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Long-Acting Reversible Contraception Duration of Use

Following FDA approval, further studies have since been completed which demonstrate that many Long-Acting Reversible Contraceptives (LARCs) are safe and effective for a longer duration than previously known. There are, however, a range of recommendations from national organizations, such as ACOG, AAFP, and Planned Parenthood, for what the optimal duration of use is. Our recommendations are designed to reflect the best available evidence, with the intention of continuing to minimize the risk of un-intended pregnancies, while also reducing the frequency of invasive procedures required for LARC removal or exchange.

Discussion

1. ParaGard - TCu380A Copper IUD
    a. FDA approved for ten years of use.
    b. Both Planned Parenthood and ACOG support 12 years use.[i] This threshold is defined based on loss to follow-up in the primarily literature, rather than evidence of contraceptive failure. "Women who are at least 35 years old at the time of insertion of a TCu380A IUD can continue use until menopause with a negligible risk of pregnancy." [ii]
    c. In keeping with this data we support a 12-year duration of use.
2. Mirena - 52-mg levonorgestrel (LNG) IUD
    a. Dose reported either as total drug in device or as maximum daily release (20 mcg).
    b. FDA approved for 8 years.
    c. Multicenter data demonstrates efficacy through 7 years of use. Additionally, the data showed no additional pregnancies among 398 LNG-IUD users who had continued use of between 8-11 years.[iii] Further studies of Liletia, below, demonstrated 8 year efficacy.
    d. In keeping with updated FDA guidance, we support a 8-year duration of use.
3. Liletia - 52-mg levonorgestrel (LNG) IUD
    a. Dose reported either as total drug in device or as maximum daily release (18.5 mcg).
    b. FDA approved for 8 years.
    c. Initial studies, sited by ACOG, compared hormone release to Mirena, and demonstrated similar values over the 5.5 year study duration, leading to ACOG recommending a 5-7 year duration of use, while awaiting further data. AbbVie subsequently completed an 8-year multicenter study, and updated their prescribing instructions, to recommend use for up to 8 years.[iv]
    d. In keeping with updated FDA guidance, we support a 8-year duration of use.
4. Kyleena – 19.5-mg levonorgestrel (LNG) IUD
    a. Dose reported either as total drug in device or as maximum daily release (9 mcg).
    b. FDA approved for 5 years.

    c. There is insufficient follow-up data for Planned Parenthood or ACOG to recommend extended use beyond 5 years.
5. Skyla – 13.5-mg levonorgestrel (LNG) IUD
    a. Dose reported either as total drug in device or as maximum daily release (8 mcg).
    b. FDA approved for 3 years.
    c. There is insufficient follow-up data for Planned Parenthood or ACOG to recommend extended use beyond 3 years.
6. Nexplanon – 68 mg etonogestrel (ENG) implant
    a. FDA approved for 3 years.
    b. Planned Parenthood supports 5 years of use and ACOG supports 4-5 years use.
    c. ACOG recommendation acknowledges on-going data collection. Initial data was from single center cohort study, and found no pregnancies in 4th and 5th years of use. However, they examined ENG blood levels, and found that over overweight and obese individuals, some had blood ENG levels below the 90 pm/ml threshold thought to prevent ovulation.[v] A subsequent multicenter cohort study similarly found no pregnancies in 4th and 5th years of use, but was limited in size, and included few obese women.[vi]
    d. In keeping with this data we support a 5-year duration of use for non-obese individuals, but find insufficient evidence for individuals with BMI >30 to recommend extended use beyond 3 years.

Summary of Recommendations:

	Planned Parenthood	FDA	ACOG	SCF OB/GYN
ParaGard	12	10	12	12
Mirena (LNG 20)	8	8	7	8
Lilita (LNG 18.6)	8	8	5-7	8
Kyleena (LNG 9)	5	5	-	5
Skyla (LNG 8)	3	3	-	3
Nexplanon	5	3	4-5	3- 5*

*Use may be extended to 5 years in individuals with BMI <30

[i] PB 176 – Long Acting Reversible Contraception (2015). ACOG Practice bulletin. *Am J Obstet Gynecol*, *213*(662), e1-8.
[ii] Wu, J. P., & Pickle, S. (2014). Extended use of the intrauterine device: a literature review and recommendations for clinical practice. *Contraception*, *89*(6), 495-503.
[iii] Rowe, P., Farley, T., Peregoudov, A., Piaggio, G., Boccard, S., Landoulsi, S., & Meirik, O. (2016). Safety and efficacy in parous women of a 52-mg levonorgestrel-medicated intrauterine device: a 7-year randomized comparative study with the TCu380A. *Contraception*, *93*(6), 498-506.
[iv] Liletta Prescribing Information, AbbVie
[v] McNicholas, C., Swor, E., Wan, L., & Peipert, J. F. (2017). Prolonged use of the etonogestrel implant and levonorgestrel intrauterine device: 2 years beyond Food and Drug Administration–approved duration. *American journal of obstetrics and gynecology*, *216*(6), 586-e1.

[vi] Ali, M., Akin, A., Bahamondes, L., Brache, V., Habib, N., Landoulsi, S., ... & WHO study group on subdermal contraceptive implants for women†. (2016). Extended use up to 5 years of the etonogestrel-releasing subdermal contraceptive implant: comparison to levonorgestrel-releasing subdermal implant. *Human Reproduction*, *31*(11), 2491-2498.

Written 7/14/24 jau