



L7 BULLETIN

NO.13

January 2025
Skincare

CLINICAL

The ABC of Skincare

ACADEMIC

Cosmetic Chemistry
Resources

JOURNAL CLUB

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CLINICAL

THE ABC OF SKINCARE

The A, B, C of skincare... (Vitamin **A**, sun**B**lock, Vitamin **C**)

I could talk about skincare all day long as the range is so vast and there are so many conditions we can effectively treat. Instead, I've chosen to focus on 3 key ingredients that should form the basis of the majority of your patient's skincare routines.

The three key ingredients that form the foundation of an effective skincare are: Vitamin C, retinol, and sunscreen (SPF). Each serves a distinct yet complementary role in maintaining skin health, preventing damage, and addressing common dermatological concerns.

1. Vitamin C

Why It Matters:

Vitamin C is a potent antioxidant that neutralises free radicals, reducing oxidative stress on the skin. It plays a vital role in collagen synthesis, which helps maintain skin's firmness and elasticity. Additionally, Vitamin C has brightening properties that can help diminish hyperpigmentation and even out skin tone.

Patient Benefits:

- **Prevention of Premature Ageing:** By counteracting environmental stressors such as UV rays and pollution, Vitamin C reduces the risk of fine lines and wrinkles.
- **Reduction in Pigmentation:** It can fade dark spots, making it particularly beneficial for patients with sun damage or post-inflammatory hyper-pigmentation.
- **Boosted Radiance:** Regular use leads to a brighter, more luminous complexion.

Key Advice:

Recommend patients apply Vitamin C serum in the morning, preferably after cleansing and before moisturising, to protect against daytime environmental aggressors. Vitamin C can be neutralised by daylight so should be stored in an opaque bottle.



2. Retinol

Why It Matters:

Retinol, a derivative of Vitamin A, is one of the most researched and effective ingredients in skincare. It accelerates cell turnover, stimulates collagen production, and helps unclog pores.

Patient Benefits:

- **Smoothing Fine Lines and Wrinkles:** Retinol's ability to boost collagen can visibly reduce signs of ageing.
- **Clearer Skin:** Its exfoliating properties make it an excellent choice for patients dealing with acne or textured skin.
- **Improved Skin Tone:** Retinol can fade discolouration and promote an even complexion.

Key Advice:

Educate patients to start with a low concentration (0.25% tretinoin) to minimise irritation and use at night. Emphasise the importance of following with a moisturiser to reduce dryness and flaking. They can also layer the product in-between two layers of moisturiser if dryness is bothersome (sandwich method). Vitamin A can not be used when pregnant or breast feeding.



3. SPF

Why It Matters:

Sunscreen is the cornerstone of any skincare routine, offering protection against harmful UVA and UVB rays. It prevents sunburn, photoageing, and, most importantly, reduces the risk of skin cancer.

Patient Benefits:

- Prevention of Premature Ageing: Up to 90% of visible skin ageing is caused by sun exposure.
- Protection Against Pigmentation: SPF helps prevent the worsening of existing dark spots and melasma.
- Reduced Risk of Skin Cancer: Regular use significantly lowers the incidence of UV-induced skin cancers.

Key Advice:

Recommend a broad-spectrum SPF 50. Encourage patients to apply sunscreen daily, even on cloudy days or while indoors, as UV rays can penetrate glass.

Putting It All Together

For optimal results, patients can integrate all three building blocks into their skincare routines:

1. Morning Routine: Cleanser Vitamin C Serum Moisturiser SPF.
2. Evening Routine: Cleanser Retinol Moisturiser.



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Skincare is chemistry, and if you want to delve in a little deeper (and discuss the science around ingredients), here are some free resources to start your exploration:

Free Webinars & Talks from Cosmetic Science Experts

- Platforms: YouTube channels like “The EcoWell” or “Lab Muffin Beauty Science”.
- Why it’s useful: Bite-sized, evidence-based content explaining cosmeceuticals and active ingredients.

Ingredient Safety & Efficacy Resources

- Example: “INCI Decoder” for free information on cosmetic ingredient functions or “CoSmile Europe”
- Why it’s useful: Helps professionals decipher complex ingredient lists.
- Access: www.incidecoder.com
<https://cosmileeurope.eu/> .

