

# Active Ingredient Summary Table

## Peptides

Peptide	Approved Indication and Dosing	Other Studied Indications (NOT FDA APPROVED) and Dosing
<b>Semaglutide</b>	<ul style="list-style-type: none"> <li>FDA approved as adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes</li> <li>Dosing varies, injectable product often starts at 0.25mg for 4 weeks and then is increased after that to 0.5mg up to a maximum possible dose of 2mg once weekly</li> </ul> <p>Tablet product dosed at 3mg once daily for 30 days, the dose is then increased to 7mg once daily up to a maximum possible dose of 14mg once daily</p>	<p>Some studies have noted weight loss with both subcutaneous and oral semaglutide. One study noted injected semaglutide 1mg and oral semaglutide 14mg monotherapy were able to reduce body weight superior to placebo<sup>1</sup> and other studies have also noted significant weight loss with the commercially available subcutaneous injectable product</p> <p>Clinical trials are ongoing regarding appropriate dosing and utility of oral semaglutide for people who are overweight or living with obesity<sup>2</sup></p>
<b>Bremelanotide</b>	<ul style="list-style-type: none"> <li>FDA approved for treatment of premenopausal women with acquired, generalized hypoactive sexual desire disorder (HSDD)</li> </ul> <p>Injectable is dosed at 1.75mg administered subcutaneously at least 45min prior to sexual activity, no more than 8 doses per month recommended</p>	<p>Studied in men at 7.5mg via nasal route in combination with sildenafil vs sildenafil alone and found to be superior<sup>3</sup></p> <p>Studied nasally at 4,7,10, and 20mg in men and doses at or greater than 7mg produced an erectile response in approximately 30min<sup>4</sup></p> <p>Studied at a 20mg nasal dose vs placebo in women and it was noted to positively affect desire and arousal in women with female sexual arousal disorder<sup>5</sup></p>
<b>Sermorelin</b>	<ul style="list-style-type: none"> <li>Previously FDA approved (currently discontinued) for diagnostic evaluation of pituitary function and also for increasing growth in children</li> </ul> <p>0.2-0.3mcg once daily at bedtime</p>	<p>Studied in men for management of hypogonadism, dosing varies significantly, one study evaluated injections at 0.5mg or 1mg twice daily for 14 days and found dose related increase in GH, IGF-1 and increase in serum testosterone levels<sup>6</sup></p>

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<b>Gonadorelin</b>	<ul style="list-style-type: none"><li>Previously FDA approved (currently discontinued) for induction of ovulation in women with primary hypothalamic amenorrhea</li></ul> Lutrepulse (gonadorelin acetate) dosing per package insert is 5-20mcg/pulse every 90 minutes	Studied off label for spermatogenesis, pulsatile therapy: 10mcg every 90 minutes subcutaneously (range was 3mcg to 15mcg every 90 minutes) <sup>7,8</sup>
<b>Oxytocin</b>	<ul style="list-style-type: none"><li>FDA approved for initiation or improvement of uterine contractions antepartum or postpartum (to control postpartum bleeding or hemorrhage)</li></ul> Dosing is highly dependent on indication and route (intravenous vs intramuscular), see package insert for full details	Doses vary, studied between 8-40IU per dose intranasally for social cognition, libido, and anorgasmia <sup>9,10,11</sup>  Studies on weight loss generally evaluate nasal use, one study found clinically significant weight loss with 24IU administered four times daily (once before each of 3 meals and again before bed) <sup>12</sup>
<b>Vasoactive Intestinal Peptide</b>	N/A: No commercially available product previous or current	Studied for chronic inflammatory response syndrome at 50mcg/0.1ml nasal spray. Patients were started on one spray four times daily for one month, then increased to two sprays four times daily each month if the symptoms were not resolved at the end of the first month of VIP treatment. <sup>13</sup>

### Resources:

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2. Novo Nordisk A/S. Research Study to Investigate How Well Semaglutide Tablets Taken Once Daily Work in People Who Are Overweight or Living With Obesity (OASIS 1) (OASIS 1). NCT05035095. Posted 9/5/21, Last updated posted 1/27/22. Accessed 9/30/22. <https://clinicaltrials.gov/ct2/show/NCT05035095>
3. Diamond LE, Earle DC, Garcia WD, Spana C. Co-administration of low doses of intranasal PT-141, a melanocortin receptor agonist, and sildenafil to men with erectile dysfunction results in an enhanced erectile response. Urology. 2005;65(4):755-759. doi:10.1016/j.urology.2004.10.060
4. Diamond, L., Earle, D., Rosen, R. et al. Double-blind, placebo-controlled evaluation of the safety, pharmacokinetic properties and

### Peptides

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5. Diamond LE, Earle DC, Heiman JR, Rosen RC, Perelman MA, Harning R. An effect on the subjective sexual response in premenopausal women with sexual arousal disorder by bremelanotide (PT-141), a melanocortin receptor agonist. *J Sex Med.* 2006;3(4):628-638. doi:10.1111/j.1743-6109.2006.00268.x
  6. Sinha DK, Balasubramanian A, Tatem AJ, et al. Beyond the androgen receptor: the role of growth hormone secretagogues in the modern management of body composition in hypogonadal males. *Transl Androl Urol.* 2020;9(Suppl 2):S149-S159. doi:10.21037/tau.2019.11.30
  7. Zhang L, Cai K, Wang Y et al. The pulsatile gonadorelin pump induces earlier spermatogenesis than cyclical gonadotropin therapy in congenital hypogonadotropic hypogonadism men. *Am J Mens Health.* 2019. 13(1): doi: 10.1177/1557988318818280
  8. Jianli L, Mao J, Wang X et al. Optimal treatment for spermatogenesis in male patients with hypogonadotropic hypogonadism. *Medicine.* 2019; 98(31). doi: 10.1097/MD.00000000000016616