

Why are women who switch birth control more likely to start semaglutide?

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A woman's contraceptive history is not something most clinicians think to ask about when discussing weight-loss medication. New research published in JAMA Network Open suggests it might be worth asking anyway: women who have cycled through multiple types of hormonal birth control are markedly more likely to later start semaglutide than women who never used it.¹

KEY TAKEAWAYS

- **The Pivot:** A history of switching between multiple types of hormonal contraception is independently associated with a woman later starting semaglutide, even after accounting for BMI.
- **The Data:** Women with three prior contraceptive types were about twice as likely to start semaglutide as never-users; those with more complex switching patterns were up to four times as likely.
- **The Action:** Use contraceptive history as one more data point, not a diagnosis, when a patient raises weight concerns, and default to individualised counselling that asks directly about perceived weight change and side effects rather than assuming a causal link.

Around 26% of UK women aged 15 to 49 use hormonal contraception, and an estimated 9% of adults report having used a GLP-1 drug at some point, with women aged 30 to 49 twice as likely as men to have done so.¹ In Denmark specifically, hormonal contraceptive use in that age group rose from 35% to 39% between 2010 and 2019, and 110,748 Danish adults filled a Wegovy prescription in the twelve months to December 2023, 70% of them women.

Dr Mille Dybdal Bager of Steno Diabetes Center Copenhagen led a team through Denmark's nationwide health and prescription registers to test whether contraceptive history predicts later semaglutide use. The study drew on women aged 12 to 49 living in Denmark between 1996 and 2023, comparing 22,694 women who filled a first semaglutide prescription against 226,940 birth-year-matched controls who had not.¹

The Numbers

Women who had used any type of hormonal contraception, the combined pill, the progestin-only mini pill, hormonal IUDs, implants, injections, vaginal rings or patches, were significantly more likely to start semaglutide than women who had never used hormonal birth control.¹ The strength of the association tracked how much a woman had switched between methods: those who had used three different types were roughly twice as likely to start semaglutide as never-users.

Women who fell into what the authors grouped as "other utilisation patterns", implants, patches, vaginal rings or complex switching between progestin and combined methods, showed the strongest signal of all: almost four times more likely to start semaglutide among women with a normal or low BMI, and around twice as likely among women with overweight or obesity, compared with never-users in the same BMI category.

The one pattern that did not clearly associate with later semaglutide use was exclusive use of the progestin-only pill among women with normal or low BMI, though the authors caution that estimate rests on just 10 cases and should not be read as a real exception. The overall association persisted, though somewhat attenuated, after adjusting for BMI in the subgroup with recorded measurements, and held up consistently across age, education, income, parity and immigrant status.

Roughly three-quarters of the women who went on to start semaglutide had a prior BMI in the overweight or obesity range, against about a third of the matched controls, an expected gap given semaglutide's indication but one that makes the independent contraceptive signal, which survived BMI adjustment, more notable rather than less.

The study's findings prompt critical questions regarding the underlying mechanisms that might link contraceptive switching patterns to subsequent semaglutide initiation. While the association persisted after adjusting for BMI, suggesting an independent signal, the precise nature of this connection remains to be fully elucidated. One hypothesis centers on the potential for hormonal fluctuations or metabolic changes induced by different contraceptive methods to influence appetite regulation, insulin sensitivity, or gut hormone secretion, thereby contributing to weight management challenges that eventually lead to GLP-1 receptor agonist prescription. For instance, some progestin-only methods have been associated with minor weight gain in certain individuals, and frequent switching could reflect an ongoing struggle with weight or metabolic side effects, prompting patients and clinicians to explore more aggressive weight management strategies.

Another consideration is the possibility that women who frequently switch contraceptive methods may represent a subgroup with a higher baseline propensity for seeking medical interventions for various health concerns, including weight management. This could reflect a greater awareness of health options, a more proactive approach to managing side effects, or a higher likelihood of engaging with healthcare providers about their overall well-being. The "other utilisation patterns" group, which showed the strongest association, included complex switching between progestin and combined methods, suggesting that women navigating these intricate contraceptive journeys might be experiencing more persistent or challenging symptoms that ultimately lead to semaglutide use.

Despite the robust statistical associations, the study, being observational, cannot establish causality. It is plausible that confounding factors not fully captured by the available register data could contribute to the observed link. For example, underlying polycystic ovary syndrome (PCOS), a condition often managed with hormonal contraception and frequently

associated with insulin resistance and obesity, could be a common driver for both contraceptive switching and subsequent semaglutide initiation. While the study adjusted for several socioeconomic and demographic factors, detailed clinical data on comorbidities like PCOS were not available. Future research incorporating more granular clinical phenotypes and longitudinal metabolic assessments would be crucial to disentangle these complex interrelationships.

The clinical implications of these findings are significant for healthcare professionals. When counseling women about contraceptive choices, it may be prudent to consider the potential long-term metabolic trajectories, particularly in those who report frequent method switching or express concerns about weight management. While the study does not suggest that contraceptive switching directly causes a need for semaglutide, it highlights a demographic that warrants closer monitoring for metabolic health. Clinicians should be aware that women with a history of complex contraceptive utilization patterns, even those with a normal or low BMI, may represent a population at higher risk for future weight management challenges, potentially benefiting from early intervention and personalized care strategies. Further prospective studies are needed to confirm these associations and explore the underlying biological and behavioral pathways.

CLINICAL IMPLICATIONS

The least useful way to read this study is as evidence that birth control causes weight gain that then requires semaglutide to fix. Dr Bager is explicit that her data cannot support that chain of causation, and the more interesting explanation she offers points the other way: women who have already cycled through several contraceptive methods may simply be more comfortable navigating the healthcare system, more likely to raise a weight concern with a clinician, and more willing to start a new medication when one is offered. The contraceptive switching is not the cause, it may be a marker of a woman who engages with her care differently.

That reframing has a genuine clinical use. A patient's contraceptive history is already sitting in her chart, unlike a validated screening tool for obesity-treatment readiness. If a documented pattern of method-switching flags a woman who is more likely to be receptive to a weight-management conversation, that is a low-cost, already-available prompt for clinicians to ask the question rather than wait for the patient to raise it.

Dr Bager's own recommendation is the right one to carry into practice: individualised contraceptive counselling that asks directly about a woman's weight history, any perceived changes, and her comfort with medication, rather than treating contraceptive choice and weight management as two separate conversations that happen to share a patient. The study cannot say whether hormonal contraception itself affects weight, a question the authors note remains genuinely unsettled in the broader literature, but it can say that the two topics are already linked in how women experience their care.

This was an observational registry study, and the authors are upfront that unmeasured lifestyle, psychological and social factors could explain some or all of the association. No clinician should read a three-method contraceptive history as a reason to preemptively suggest semaglutide. The more defensible takeaway is

narrower: when a woman with that history does raise a weight concern, take it seriously and follow up, because the data suggest she is more likely than average to actually want the conversation.

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REFERENCES

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