

ERIN HENNESSEY  
DNP, APRN

# EMERGING TREATMENTS IN THE TREATMENT OF SKIN AND MUCOSA

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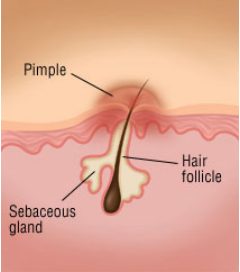
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## ACNE

- Acne vulgaris is a common chronic skin disease involving blockage and/or inflammation of pilosebaceous units (hair follicles and their accompanying sebaceous gland).
- Acne can present as noninflammatory lesions, inflammatory lesions, or a mixture of both, affecting mostly the face but also the back and chest.



The diagram illustrates a cross-section of the skin. A hair follicle is shown extending from the surface into the dermis, where it is attached to a sebaceous gland. A pimple is depicted as a red, inflamed bump on the skin's surface, with a central opening where the hair follicle is blocked. Labels with arrows point to the 'Pimple', 'Hair follicle', and 'Sebaceous gland'.

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## ACNE

An equal opportunity nuisance

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### ORAL AND TOPICAL MEDICATIONS

- 1

Oral antibiotics – not a good long term solution, how long
- 2

Isotretinoin – what, why, and why are parents pushing back?
- 3

Monotherapy or just one topical – medication is not usually recommended to treat active acne
- 4

Benzoyl peroxide – it's and older, but a goda
- 5

Antibiotic topicals – combination, combination, combination
- 6

Anti-inflammatory – for cosmetic improvement and comfort
- 7

Retinol – for EVERYONE

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### IF IT AINT CHEAP...

- PurGen Pharmacy – GenRx Connect
- GenRx2U.com
- Or 1-844-436-7928
- Commercially insured patients - \$0
- All others uninsured - \$25

- Adapalene (Differin)
- BenzePrO foaming cloths and creamy wash
- Clindamycin Phosphate topical 1%
- Doxycycline Hyclate and Monohydrate
- Minocycline
- Tazarotene cream 0.1%

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WOMEN: SHAMPOO FOR DRY DAMAGED HAIR



MEN: 4 IN 1 SHAMPOO FOR FACE, HAIR, BODY, FLOOR, CAR, DISHWASHER



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## DOXYCYCLINE

- IN GENERAL, GUIDELINES RECOMMEND 3-6 MONTHS OF THERAPY WITH CONCOMITANT TOPICAL RETINOID
- Take it with food despite the label, why?
- IN THE PIPELINE – THERE ARE ONGOING STUDIES THAT ARE TRIALING OMEPRAZOLE FOR THE TREATMENT OF ACNE IN PLACE OF DOXYCYCLINE: in vitro antibacterial effects against staphylococcus aureus and anti-androgen that can be potential treatment of acne vulgaris.

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## NEW KID ON THE BLOCK



Atrevo 0.05% lotion



Mechanism of action: Tretinoin is a metabolite of vitamin A that binds with high affinity to specific retinoic acid receptors located in both the cytosol and nucleus. Tretinoin activates three members of the retinoic acid (RAR) nuclear receptors (RAR $\alpha$ , RAR $\beta$ , and RAR $\gamma$ ) which act to modify gene expression, subsequent protein synthesis, and epithelial cell growth and differentiation. It has not been established whether the clinical effects of tretinoin are mediated through activation of retinoic acid receptors, other mechanisms, or both. Although the exact mode of action of tretinoin in acne treatment is unknown, current evidence suggests that topical tretinoin decreases cohesiveness of follicular epithelial cells with decreased microcomedone formation. Additionally, tretinoin stimulates mitotic activity and increased turnover of follicular epithelial cells causing extrusion of the comedones.



Relatively similar MOA as Retin A or tretinoin, but may be better tolerated due to the vehicle.



Lets talk receptor sites and routine...

