

## MT-2

### History and Background

Melanotan II (MT-2) is a synthetic peptide analog of alpha-melanocyte stimulating hormone ( $\alpha$ -MSH). It was originally developed in the 1990s at the University of Arizona as a potential sunless tanning agent and for treating skin conditions. MT-2 stimulates melanogenesis (melanin production) leading to skin darkening. It also has effects on libido and appetite. Despite its popularity, MT-2 has never been approved by the FDA and remains unregulated.

### Primary Uses

MT-2 is investigated (in unregulated contexts) for skin tanning with reduced sun exposure, potential skin cancer protection through tanning, libido enhancement, appetite suppression and weight loss, and erectile function improvement (secondary effect).

### How It Works

MT-2 is a melanocortin receptor agonist that binds to several melanocortin receptors (MC1R, MC3R, MC4R, MC5R). Binding to MC1R stimulates melanocytes to produce melanin, causing skin darkening. MC4R activation suppresses appetite and enhances sexual arousal. The tanning effect occurs with or without UV exposure but is enhanced with minimal sun exposure.

### Standard Protocol

**Dosing:** Loading: 0.25-0.5mg daily or every other day for 1-2 weeks. Some protocols use up to 0.8-1mg daily. Maintenance: lower doses 1-2x weekly.

**Administration:** Subcutaneous injection, typically in abdomen or thigh. Comes as lyophilized powder requiring reconstitution.

**Timing:** Often dosed in evening due to nausea side effects. Some prefer morning dosing with minimal sun exposure.

#### Titration Schedule:

**Starting/Loading:** 0.25-0.5 mg daily or every other day

**Research Protocol:** 0.01 mg/kg daily for up to 2 weeks ( $\approx$ 0.8mg for 175lb person)

**Alternative Loading:** 0.5mg twice daily for 3-4 days, then 1.5mg daily for one week

**Maintenance:** Lower doses 1-2x weekly after desired tan achieved

**Duration:** Loading phase: 1-3 weeks until desired tan achieved. Maintenance: ongoing at reduced frequency to maintain color.

### What to Expect

## Positive Effects (Week 1-2)

Skin darkening begins within days to 1-2 weeks. Enhanced tanning response to sun exposure. Darkening of moles and freckles. Increased libido and sexual arousal in many users. Appetite suppression commonly reported. Facial flushing common side effect.

## Timeline to Results

Initial darkening: 3-7 days. Noticeable tan: 1-2 weeks. Full effects: 2-4 weeks. Individual response varies by skin type, baseline melanin, sun exposure.

## Dose Response

Higher doses produce faster/darker tanning but more side effects. Lower doses (0.25-0.5mg) better tolerated. Effects dose-dependent but with diminishing returns above 1mg.

## Pros

Effective at producing tan with minimal UV exposure  
May reduce UV exposure needed for tanning  
Can produce tan in people who typically burn  
Libido enhancement side effect valued by some users  
May suppress appetite  
Effects noticeable within days

## Cons

NOT FDA-approved; unlicensed and unregulated  
Significant side effects: nausea (very common), facial flushing, spontaneous erections (men)  
Darkening of moles and freckles (permanent changes)  
May promote new mole formation  
Long-term safety completely unknown  
Potential melanoma risk theoretical but unstudied  
Quality control issues with underground suppliers  
Can cause hyperpigmentation that persists  
May cause changes in existing moles  
Nausea can be severe in some users

## Who Should Consider It

No medical professionals recommend MT-2 due to lack of approval and safety data. Use is at user's own risk. Some individuals use it for: cosmetic tanning with reduced UV exposure, situations where natural tanning is difficult.

## Who Should Avoid It

EVERYONE should avoid MT-2 according to FDA and medical authorities. Especially: anyone with history of melanoma or skin cancer, individuals with many moles or atypical moles, pregnant or breastfeeding women, those with cardiovascular conditions, people taking medications affecting

blood pressure.

***MT-2 is NOT approved by the FDA or any major regulatory body. It is considered unsafe and unregulated. Use is strongly discouraged by health authorities. This information is for educational purposes only and does not constitute medical advice or endorsement.***

