



EVIDENCE GUIDE · FORMULAS

Choose facial oils by evidence, not scores

Many readers choose an oil from a comedogenic chart and expect a clear answer. This guide looks at fatty acid data, human testing and storage limits so a choice rests on evidence rather than a score.



Acid balance

Linoleic structure differs from oleic softness in measurable ways.



Score limits

Rabbit ear scores do not predict human facial clogging.



Oxidation risk

Light oils degrade faster and need cool dark storage.

By Benjamin Marsh · Updated Jul 30, 2026 · 10 min read

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Different readers keep reaching for a comedogenic score as if it predicts a breakout. That habit leads to confident choices built on weak models, while fatty acid balance, formula context and freshness receive less attention than they deserve.

01

What linoleic and oleic acids may show in skin

Linoleic acid contains 18 carbons with 2 double bonds and cannot be synthesised by the body. Oleic acid also contains 18 carbons with 1 double bond and can be produced internally. This modest structural contrast influences behaviour at the surface, where linoleic associates with architecture and oleic associates with pliability and spread.

Ceramides constitute approximately 50 percent of the skin barrier and require linoleic acid for production, notably ceramide 1. When sufficient linoleic acid is available for ceramide 1, water retention becomes more uniform and roughness often feels reduced. Plant oils consist of triglycerides at typically around 99 percent plus unsaponifiable matter at typically around 1 percent, including phytosterols, squalene, carotenoids and vitamin E, so the fatty acid profile carries more weight than minor constituents.

Sebum reflects a parallel pattern from within. Individuals with oily acne prone skin tend to show sebum low in linoleic acid and elevated in oleic acid. Sebum depleted in linoleic acid grows thicker and drains less readily from pores, a state that favours congestion. This association does not establish that topical use of a linoleic rich oil improves acne or substitutes for acne medicine or sunscreen, and the topical linoleic acid dose required to alter sebum composition across individuals remains unknown.

Oleic acid functions chiefly as a monounsaturated emollient that softens and pads. It serves as a penetration enhancer as well, assisting other lipid substances in settling toward upper strata. A facial oil is lipid based and does not supply water as a humectant moisturiser does, but may ease dry skin and help reduce the sensation of moisture escaping. Dense oleic oils can feel reassuring on undamaged dry skin, although references differ concerning suitability for

sensitive or inflamed skin. A review of 27 clinical studies covering 17 vegetable oils found that oils high in oleic acid with little or no linoleic acid may add structural harm to the stratum corneum on skin with inflammation, while unaffected skin may tolerate them.

02

Sorting common oils through fatty acid ratios

Oils abundant in linoleic acid feel thinner and disperse rapidly with limited residual cushion. Safflower provides about 75 to 80 percent linoleic acid, grapeseed provides about 70 to 75 percent, and hemp seed provides about 55 to 60 percent linoleic acid. Rosehip fits this lighter practical category, although reviewed figures focus on hemp, safflower and grapeseed. These selections appeal to people averse to weight, and they layer readily above a water based moisturiser.

Oils abundant in oleic acid feel denser and retain a prolonged soft layer. Olive provides about 70 to 80 percent oleic acid, avocado provides about 60 to 70 percent, and sweet almond provides about 60 to 70 percent oleic acid. Apricot kernel sits close to this richer group and commonly feels marginally lighter than olive or avocado. Richness can benefit dry cheeks, shins, elbows and hair tips, where added slip registers as care instead of grease.

Intermediate choices fall between these extremes. Argan presents a middle course for users seeking some substance without heaviness. Jojoba oil is in fact a wax ester that resembles sebum in structure, with about 5 to 10 percent linoleic content, which helps explain why a very small amount feels sufficient. It distributes in a thin film, remains relatively stable, and fits facial application when bulkier oils seem excessive.