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## WE ARE AN IMMEDIATE GRATIFICATION SOCIETY




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**FOREVER CLEAR BBL**  
TREATMENT 1: 420 NM FILTER, 6 JICM, 240 MS, 15 °C COOLING, 3 PASSES, 560 NM FILTER, 15 JICM, 15 MS, 20 °C COOLING, 1 PASS  
TREATMENT 2: 420 NM FILTER, 7 JICM, 240 MS, 15 °C COOLING, 3 PASSES, 560 NM FILTER, 15 JICM, 15 MS, 20 °C COOLING, 1 PASS  
TREATMENT 3: 420 NM FILTER, 4 JICM, 240 MS, 15 °C COOLING, 3 PASSES, 560 NM FILTER, 15 JICM, 15 MS, 20 °C COOLING, 1 PASS



18 FOREVERCLEAR® BBL (FOREVERCLEAR® BBL) (2017) No. 1-180-0000

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**FOREVERCLEAR® BBL**



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**FOREVERCLEAR® BBL**



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SCARS AND SCAR MANAGEMENT: HALO AND MICRONEEDLING



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FOREVERCLEAR® BBL



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Forever Clear BBL™

Parameters: 1st pass 450 nm filter, 5 J/cm², 150 ms, 50% overlap, 15 °C cooling, 2 passes  
2nd pass 560 nm filter, 15 J/cm², 150 ms, 50% overlap, 15 °C cooling, 3 passes



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FOREVERCLEAR® BBL



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CHEMICAL PEELS, OXYGENEO, SILK PEEL DERMALINFUSION

Female, Age 43



Before the Peel After 2 Peels

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**3-IN-1 TECHNOLOGY SIMULTANEOUSLY**

**EXFOLIATES**  
REMOVES UP TO 20%  
DAMAGED SKIN CELLS

**EXTRACTS**  
DEEP CLEANSING OF PORE  
SURFACE AND PORES

**INFUSES**  
DELIVERY OF CONDITIONING  
SPECIAL SERUMS DEEP  
INTO THE SKIN



**VOLUMIZES SKIN BY 70%**

**WHY DERMALINFUSION?**

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**GENERAL CARE**

- Washing your face twice daily and after working out
- Moisturizing
- Following treatment instructions
- Balanced diet
- Sanitizing sports equipment
- Keeping hands away from acne prone areas
- Hydration
- Sunscreen, sunscreen, sunscreen

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**DIVA FOR WOMEN**

A NEW APPROACH TO VAGINAL WELLNESS



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**WHAT ARE THE PROBLEMS? WHY ARE THEY OCCURRING?**

- Pre and postmenopausal women are looking for solutions
  - 25 million women agonize over urinary incontinence
- Prevalence of stress urinary incontinence in general populations reported in 13 different studies
  - Young adult, 20% to 30%
  - Middle age, 30% to 40%
  - Elderly, 30% to 50%
- Body changing events
  - Vaginal childbirth
  - Menopause

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**HEM1** As many as 1 in 3 adults—more than 80 percent of them women—  
have bladder control issues<sup>2</sup>

Hennessey, Erin M, 6/20/2018



### VAGINAL ATROPHY

Vaginal dryness ranges from about 4% in early premenopausal to 47% in late postmenopausal<sup>1</sup>

- In postmenopausal phase, prevalence is close to 50% due to decreasing levels of estrogen<sup>2</sup>
- In subgroups such as breast cancer survivors, vaginal dryness is present in 23.4% of premenopausal patients and in 61.5% of postmenopausal patients<sup>3</sup>

Dyspareunia affects 10-20% of US women and varies by age group<sup>4</sup>

- Post partum dyspareunia is underreported, 41% and 22% at 3 & 6 months post<sup>5</sup>
- Dyspareunia is a common presenting symptom in women with vaginal atrophy<sup>6</sup>

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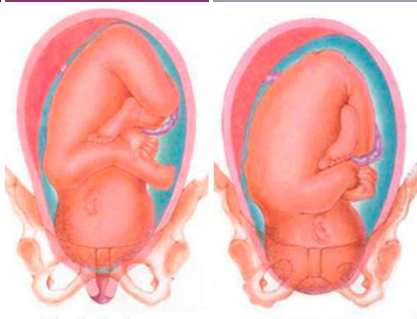
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### FACTORS THAT AFFECT VAGINAL HEALTH

- Childbirth stretches the vaginal canal and surrounding tissues
- Tissue injury is magnified if labor or delivery is difficult or prolonged
- Relaxation or atrophy of vaginal walls and surrounding tissues can lead to diminished vaginal health and function




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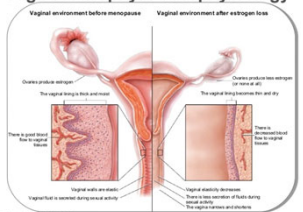
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### MENOPAUSE