Society of Cosmetic Chemists (SCC) Resources

- Content: Free webinars, articles, and newsletters covering the basics and latest developments in cosmetic chemistry.
- Why it’s useful: Industry-focused and offers high-quality educational content.
- Access: www.scconline.org

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Chemists Corner (Blog & Forum)

- Content: Articles, tips, and free resources focused on cosmetic chemistry.
- Why it's useful: Aimed at beginner and experienced cosmetic chemists, this resource provides practical advice on formulation and industry trends.
- Access: www.chemistscorner.com

CosmeticsInfo.org

- Content: Ingredients database and science-backed explanations of cosmetic product components.
- Why it's useful: Excellent for understanding individual ingredients and their functions in formulations.
- Access: www.cosmeticsinfo.org



Factors Influencing Skin Aging and the Important Role of Estrogens and Selective Estrogen Receptor Modulators (SERMs)

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This review highlights the role of oestrogens and selective oestrogen receptor modulators (SERMs) in skin ageing, drawing from recent and foundational research. It addresses the impact of intrinsic and extrinsic factors, including the skin and gut microbiomes, on dermal ageing, particularly in women experiencing menopause. The paper emphasises oestrogen's contributions to collagen, elastin, and hydration levels, which decline with age, leading to visible signs of skin ageing. Additionally, it explores the therapeutic potential of 17 β -estradiol and plant-based SERMs, such as isoflavonoids, which mimic oestrogen's protective effects on skin health. The findings suggest novel strategies for managing oestrogen-deficient skin, including topical oestrogen analogues like methyl estradiol propanoate (MEP), offering promising avenues for dermal rejuvenation while mitigating systemic risks. Further research is encouraged to understand the molecular mechanisms of these interventions.



Oestrogens

Oestrogens, recognised for over a century, are vital for maintaining skin health and overall physiological homeostasis. Natural oestrogens, including estrone, estriol, estradiol, and estetrol (present during pregnancy), originate from androgen precursors via the aromatase enzyme. Among them, 17β -estradiol is the most potent, regulating numerous cellular processes such as cell proliferation, apoptosis, lipid metabolism, and immune modulation. Oestrogen impacts skin by stimulating collagen and elastin production, maintaining dermal structure, and enhancing hydration through hyaluronic acid and sebum synthesis. Its antioxidant properties counteract oxidative stress and preserve cellular integrity.

Oestrogen Receptors

Oestrogen acts through three primary receptors:

1. Nuclear Receptors (ER α and ER β): These mediate gene expression by binding to DNA at oestrogen response elements (EREs). ER β is predominant in skin and is crucial for dermal repair and structural integrity. Declines in ER β expression post-menopause correlate with reduced skin elasticity and collagen levels.
2. Membrane-Bound Receptors (GPER or GPR30): Found in the skin, these receptors trigger rapid intracellular signalling pathways, promoting dermal fibroblast cytoskeletal changes and UVB protection.
3. Mitochondrial Receptors: Although not yet identified in skin, mitochondrial ERs in other tissues mitigate oxidative damage and inhibit apoptosis.

These receptors collectively regulate skin resilience, wound healing, and hydration, with ER β playing a pivotal role in countering skin atrophy.



Skin Collagen and Elastin Profiles During Ageing

During the reproductive years, 17β -estradiol peaks, ensuring high collagen and elastin levels. From the mid-30s onwards, oestrogen production declines, leading to reduced dermal thickness, elasticity, and hydration. The effects intensify post-menopause due to minimal oestrogen synthesis from adipose tissue and local skin cells. Collagen declines by 2% annually for up to 15 years post-menopause in the absence of hormone therapy. Environmental factors like UV exposure and smoking exacerbate this deterioration.



Selective Oestrogen Receptor Modulators (SERMs)

SERMs, synthetic or plant-derived compounds, selectively mimic or block oestrogen actions in specific tissues:

- Synthetic SERMs: Examples include tamoxifen and toremifene. They target $ER\beta$ to support skin health while avoiding adverse effects like endometrial activation.
- Plant-Derived SERMs: Isoflavonoids, such as equol and genistein, show promise as $ER\beta$ agonists. These compounds stimulate collagen and elastin synthesis and inhibit matrix metalloproteinases (MMPs), which degrade skin structure.

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SERMs are particularly valuable for postmenopausal women, providing dermal benefits without systemic risks like venous thromboembolism or breast hyperplasia.

