Peptide Perspectives™

BEYOND HORMONES

Peptides, Sexual Desire & Arousal

SEXUAL WELLNESS IS MORE THAN ONE NUMBER

Desire: motivation, interest, and sexual curiosity.

Arousal: brain signals, nerves, blood flow, erection/lubrication.

Reproduction: hormones, sperm/egg development, fertility.

Emotional context: stress, connection, medications, sleep, and health all matter.

Important: low desire, erectile/lubrication issues, pain with sex, and infertility are different clinical concerns.



Brain Reward Signaling
- Dopamine
- Reward
- Motivation
- Desire

Neurovascular Arousal
- Nerves
- Nitric oxide (NO)
- Increased blood flow
- Erection / lubrication

Reproductive Axis
- GnRH → LH / FSH
- Gonads
- Reproductive hormones (e.g., testosterone, estradiol)
- Fertility

FOUR BIOLOGICAL PATHWAYS

Desire & Reward
Motivation, attention, reward networks.

Arousal & Blood Flow
Autonomic nerves, nitric oxide, neurovascular response.

Reproductive Axis
GnRH → LH / FSH → gonads.

Social / Stress Context
Oxytocin, stress, emotional safety.

A rise in testosterone does NOT automatically equal higher desire, better arousal, or improved fertility.

7 COMPOUNDS & THEIR EVIDENCE

PT-141 (Bremelanotide)
- Melanocortin receptor agonist; central desire signaling.
- Large Phase 3 human trials.
- FDA-approved as Vyleesi for acquired, generalized HSDD in premenopausal women only.
- Cautions: nausea, flushing, headache, transient BP increase.

FDA-APPROVED FOR A NARROW INDICATION

Oxytocin
- Social / emotional signaling peptide.
- Human sexual-outcome trials are mixed or negative.
- Interesting for context, stress, and intimacy research.

MIXED HUMAN EVIDENCE

Kisspeptin-54
- Upstream regulator of GnRH; links reproductive hormones with sexual brain processing.
- Small randomized human studies in men and women with HSDD show changes in brain responses and some arousal/ desire measures.
- Long-term benefit remains unproven.

EARLY HUMAN STUDIES

Melanotan II
- Broad melanocortin agonist.
- Very small older human studies reported erectile-response and desire findings.
- Not FDA-approved; safety and product-quality concerns.

SMALL HUMAN STUDIES / INVESTIGATIONAL

Melanotan I (Afamelanotide)
- Primarily pigmentation-related melanocortin signaling.
- FDA-approved Scenesse is for erythropoietic protoporphyria (EPP), not libido or arousal.

APPROVED FOR A DIFFERENT USE

Gonadorelin (GnRH)
- Synthetic GnRH with specialized reproductive-endocrine use.
- Useful model of hormonal signaling, but not a direct libido enhancer.

SPECIALIZED CLINICAL USE

hCG
- LH-like stimulation of testicular / reproductive function.
- Relevant in selected reproductive disorders.
- Not a direct central arousal or desire treatment.

ESTABLISHED MEDICINE IN SELECT CASES

WHAT GOOD STUDIES SHOULD MEASURE

- Sexual desire & distress
- Arousal / erection / lubrication
- Satisfaction & orgasm
- Relationship / quality of life
- Hormones & fertility markers
- Side effects / BP / safety

WHERE SCIENCE IS HEADING

- Separate desire, arousal, and fertility instead of treating them as one switch.
- Match therapy to the actual problem.
- Improve receptor selectivity and patient selection.
- Use longer trials with meaningful patient-reported outcomes.

DESIRE, AROUSAL, AND FERTILITY ARE DIFFERENT OUTCOMES.

Bremelanotide has a narrow FDA-approved use; most other compounds remain investigational for sexual health.

Educational research overview | November 2026 | Not medical advice.