- May lead to reduced estrogen production by the ovaries
- Also a hysterectomy, chemotherapy, or the process of breast-feeding
- Often leads to thinning, drying and inflammation of the vaginal walls
- For many women, vaginal atrophy decreases healthy vaginal function and a reduced quality of life
- Vaginal atrophy is now called Genitourinary Symptoms of Menopause (GSM)

#### Vaginal Atrophy: Pathophysiology



**Vaginal environment before menopause**

- Ovaries produce estrogen
- The vaginal lining is thick and moist
- There is good blood flow to the vagina
- Vaginal walls are thick
- Vaginal fluid is secreted throughout the day

**Vaginal environment after estrogen loss**

- Ovaries produce less estrogen (or none at all)
- The vaginal lining becomes thin and dry
- There is less blood flow to the vagina
- Vaginal walls thin
- There is less secretion of fluids during the day
- The vagina becomes inflamed

Johnson, RL, Givner, S & Kemp, 2013(7)(4-6)

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### SYMPTOMS OF GSM



- Vaginal dryness
- Burning
- Vaginal discharge
- Genital itching
- Burning with urination
- More urinary tract infections
- Urinary incontinence
- Dyspareunia – discomfort with intercourse
- Light bleeding after intercourse
- Decreased vaginal lubrication during sexual activity
- Shortening and tightening of the vaginal canal

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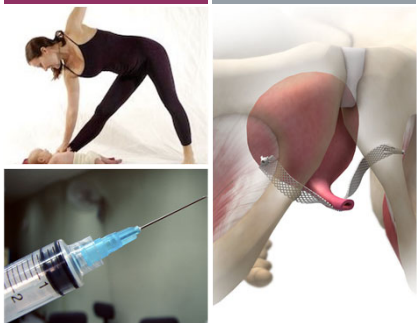
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### COMMON TREATMENT OPTIONS

- Physical Therapy
- Drugs
- Injections
- Surgical
  - Slings
  - Colposuspension
- Devices (inserted)




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### GSM TREATMENT OPTIONS



- **Non-hormonal treatments**
  - OTC vaginal lubricants
    - Reduce discomfort during intercourse
  - OTC vaginal moisturizers
    - Apply every 2-3 days, effects last a little longer than lubricants
- **Low-dose vaginal estrogen**
  - Rings, creams (messy!), suppositories, and tablets
  - Effective at low doses and limits exposure to estrogen; may provide direct relief of symptoms
- **Systemic estrogen therapy**
  - Administered orally, vaginally, or transdermally via injection or nasal spray
  - Concerns about long-term potential of estrogen to increase risk of breast and endometrial cancer

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## WHY DIVA

SCITON JOULE




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	<b>HFL</b>	<ul style="list-style-type: none"> <li>More treatment options</li> <li>Tune ablation and coagulation</li> <li>Customize per patient needs</li> </ul>
	<b>Speed</b>	<ul style="list-style-type: none"> <li>High Precision Automation makes treatment time 5 min</li> <li>Fits a quick procedure into a busy day</li> </ul>
	<b>Comfort</b>	<ul style="list-style-type: none"> <li>Stationary Strengthened Quartz Dilators (SQDs) allow for a comfortable treatment</li> <li>More positive patient experiences</li> </ul>
	<b>Safety</b>	<ul style="list-style-type: none"> <li>Single-use SQDs remove cross-contamination risk</li> <li>Patient safety always comes first</li> </ul>
	<b>Multi-Platform</b>	<ul style="list-style-type: none"> <li>JOULE is the total aesthetic solution including Halo, BBL, Hair Removal, Skin Firming, etc.</li> <li>Multi-platform systems can offer multiple treatments without changing rooms or devices.</li> </ul>




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## WHY DIVA?



- Only Hybrid Fractional Laser (HFL) technology for laser vaginal therapy
  - Dual wavelength system
  - Can use lasers separately or as hybrid ablation and heating
- Fast, easy, effective, comfortable
- World's first fully automated handpiece
  - Turns a 20 min procedure into 5 min!
  - Reduces treatment variability due to users
- 360 degree safeguard window
  - Hygienic, single-use Strengthened Quartz Dilators (SQDs)
  - Every laser pulsed through new region of window

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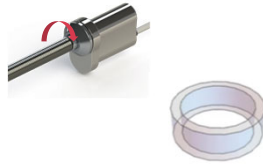
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### WHAT IS HIGH PRECISION AUTOMATION (HPA)?