Coconut oil remains separate because saturation dominates. A reviewed composition table lists about 48 to 52 percent lauric acid, 18 to 19 percent myristic acid, 8 to 9 percent palmitic acid, 5 to 6 percent oleic acid and 1 to 2 percent linoleic acid. This saturated arrangement keeps it solid at cool room temperature and substantial on skin. Numerous faces perceive it as overly heavy, whereas legs, feet and hair shafts may accept it.

OIL TYPE	FATTY ACID CHARACTER	TEXTURE AND BEST FIRST USE
Safflower, grapeseed, hemp seed	High linoleic, polyunsaturated	Light and fast, good for oily or combination faces
Olive, avocado, sweet almond, apricot kernel	High oleic, monounsaturated	Rich and cushioning, good for dry or mature skin
Argan, jojoba wax ester	Balanced or wax based	Middle weight, good for daily facial layering
Coconut	Mostly lauric and myristic, saturated	Dense and occlusive, better for body than face

FROM THE EDITORS

Oleic means monounsaturated, with one double bond that feels richer and lasts longer in storage, yet it may bother skin where inflammation has already weakened the barrier. Linoleic means essential and polyunsaturated, with two double bonds that support ceramide synthesis but break down faster through oxidation.

03

Matching oil weight to oily, dry, sensitive and mature skin

Oily and acne prone skin generally favours sparing use of light linoleic rich oils. Safflower, grapeseed and hemp seed deposit less cushion and combine more smoothly with a gel or light lotion below. Begin with night application alone, monitor for congestion across two to three weeks, and maintain acne medicine and sunscreen. Oil contributes comfort in this setting, it does not treat acne by itself.

Dry and mature skin commonly favours oleic rich cushioning oils that soften fine texture. Olive, avocado and sweet almond press effectively into slightly damp skin above moisturiser, where the humectant stratum retains water and oil slows its escape. A slender second film on cheeks or near the mouth can support cold days. Body skin accepts more generous application, so residual oil on hands can finish shins, elbows or cuticles instead of being discarded.

Sensitive skin benefits from fewer variables. Select a fragrance free single oil, patch test along the jaw or behind the ear, and introduce one product at a time and observe. Apricot kernel or sweet almond may seem gentler than olive for certain faces, while others favour jojoba because of its thin wax ester glide. Where skin shows cracks, eczema tendency or recent inflammation,

caution matters because high oleic low linoleic oils may damage stratum corneum on inflammation affected skin. A clinician can help decide whether oil use should wait until calm has returned.

Combination skin can apply two approaches together. A light linoleic oil may fit forehead and nose, whereas a richer oleic oil fits cheeks and neck. Hair tips also receive oil successfully, particularly avocado or sweet almond smoothed lightly across dry lengths. Separating facial and body applications prevents transfer of a heavy body oil onto a reactive face.

04

Interpreting comedogenic scores without overstating them

The 0 to 5 comedogenic scale comes from rabbit ear testing reported by Fulton, Pay and Fulton in 1984, where substances were applied to rabbit inner ear for 2 to 4 weeks. Rabbit inner ear reacts far more strongly than most human facial skin. "The rabbit ear model is extremely sensitive" according to Starzyk et al., authors of the 2025 JAAD Reviews review. A score that appeared concerning in that model may mean little on a human cheek.

Human testing tells a quieter story. A 2006 study by Draelos and DiNardo in the Journal of the American Academy of Dermatology tested finished cosmetic products on human upper back skin and found finished products were not always comedogenic. "Finished products using comedogenic ingredients are not necessarily comedogenic" according to Draelos and DiNardo, dermatology researchers. In a 2021 double blind randomised human trial, Waranuch et al. found four finished creams with lanolin, apricot kernel, avocado and sunflower lipids were non comedogenic while octyl palmitate raised microcomedone counts. Concentration and place on the ingredient list, the complete formula, and personal tendency to clog all shape the result.

