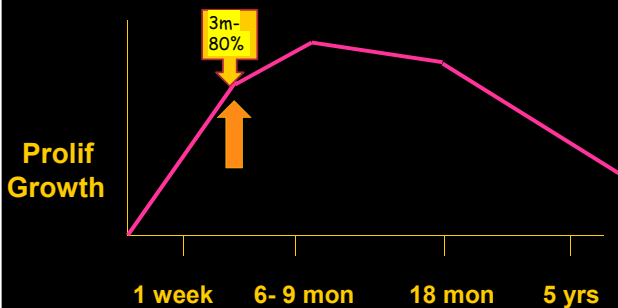
We performed a multicenter, randomized, double-blind, adaptive, phase 2-3 trial assessing the efficacy and safety of a pediatric-specific oral propranolol solution in infants 1 to 5 months of age with proliferating infantile hemangioma requiring systemic therapy. Infants were randomly assigned to receive placebo or one of four propranolol regimens (1 or 3 mg of propranolol base per kilogram of body weight per day for 3 or 6 months). A preplanned interim analysis was conducted to identify the regimen to study for the final efficacy analysis. The primary end point was success (complete or nearly complete resolution of the target hemangioma) or failure of trial treatment at week 24, as assessed by independent, centralized, blinded

The authors' full names, academic degrees, and affiliations are listed in the Appendix. Address reprint requests to Dr. Léauté-Labréze at Unité de Dermatologie Pédiatrique, Hôpital Pellegrin Enfants, Pl. Amélie Raba Léon, 33 076 Bordeaux CEDEX, France, or at christine.labraze@chu-bordeaux.fr.

A complete list of the investigators who recruited patients for the trial is provided in the Supplementary Appendix, available at NEJM.org.

N Engl J Med 2015;372:795-66.  
DOI:10.1056/NEJMoa1402218

**IH Growth**



## Refer/Treat Early



- 5-8wk corrected age
- Problematic or At Risk IH
  - Location/size- Deforming or Functional prob (facial, eye, nasal tip, ear, neck)
  - Ulceration (mucous membranes/folds/large)
  - Multiple (internal)
  - Social impact

## Referral/Caution Needed



### Multiple

- Risk internal ones, liver-> hi output failure

### Large plaques on face

- PHACES-> CNS AV/CV/Eye problems

### Lumbar/sacral

- Risk for Spinal Dysraphism
- Associated Risk for GU/Renal Problems

pediatric dermatology

ORIGINAL ARTICLES

Pediatric Dermatology Vol. 33 No. 4 380-387, 2016

**Crisaborole Topical Ointment, 2% in Patients Ages 2 to 17 Years with Atopic Dermatitis: A Phase 1b, Open-Label, Maximal-Use Systemic Exposure Study**

Lee T. Zane, M.D., M.A.S.,\* Leon Kircik, M.D.,† Robert Call, M.D.,‡ Eduardo Tschien, M.D., M.B.A.,§ Zoe Diana Draeos, M.D.,¶ Sanjay Chanda, Ph.D.,\* Merrie Van Syoc, B.S.,\* and Adelaide A. Hebert, M.D.\*\*

## Crisabole (Eucrisa)

- FDA- Topical ointment approved Dec 2016
- Intercedes with the immune cascade
- Provided some relief with less severe disease
- No serious side effects (stinging- most common)

## Dupilumab (Dupixenet)- "Blockbuster" & "Gamechanger"

A new injectable biological for AD  
Lancet 10/15 for AD in adults  
Lancet 7/16 for uncontrolled Adult Asthma  
 FDA approval for AD in children- 3/17

Modulates immune dysfunction present in AD-  
 (IL 4 & IL 13 inhib)

Insurances determining coverage  
 Costs est. >\$37K/year

## NIH Panel Guidelines 1/17

Early Peanut Introduction  
 for High-Risk Infants  
 (expose as young as 4 months)

