

Combined birth control pill linked with increased risk of blood clots in obese women

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Obese women who use oral contraceptives containing estrogen and progestin have a 24-fold increased risk of venous thromboembolism (VTE) compared with non-obese women not using the drugs, according

to a review paper published today in *ESC Heart Failure*.

Study author Professor Giuseppe Rosano of the IRCCS San Raffaele Pisana, Rome, Italy said, "It is well established that both obesity and estrogen-containing contraceptives are risk factors for VTE. Despite this, [obese women](#) continue to receive these drugs. The scientific evidence indicates that obesity and combined [oral contraceptives](#) have a synergistic effect on VTE risk and this should be considered in prescribing decisions. Progestin-only products, including pills, intrauterine devices, or implants are a safer alternative to the combined pill in women carrying excess weight."

This review article highlights the latest evidence on the independent effects of obesity and contraceptives, and their synergistic effects, on VTE risk and provides clinical recommendations. VTE refers to a blood clot in a vein and includes two life-threatening conditions: deep venous thrombosis and pulmonary embolism.

The World Health Organization estimates that the global prevalence of obesity nearly tripled between 1975 and 2016—with 15% of adult women being obese. The risk of VTE increases progressively with [body mass index](#) (BMI), and in obese women it is more than double that of non-obese women. Obesity has the most substantial impact on VTE women under 40 years of age, who have a five-fold increased risk compared with non-obese women. Professor Rosano noted, "The particularly high risk in obese women under 40 is important, since it is at this age that many seek contraception."

Combined oral contraceptives are associated with an elevated likelihood of VTE, with users having a three- to seven-fold elevated likelihood of VTE compared with non-users. In contrast, progestin-only products are not associated with an increased risk of VTE.

The combination of overweight/obesity and use of combined oral contraceptives potentiates the likelihood of blood clots in women of reproductive age. For example, a large population-based study found that overweight and [obesity](#) were associated with 1.7-fold and 2.4-fold increased risks of VTE, respectively. However, in combined pill users, the risk of VTE was 12-fold higher in [overweight women](#) and 24-fold higher in obese women—when compared with normal weight non-users.

Professor Rosano said, "Obese women taking contraceptives are vulnerable to VTE and should take steps to limit their other predisposing factors for [cardiovascular disease](#), for example by quitting smoking and increasing their physical activity levels."

More information: Giuseppe M.C. Rosano et al, Obesity and contraceptive use: impact on cardiovascular risk, *ESC Heart Failure* (2022). [DOI: 10.1002/ehf2.14104](https://doi.org/10.1002/ehf2.14104)

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