- Motorized control system
  - Footswitch controls rotation and automatically delivers laser pulses
- Advantages
  - Comfortable, predictable results
  - Limits user and treatment variability
  - Significantly decreases treatment time (3-6 min)




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### STRENGTHENED QUARTZ DILATORS (SQDS)

- Single-use dilators
- SIZE
  - Expands vaginal canal for increased treatment area
  - Tip Length of 5.5"
  - Diameter of 1"
- HYGIENIC
  - Act as barrier between patient and handpiece




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### BENEFIT OF SQDS

- Efficient
  - Every pulse delivered through new zone in strengthened quartz tip
- Hygienic
  - No risk of cross contamination
- Equipment stays consistent
  - Reprocessing can alter the surface of metal, lenses, and mirrors, which can degrade the handpiece

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### PATTERN COMPARISON

Competing Laser Pattern Treating Every 60 degrees



diVa Laser Pattern Treating 360 degrees




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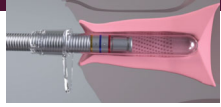
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### DESIGN COMPARISON




diVa keeps the vaginal canal expanded




FEMILIFT  
Shoot the laser once for every 1 cm



MONALISA TOUCH



CO2RE INTIMA



FEMTOUGH

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Company	Product	Type	Tx Time (min)	Automated?	Dilator?	Disposable?	Expandable Platform?
Sciton	diVa	HFL	5	Yes	Yes	Yes	Yes
Alma	Femilift	CO <sub>2</sub>	10 - 15	Yes	Yes	Yes	No
DEKA	Monalisa Touch	CO <sub>2</sub>	5 - 10	No	No	No	No
Fotona	IntimaLase	Er:YAG	20	Yes	Yes	No	No
Lumenis	FemTouch	CO <sub>2</sub>	5 - 10	No	No	No	No
Syneron	CO2RE Intima	CO <sub>2</sub>	15	No	No	Yes	No
Thermi	ThermiVA	RF	20 - 25	No	No	Yes	Limited

### VAGINAL THERAPY COMPARISON

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### WHO IS NOT A GOOD CANDIDATE FOR THIS PROCEDURE

Pregnant or lactating  
Active yeast, bacterial, or viral infection  
Known collagen disorder, vascular disease, history of bleeding disorder

Severe vaginal atrophy  
Moderate to severe pelvic organ prolapse  
Urinary tract infections  
Undiagnosed pelvic pain or dyspareunia  
Recent vaginal surgery  
History of rectovaginal or vesicovaginal fistula

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### TREATMENT RECOMMENDATIONS

3 procedures every 4-6 weeks  
Maintenance procedure on as needed basis  
No sedation necessary  
Local anesthetic recommended

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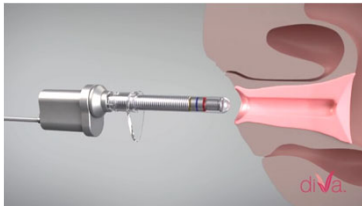
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### TREATMENT ANIMATION



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## Treatment Post-Care

**Patients:**

- Can immediately return to work and normal life routine, with a few exceptions
- Should refrain from vaginal penetration for up to 48 hours, included by not limited to
  - Sexual intercourse for 48 hours
  - Douching
  - Use of tampons
- May experience
  - Spotting, pinkish colored discharge
  - Mild cramping
  - Sunburn-like feeling

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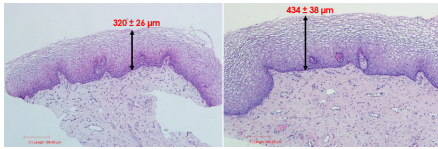
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## BEFORE AND 3 MONTHS POST 3 TREATMENTS



*Photos courtesy of Johnny Peel, MD*

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## COMPLIMENTARY CONSULTATIONS

- If you have questions, we have answers. Give us a call at [301-206-0000](tel:301-206-0000) and schedule your consultation today. We have weekend and evening hours ☺

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## REFERENCES

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