Peanut Extract Skin prick testing defines 3  
 likelihood categories of peanut allergy

Low Risk (wheal 2 mm or less)- Panel rec:  
 Peanut (PN) introduction

Med Risk (wheal 3-7mm wheal)- Panel rec:  
 Supervised PN feed/oral challenge

High Risk (wheal 8 mm or more)- Panel rec:  
 Referral to specialist

## Or do Peanut IgE

- Peanut IgE levels <0.35 kUA/L: low likelihood of peanut sensitivity. Panel rec: Intro peanuts
- Peanut IgE >0.35: Panel rec- Referral

[Boyce JA, et al "Guidelines for the diagnosis and management of food allergy in the United States: report of the NIAID-sponsored expert panel" J Allergy Clin Immunol 2017; Jan. 5.](#)

## On Diet: **Insufficient evidence** to rec any specific dietary measures to prevent AD

"Breastfeeding for the first 6 mon of life is encouraged for its other benefits for the infant and mother (e.g. bonding, passive immunity)."

"Most studies of dietary modification of maternal or infant diet do not show a protective effect, although **recently published studies of hydrolyzed formula & probiotic supplementation suggest that these approaches could have a beneficial effect** in preventing disease development in some high-risk infants who are not exclusively breastfed."

"While patients with AD are often sensitized to certain foods, the timing of solid food intro or withholding of allergenic foods does not appear to alter the risk for AD."

See more at: <https://www.aad.org/practicecenter/quality/clinical-guidelines/atopic-dermatitis/diagnosis-and-assessment/risk-factors-for-disease-development#sthash.fHLI8O45.dpuf>

# Psoriasis



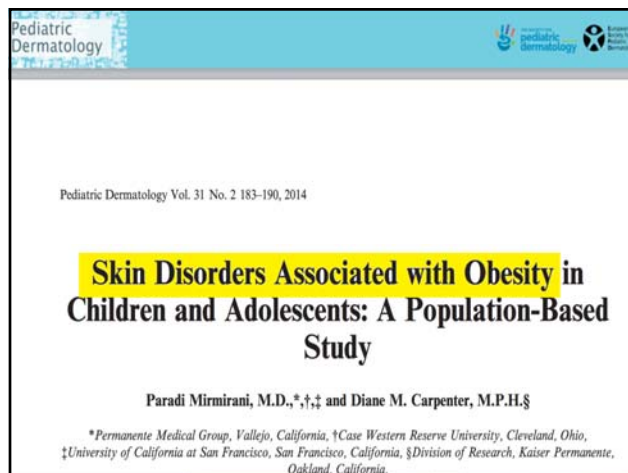
## Co-morbid conditions in adults:

- **Obesity**
- **Depression**
- **Smoking**
- **HTN**
- **Heart Disease**

## The Heartbreak of Psoriasis Special to the BDN

by Janice L. Pelletier  
Posted Aug. 21, 2013

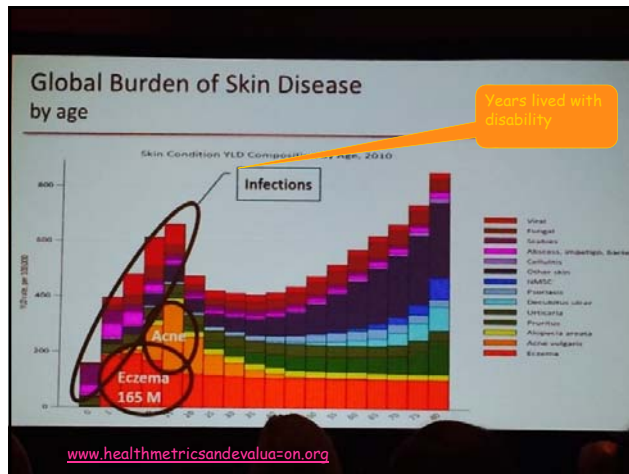
<http://bangordailynews.com/2013/08/21/opinion/the-heartbreak-of-psoriasis/>



