Ipamorelin — Basic Review Questions

1. What is ipamorelin, what class of peptide is it, and what is its regulatory status?

Answer: Ipamorelin is a synthetic peptide — a five-amino-acid pentapeptide — classified as a growth hormone secretagogue, specifically a third-generation GHRP that mimics the hormone ghrelin by activating its receptor (GHS-R1a). It is given mainly as a subcutaneous injection. It is not FDA-approved (it is an investigational compound) and is prohibited in sport by WADA. Most of its evidence is preclinical, with only limited human data.

2. How does ipamorelin work?

Answer: It binds the ghrelin receptor (GHS-R1a) on the pituitary gland, prompting the pituitary to release the body's own growth hormone (GH) in natural pulses. It also reduces somatostatin, the brake that normally limits GH release. The released GH then raises IGF-1, which carries out GH's anabolic effects. So, like the GHRH analogs, it stimulates the body's own GH production rather than supplying GH directly — but it works through a different (ghrelin) receptor.

3. What is ipamorelin's defining advantage compared with other GHRPs?

Answer: Its defining advantage is what it does not do. Among the GHRP family, ipamorelin is the most selective and "cleanest": even at high doses it does not raise cortisol, ACTH, or prolactin, and it does not trigger the strong appetite surge seen with older GHRPs such as GHRP-2 and GHRP-6. This clean hormonal profile is its main clinical differentiator and makes it suitable for patients in whom raising stress hormones, prolactin, or appetite would be a problem.

4. How is ipamorelin different from taking growth hormone directly?

Answer: Like other GH secretagogues, it preserves the body's natural pulsatile GH rhythm and keeps the normal feedback system (somatostatin) intact. Injected synthetic GH, by contrast, provides a continuous, non-pulsing signal that can cause insulin resistance, downregulate GH receptors, and override the body's own regulation. Ipamorelin aims to restore GH physiologically rather than load the body with supraphysiologic amounts — in animal models it produced a modest, physiologic effect compared with the much larger effect of exogenous GH.

5. How is ipamorelin dosed and used, and why is it often combined with a GHRH analog?

Answer: It is typically given as 100 mcg subcutaneously (up to 200 mcg), one to three times daily, in a fasted state (food blunts the GH response), with cycling (for example, about 12 weeks on, then a break) to maintain receptor sensitivity. Higher doses do not proportionally increase GH and speed up receptor desensitization, so staying low is the guiding principle. It is often paired with a GHRH analog (such as CJC-1295/Mod GRF 1-29 or sermorelin) because the two activate different receptors at once, producing a larger, synchronized GH pulse — and ipamorelin's clean profile makes it the preferred "anchor" peptide in those combinations.

6. What is the state of the evidence, and what are the main cautions?

Answer: Most of the evidence is preclinical (animal and laboratory studies showing GH release, bone growth, and gut-motility effects). Human data are limited to early studies — Phase 1 work confirming its pharmacology and clean hormone profile, and a Phase 2 trial in postoperative ileus that was well tolerated but did not meet its main endpoint. There are no long-term human safety data and no studies of body-composition or anti-aging outcomes. The main cautions are that GH/IGF-1 stimulation could theoretically promote tumor growth (so active cancer is a contraindication), it can transiently affect blood sugar, and any use is investigational and off-label.