Topical Use of Oestrogen and Analogues

Topical applications offer targeted oestrogenic benefits while minimising systemic exposure. A notable example is methyl estradiol propanoate (MEP), an oestrogen analogue metabolised to an inactive state upon entering systemic circulation. Clinical studies with MEP demonstrate improvements in skin dryness, laxity, and texture among postmenopausal women, with significant reductions in wrinkles and atrophy.



Benefits of 17 β -Estradiol for Skin Health

Oestrogen supports:

- Collagen and Elastin Production: Promotes youthful skin structure and resilience.
- Hydration: Enhances hyaluronic acid and sebum production, improving skin turgor and texture.
- Antioxidant Protection: Reduces oxidative stress by activating pathways like nuclear factor erythroid 2-related factor (Nrf2).
- Wound Healing: Accelerates repair processes via ER β activation.
- Anti-Androgenic Actions: Counters androgens' adverse effects, especially post-menopause.



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Conclusions

Oestrogens and SERMs play integral roles in maintaining dermal health, particularly during and after menopause. Advances in SERMs and topical oestrogen analogues offer promising non-invasive options to mitigate oestrogen-deficient skin ageing. These treatments provide effective alternatives to systemic hormone therapies, balancing safety and efficacy.

Further research is needed to optimise their applications and understand their molecular mechanisms in skin health.



DIPLOMA CHANGES

Dear Level 7 Delegates,

There are some changes coming for the diploma. Please watch the Diploma Session on your dashboard for all the details. A breakdown of the assignments included in this bulletin.

In summary, before the changes which will occur in March 2025, all delegates will be required to submit a reflective log. This has been negotiated with OTHM **instead** of asking you to resubmit reflective essays on 20 logbook procedures.

After March 2025, there will be a new Unit 3 assignment, the Unit 7 assignment of critical appraisal will change to a systematic review, and finally the logbooks will be extensively updated for the practical day with reflective essays.

Please see upcoming submission dates:

Informal Marking	Formal Marking
<u>13th February 2025*</u> 14th April 2025 14th July 2025 13th October 2025 15th December 2025	<u>17th March 2025*</u> 14th June 2025 16th September 2025 15th December 2025

***Last informal submission date before new changes come in. If you get your informal submission done on this date, you will not have to submit new coursework (other than the reflective essay.)**

The submission window will open 1 week prior to each submission date.

The window will close at midnight on each submission date.

Any work submitted outside of these dates will not be marked until the next submission window.

We also ask for all work to be submitted together,

- SAQs
- Case Studies x2
- Critical Appraisal
- Reflective Log
- Logbook

Your logbook must be roughly 50 - 75% completed for informal feedback.

Submission must be made via the Level 7 Dashboard -

Coursework 2 for Informal Marking, Coursework 3 for Formal Marking.

REFLECTIVE LOG

Dear Level 7 Delegates,

After a recent discussion with OTHM, all delegates submitting **before March 2025 will have to do one additional assignment, a reflective log.** Please find confirmed details below:

- Candidates are required to submit a reflective piece centered on the cases in their logbook or presented case, with a focus on patient safety and professional development.
- Key areas to address include toxin use, dermal fillers, complication management, ethics, legislation, and your personal and professional journey.
- The recommended word count is 800 - 1000 words. Please use the reflective log template provided by OTHM.
- This reflection should cover your entire learning experience.
- Once completed, trainers will add their feedback, and the process will proceed according to the timeline below.

If you have any questions or need assistance, please don't hesitate to reach out to our support team.

CHANGE TO UNIT 7 ASSIGNMENT

CRITICAL APPRAISAL WILL BE A SYSTEMATIC LITERATURE REVIEW

Dear Level 7 Delegates,

We would like to inform you about an upcoming change to the Unit 7 Diploma Assignment requirements. Beginning in March 2025, there will be a change in the Unit 7 current assignment format from a critical appraisal of an assigned paper to a systematic literature review. This is to align with new requirements of our awarding body: OTHM.

What does this mean for you?

- If you have already completed the current assignment: Please continue with your coursework as planned. You will not be affected by the changes as we have negotiated an allowance during this transition period.
- If you have just started or have not yet started the assignment: ***We recommend taking this upcoming change into account when planning your work.***

Resources and Support:

We are preparing detailed guidance and resources to support you in the transition to the new format. These will be made available soon via eLearning and extra Diploma Sessions to ensure you have the tools and knowledge needed to succeed.

