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Birth Control for Migraine Guide

Use this guide to help your patient find the best birth control option for them and their migraine

Migraine is very common in women of child-bearing age. Many of those same women need or want contraception, or may have other conditions, such as irregular menstrual cycles, severe dysmenorrhea, ovarian cysts, or polycystic ovarian syndrome, that are commonly treated with estrogen-containing contraception.

Studies and medical literature do not clearly support the use of contraceptives to prevent migraine, but women who need or want contraception can keep their hormone levels even by using continuous contraception. Studies have shown a link between fluctuating hormone levels and migraine attacks.

Here's a guide to common birth control options and how they can be used most effectively for migraine.

Type	Hormones Contained	Effective Use	Why it Works	Risks
Combined Oral Contraceptive Pills (the pill)	Ethinyl estradiol and a progestin	For best migraine prevention, use monophasic pills (the same dose in each pill) and take an active pill daily, skipping the placebo pills	Suppresses menstrual cycle hormonal changes. Presents a relatively stable source of ethinyl estradiol daily to the brain	• Uterine spotting* • DVT • Stroke
Progestin-Only Pills	Progestin	Taken daily without placebo pills – should not be stopped	Unreliably suppresses ovulation and for some women reduces both total and fluctuations in estradiol	• Uterine Spotting • At risk for contraceptive failure with missed pills
Vaginal Ring	Ethinyl estradiol and a progestin	For best migraine prevention, use continuously, skipping the placebo week. One US product requires a new ring every 3 weeks; other US ring has sufficient hormone to last 39 weeks and releases 13% less estrogen then the other ring	Both rings provide a lower daily dose of ethinyl estradiol than the pill without the daily fluctuations of an oral formulation	• Uterine spotting* • DVT • Stroke

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Type	Hormones Contained	Effective Use	Why it Works	Risks
Copper Containing Intrauterine Device	None	Inserted and removed by a provider; contraceptive for 10 years; does not suppress hormonal cycle changes – not effective for migraine prevention	Endometrial copper is spermicidal and increases endometrial inflammation which impairs implantation; no effect on systemic estradiol fluctuations	• Uterine spotting • Increased menstrual flow and cramps
Progestin Releasing Intrauterine System	Progestin releasing	Inserted and removed by a provider; Contraceptive efficacy varies with the model Systemic progestin levels are ≤10% that seen with oral contraceptive pills; does not suppress hormonal cycle changes – not effective for migraine prevention	Local Progestin causes endometrial atrophy, which prevents implantation and changes cervical mucus which; no effect on systemic estradiol fluctuations impairs sperm migration	• Uterine spotting • Amenorrhea
Contraceptive Implant (upper arm)	Etonogestrel, a progestin	Inserted and removed by a provider; provides contraception for 3 years; because of the reduction and stabilization of estradiol in most women, may help prevent migraine	Daily exposure to progestin suppresses ovulation in most women; causes endometrial atrophy which prevents implantation and changes cervical mucus which impairs sperm migration	• Uterine spotting • Oligomenorrhea Amenorrhea
Injectable Progestin – Available IM or SC	Medroxyprogesterone Acetate	Injected every 3 months at the provider's office – either intramuscularly or subcutaneously May be effective for migraine prevention because it profoundly reduces and stabilizes estradiol	Daily exposure to progestin suppresses ovulation in most women; causes endometrial atrophy which prevents implantation and changes cervical mucus which impairs sperm migration	• Uterine spotting • Oligomenorrhea Amenorrhea • Weight gain • Depression • Bone density reduction

*If endometrial spotting becomes problematic, hold pill ingestion or remove ring for 3 – 4 days and then restart – this will trigger endometrial sloughing and restabilization of the uterine lining.

Note: Progestin-only forms of contraception work by blocking ovulation, thickening the cervical mucus, and thinning the lining of the uterus. They may not be as effective as combined contraceptive methods in potentially helping migraine but are safer in women who have migraine with aura.

Stroke Risk

Increasingly lower dosages of ethinyl estradiol containing contraception have become available, including 10-20 mcg as oral preparations and the vaginal ring, which releases 15 mcg of ethinyl estradiol daily. There is also a new vaginal ring that releases only 13 mcg of ethinyl estradiol daily. These lower preparations come with a lower risk of ischemic stroke.

The risk of ischemic stroke is much higher in women with aura (off ratio 6.1) if using COC compared only 1.8 odds ratio for women without aura who used COCs within 90 days prior to the first diagnosis of stroke. The risk is even higher in women with aura who smoke and use COC.

Screening Questions

1. Is there a clotting disorder or a history of deep venous thrombosis (DVT)?
2. Are there risk factors for a stroke or DVT such as smoking, obesity, low high density lipoprotein (HDL) level, family history (FH) of heart or stroke at less than 60 years old, high blood pressure?
3. Does the woman ever experience aura; if so, how often, for how long, and what type of aura?

For more information on migraine and other headache disorders, visit **AHS' resources hub**. If you are interested in women's health and migraine management, be sure to sign up for our brand new presentation on **A Woman's Migraine Journey**.

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