Melanotan

History and Background

Melanotan I (also called afamelanotide) is a synthetic analog of alpha-melanocyte stimulating hormone (α-MSH) developed in the 1980s at the University of Arizona. Unlike Melanotan II (MT-2), Melanotan I was specifically developed for photoprotection and has a more selective mechanism. It received approval in Europe and Australia under the brand name Scenesse for treating erythropoietic protoporphyria (EPP), a rare disorder causing extreme photosensitivity. Melanotan I has a better safety profile than MT-2 due to its selectivity for MC1R receptors.

Primary Uses

Melanotan I is investigated for skin tanning with photoprotection, treatment of erythropoietic protoporphyria (FDA-approved in some countries), protection against UV damage and skin cancer risk, cosmetic tanning with less sun exposure, and vitiligo treatment (experimental).

How It Works

Melanotan I selectively binds to melanocortin-1 receptors (MC1R) on melanocytes in the skin. This stimulates eumelanin production (dark brown/black pigment) rather than pheomelanin (red/yellow pigment). The increased melanin provides natural photoprotection. Unlike MT-2, Melanotan I has minimal affinity for MC3R and MC4R, resulting in fewer appetite and sexual side effects. It creates a gradual, natural-looking tan that develops over weeks.

Standard Protocol

Dosing: Loading: 0.25mg daily or every other day until desired tan achieved (typically 10-20 doses over 3-6 weeks). Maintenance: 0.25mg 1-2x weekly.

Administration: Subcutaneous injection, typically in abdomen or thigh. Medical formulation (Scenesse) is an implant placed by physician.

Timing: Can dose morning or evening. Combining with minimal sun exposure (15-30 minutes) enhances tanning effect.

Titration Schedule:

Loading Phase: 0.25mg daily or every other day for 10-20 doses

Maintenance: 0.25mg 1-2 times weekly once desired tan achieved

Scenesse (Medical): 16mg implant every 2 months (prescription only)

Duration: Loading: 3-6 weeks. Maintenance: ongoing or seasonal

Duration: Loading phase: 3-6 weeks until desired tan. Maintenance: can be used indefinitely at reduced frequency, or seasonally.

What to Expect

Positive Effects (Week 1-2)

Gradual, natural-looking tan development over 2-4 weeks. Enhanced tanning response to sun exposure. More even skin tone. Reduced sunburn risk with same UV exposure. Longer-lasting tan than natural tanning. Photoprotection benefits. Minimal nausea compared to MT-2.

Timeline to Results

Initial subtle darkening: 1-2 weeks. Noticeable tan: 3-4 weeks. Full desired tan: 4-8 weeks depending on baseline skin tone and sun exposure. Maintenance tan: easily sustained with weekly dosing.

Dose Response

Effects are gradual and dose-dependent. Higher or more frequent dosing produces faster results but increases nausea risk. Lower doses (0.25mg every other day) better tolerated. Results cumulative over time.

Pros

FDA-approved in Europe/Australia (as Scenesse for EPP)
More selective than MT-2, fewer side effects
Gradual, natural-looking tan
Provides genuine photoprotection against UV damage
Minimal effects on appetite or libido (more selective receptor binding)
Can reduce sunburn severity
May have applications for vitiligo and other pigmentation disorders
Better safety profile than MT-2
Tan lasts longer than natural tanning
Useful for those who burn easily

Cons

Slower acting than MT-2 (takes weeks vs days)
Still causes nausea in some users (though less than MT-2)
Darkens existing moles and freckles
May cause new mole formation
Not FDA-approved in US for cosmetic tanning
Requires consistent dosing over weeks
More expensive than MT-2 due to higher doses needed
Long-term safety data still limited
Requires some sun exposure for optimal results
Individual response varies significantly

Who Should Consider It

Individuals with fair skin who burn easily, people seeking photoprotection with tanning benefits, those with history of severe sunburn, individuals who want a safer alternative to MT-2, people with erythropoietic protoporphyria (medical use), those willing to wait weeks for gradual results.

Who Should Avoid It

Anyone with history of melanoma or skin cancer, individuals with many atypical moles, pregnant or breastfeeding women, those seeking rapid tanning results, people with cardiovascular conditions, individuals unable to tolerate injection-related nausea.

Melanotan I is FDA-approved in some countries for EPP treatment (Scenesse) but not approved in the US for cosmetic tanning. Use for tanning purposes is off-label and should be under medical supervision. This information is for educational purposes only.