Consumer charts add more noise. Ingredients rated 0 to 2 are commonly viewed as the safer range and 3 and above as deserving caution for acne prone skin, yet the same plant lipid can score 0 on one site and 2 on another. A 2025 review in JAAD Reviews found the term non comedogenic has no legal definition in the US and consumer rating databases follow no scientific or regulatory standards. Research still does not show which exact finished formulas will clog pores for a given person without a personal trial.

Treat ratings as a rough sorting aid, not a final verdict. "No oil and butter rating chart can guarantee whether a finished product will cause acne" according to the Herbal Dynamics Beauty guide authors. Patch test a new oil for a fortnight, keep the rest of the routine steady, and track congestion, comfort and texture. Personal observation matters more than a single number.

FROM THE EDITORS

The finished formula, the amount used, and individual skin matter more than any single ingredient score can show. A non comedogenic label has no legal definition in the US, so read it as brand intention rather than a promise.

05

Storage, extraction and steady everyday application

Polyunsaturated linoleic rich oils oxidise faster than oleic rich or saturated oils, especially with heat, light and air present. Oxidation dulls scent, deepens colour and makes slip feel harsh on skin. Cold pressed oils usually have a shorter shelf life of 12 to 18 months and should be stored in a cool dark place with the cap sealed. How long a specific opened oil stays fresh in a home bathroom compared with laboratory storage is not firmly established, so buy small bottles, note the opening date, and keep oil away from steam and sun.

Pressing method shapes colour, scent and keeping ability. Cold pressing is mechanical extraction with no heat above 120 degrees F (49 degrees C) and no chemical solvents used. The resulting oil retains more tocopherols, polyphenols and pigments, which many makers value for character. Refining can mean extraction with hexane using solvent, degumming, neutralisation with sodium hydroxide, bleaching with clay, and deodorising at 450 to 500 degrees F (230 to 260 degrees C). Refined oils still function as emollients and may provide more neutral scent, colour, consistency and stability for some formulas. Organic as a farming standard does not describe extraction method, so check labels for both terms. Whether minor compounds in cold pressed oil lead to measurable long term skin benefits compared with refined versions of the same oil remains unproven.

Daily use stays simple when oil comes last in the routine. Face oil guidance points to 1 to 3 drops warmed between fingertips and pressed into slightly damp skin, or layered over moisturiser at night. Warmth thins the oil, dampness eases spread, and pressing avoids pulling at skin. Oil cleansing runs on another rhythm as a rinse off method, with oil massaged into dry skin then lifted with a soft cloth or second cleanser. Mixing a drop into moisturiser softens a lotion that feels too light in winter months. Add one product at a time and watch closely, so any shift in breakouts or softness can be linked to that oil alone.

The checklist

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- ☐ Select linoleic rich safflower grapeseed or hemp for oily faces
-
- ☐ Select oleic rich olive avocado or almond for dry skin
-
- ☐ Consider jojoba or argan when middle weight suits
-
- ☐ Reserve coconut oil for body hair ends or feet if face congests
-
- ☐ Patch test each new oil near the jaw for two weeks
-
- ☐ Apply 1 to 3 drops pressed into slightly damp skin at night
-
- ☐ Place oil as the final layer over moisturiser, not under
-
- ☐ Use oil cleansing as a rinse off phase before cleanser
-
- ☐ Blend one drop into moisturiser for winter dryness
-
- ☐ Purchase small dark bottles and record the opening date
-
- ☐ Hold oil cool dark and sealed, away from shower steam
-
- ☐ Favour fragrance free single oils for sensitive skin
-
- ☐ Maintain acne care and sunscreen steady while testing oil
-
- ☐ Discard oil that smells sharp looks darker or feels harsh
-

Sources and further reading

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- Is It Comedogenic? How Pore-Clogging Ratings Work · scienceinsights.org

For information only, not medical advice. A study summary is not a diagnosis; see a board-certified dermatologist about anything that persists, spreads or hurts.



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Benjamin looks after the brands Face Value works with and makes sure every sponsored page is labelled as one. He spent six years on the commercial side of a New Jersey contract lab, which is where he learned what a stability test costs.