# Psoriasis

- Chronic
- Inflammatory
- Common: 1-3% population
- Red, scaly plaques, well demarcated
- Treatment- topical & Systemic Therapies

<http://www.guideline.gov/content.aspx?id=14572&search=psoriasis>

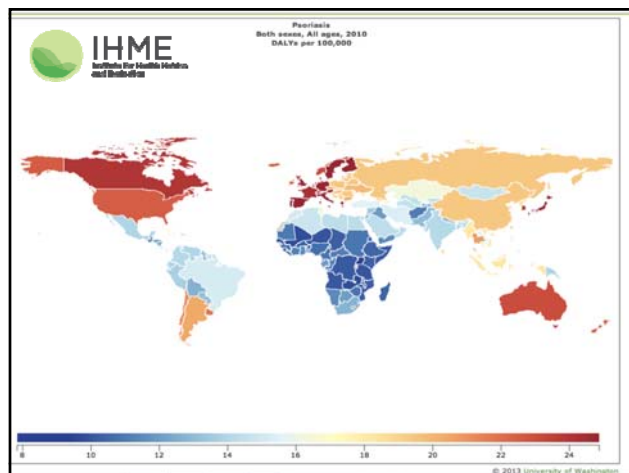


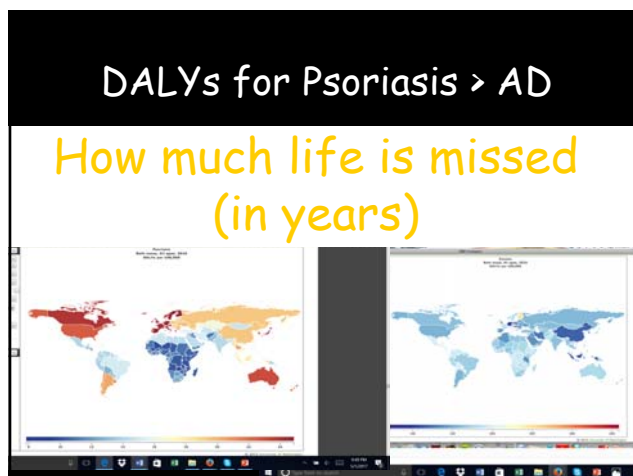
## DALYs: Overall Health Loss


DALYs (disability-adjusted life yrs) =

YLLs (yrs life lost) + YLDs (yrs lived w/ disability)

In other words -> A Measure of Disease Burden






Pediatric Dermatology  Explore t

Original Article

### Identifying Performance Gaps in Comorbidity and Risk Factor Screening, Prevention, and Counseling Behaviors of Providers Caring for Children with Psoriasis

Jillian H. Swary M.D., Erik J. Stratman M.D. 

First published: 4 September 2015 [Full publication history](#)

### Obesity, Hyperlipidemia, HTN, Insulin Resistance, & Metabolic Syndrome

More prevalent in kids with psoriasis.

Rate of comorbidities in kids with psoriasis is 2x that without psoriasis

Globally, children with psoriasis have excess adiposity regardless of psoriasis severity

Multicenter study of children with psoriasis suggested a greater association with obesity in childhood-onset versus adult-onset psoriasis.

### How did we do with counseling obesity risk factors?

- **Bad**

Although BMI was collected for all pts, counseling on high BMI as a risk factor for psoriasis and about the harms of high childhood BMI in general occurred at low rates (10% and 30%, respectively)

## What's New in Ped Derm

1. IH @ Risk -> Propranolol. Approved 5wk
2. Atopic Dermatitis (AD)
  - ❖ Medications
    - > Crisabole (Eucrista)
    - > Dupilumab (Dupixenet)
  - ❖ Allergy evaluation < 6mon for At Risk Infants
3. Psoriasis -> Assoc with Obesity; & so is AD



Thank you  
For your kind  
attention

