

An Evaluation and Comparison of Various Stimulation Protocols for in Vitro Fertilization

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Abstract: *As a result of genetic, epigenetic, or both influences, infertility is a significant medical concern in the Western world, prompting ongoing research and developments in assisted reproductive technology. A wide range of stimulation protocols are accessible for the purpose of achieving controlled ovarian hyperstimulation (COH) during in vitro fertilization (IVF). The agonist extended protocol, antagonist protocol, and minimal stimulation protocol are compared in this article. The minimal stimulation and gonadotropin-releasing hormone (GnRH) antagonist protocol reduces gonadotropin use and treatment duration. The extended protocol for GnRH agonists improves folliculogenesis and pregnancy rate, which is the primary objective of COH. Notwithstanding its expensive and protracted methodology, the GnRH agonist long protocol has yielded favorable outcomes for the majority of women. Conversely, individuals who have inadequate ovarian reserve may benefit more from the implementation of a minimal stimulation protocol. To reach more conclusive results, it is obviously essential to conduct larger-scale studies with more targeted comparisons that account for additional confounding variables and variations in patients' response criteria.*

Keywords: Stimulation protocols, In vitro fertilization (IVF), Ovarian stimulation