We aim to make this transition as smooth as possible and will provide ample notice and support leading up to March 2025. If you have any questions or concerns, please don't hesitate to reach out to the academic team.

NEW UNIT 3 ASSIGNMENT

Dear Level 7 Delegates,

There is a new assignment as part of Unit 3, coming into play after March 2025, that you will have to complete. This assignment evaluates your ability to apply and assess key concepts in clinical safety and welfare within the context of aesthetic injectable therapies.

Tasks Overview

1. Health, Safety, and Welfare Justification (500 words):
 - Justify the importance of health, safety, and welfare in clinical practice.
 - Cite relevant evidence and provide supporting references.
2. Compliance Report (1000 words):
 - Appraise key regulations, standards, and codes of practice in aesthetic injectable practice.
 - Explain the importance of adhering to legislation and regulations in the field.
3. Prescribing and Administration Limitations (500 words):
 - Discuss the limitations of prescribing and administering medicines in aesthetic injectable practice.
4. Risk Assessment and Report (1000 words):
 - Conduct a comprehensive risk assessment for a procedure or clinical environment.
 - Present this in a checklist or tabular form.
 - Write a report evaluating the reliability and effectiveness of the risk assessment and recommend improvements.

Submission Before March 2025

Delegates who submit their diploma before March 2025:

- Your current assignment submissions have been mapped to these requirements.
- Exemptions have been approved with OTHM to accommodate prior work, ensuring your efforts align with the learning outcomes without additional adjustments.

For delegates submitting after March 2025, please ensure that your work adheres to the updated assignment format as outlined. If you have any questions or need clarification, do not hesitate to contact the academic team.

DIPLOMA SESSION

We're excited to be showcasing a full educational schedule for 2025, including a range of national and international guest lecturers who are all renowned experts in their own field.

7PM MONDAY, JANUARY 20



SAQs Wrap-up and Intro to Skincare

Dr Emma Goulding and Dr Emmaline Ashley - Heads of Education at Acquisition Aesthetics.

Dr Emmaline will use the first half of the Level 7 Diploma Session to cover SAQs Unit 4, LO 1 & 2 to complete our coursework series. We will talk through how to answer these SAQs.

Dr Emma will use the second half of the session to provide an overview of medical-grade skincare ingredients.

Sign up via your Level 7 Dashboard

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7PM MONDAY, JANUARY 27



The honest truth behind my success in aesthetics

Julie Horne, RN, a world-renowned aesthetics expert and recipient of the prestigious "Golden Syringe" award, is coming to us for an exclusive diploma session! Having honed her skills in top clinics from Oslo to Cape Town, Julie is an internationally acclaimed trainer sought after for her signature lip techniques and mastery of aesthetic injectables. Don't miss this opportunity to learn from one of the best in the industry as she shares the truth about her success in aesthetics

EVENT RUNDOWN

UPCOMING COURSES

Don't miss our exciting lineup of courses in the New Year! Enhance your skills and stay ahead in the field with our specialised training sessions. Here's what's coming up:

- **FULL** Saturday 25th January 2025 - Tear Trough - London - please let us know if you wish to be added to the waitlist
- Sunday 26th January 2025 - Lips - London
- Saturday 8th February 2025 - Tear Trough - Newcastle
- Sunday 9th February 2025 - Lips - Newcastle
- Monday 10th February 2025 - Sculptra and Skinboosters - London
- Saturday 15th February 2025 - Polynucleotides - London
- Sunday 16th February 2025 - PRP - London
- Saturday 22nd February 2025 - Foundation - Newcastle
- Saturday 22nd February 2025 - Mentoring - Newcastle
- Saturday 22nd February 2025 - Foundation - London
- Saturday 22nd February 2025 - Mentoring - London
- Saturday 22nd February 2025 - Foundation - Manchester
- Sunday 23rd February 2025 - Advanced - Newcastle
- Sunday 23rd February 2025 - Advanced - London
- Sunday 23rd February 2025 - Advanced - Manchester
- **FULL** Thursday 27th February 2025 - Mentoring - London - please let us know if you wish to be added to the waitlist
- Saturday 1st March 2025 - Tear Trough - London
- Saturday 1st March 2025 - Polynucleotides - Newcastle
- Sunday 2nd March 2025 - Lip - London
- Sunday 2nd March 2025 - PRP - Newcastle