

NEXPLANON®: Long Acting Contraception As First Line Management for Adolescents

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Adolescents are among the highest risk groups for unplanned pregnancy. Long acting reversible contraception (LARC) is among the most highly effective forms of birth control available with very low failure rate of 0.05-0.8% (ACOG practice bulletin, 2017). Although LARCs come with a higher upfront cost, they are among the most cost effective options available. Two forms of long acting contraception are available for adolescent use, subdermal etonogestrel implant (Nexplanon®) or the IUD. This poster will focus on Nexplanon®. Nexplanon® is a subdermal implant of etonogestrel, a progesterone that is placed near the medial aspect of the upper arm. The device works to prevent pregnancy by inhibiting ovulation, thickening cervical mucus and thinning the endometrial lining.

Objectives:

Upon completion of this activity the audience will be able to:

1. Define the scope of the problem of adolescent pregnancy and contraceptive recommendations.
2. Identify the advantages and disadvantages of using Nexplanon®.
3. Summarize the insertion and removal process of Nexplanon®.
4. Recommend LARCs as a first line contraception for adolescents.

Scope of the problem:

Approximately, 40% of high school adolescents are having sexual intercourse and about 75% of all teenage pregnancies are unplanned (Norris, 2019). The forms of birth control that most adolescents are familiar with and using are user dependent. According to CDC Division of Reproductive Health these methods have a failure rate of 7-23%. LARCs are safe, more than 99% effective, and NOT user dependent (Norris, 2019). So why are only 4.5% of adolescents using them (Norris, 2019)? Because patients aren't asking and providers aren't offering. According to Norris (2019) the majority of pediatricians are not comfortable doing pelvic exams, performing insertions, and don't feel they would have enough demand to make them comfortable or worth their time to offer. A pelvic exam is not required for the implant and many adolescents would accept a LARC if they were aware of them. Standard sexual transmitted disease screening recommendations should be followed. Both American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics recommend and support the use to LARCs as a first line contraceptive choice.

Contraindications for Nexplanon® Use:

There are relatively few contraindications to Nexplanon®. Pregnancy is a one of them. Urine pregnancy test should be done before insertions and history should reasonably exclude pregnancy. However, inadvertent placement of the implant has occurred in early pregnancy with a negative pregnancy test and has not resulted teratogenicity or adverse pregnancy outcomes (Sznajder et al., 2017). The implant should be removed as soon as a pregnancy is confirmed. Elevated liver enzymes or known liver disease is a contraindication but it is not necessary to screen for liver enzymes prior to insertion. Personal history of breast cancer or blood clot and undiagnosed vaginal bleeding are also contraindications. Known allergies to progesterone or other components of the implant would also be a contraindication.

Advantages of Nexplanon®:

Nexplanon® is effective for 3 years. There is no "messaging" it up, forgetting and no trips to the pharmacy. The efficacy is greater and 99% and comparable to IUDs and sterilization. There is no need for adolescents to undergo a pelvic exam prior to starting and a "quick start" may be used on the same day as evaluation if pregnancy can reasonably be ruled out by history and urine pregnancy test. Nexplanon® can improve acne and dysmenorrhea and menstruation may stop. The implant has little to no effect on bone density and weight gain unlike Depo-Provera® injection (ACOG, 2018). No one but you knows you are using it because the implant is almost invisible. It is estrogen free so individuals with contraindications to estrogen may be able to use it. Can be used immediately post-abortion and postpartum unless breastfeeding. All Medicaid providers cover the implant but you have to determine if it is a medical or pharmaceutical benefit.

Disadvantages of Nexplanon®:

The initial expense of Nexplanon® is high, the implant costs around \$900. It does require a provider to be trained to insert and remove the device and the implant must be placed and removed in an office visit. If breastfeeding should wait until 4 week postpartum to insert. It is possible to have prolonged heavy bleeding instead of amenorrhea. Other possible side effects include headaches, breast pain, and nausea. Condoms still need to be used to prevent STDs. Infection and scaring at the insertion sight are possible complication. Rarely migration or breakage of the implant can occur. There are a few drugs that may interact with Nexplanon®. Concomitant use could make one or the other less effective. Most of these are seizure medications and one should be aware that a dosage change may be required or failure of contraception may occur.

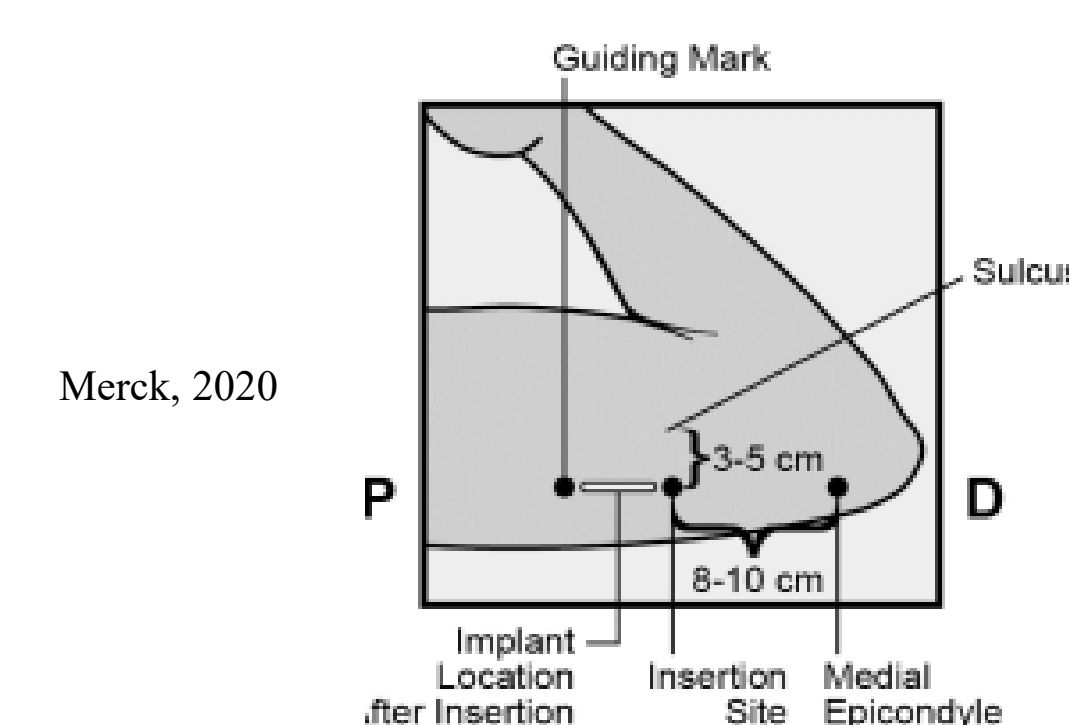
Treatment of Bleeding:

About one third of Nexplanon® users may experience bothersome and unscheduled bleeding. Most women who experience bothersome bleeding will have improvement within one year of initiation. Be sure to evaluate if infection or pregnancy could be the source of bleeding but once ruled there are several options that may provide relief and buy time and reduce disruptive bleeding that may lead to early termination of Nexplanon® use:

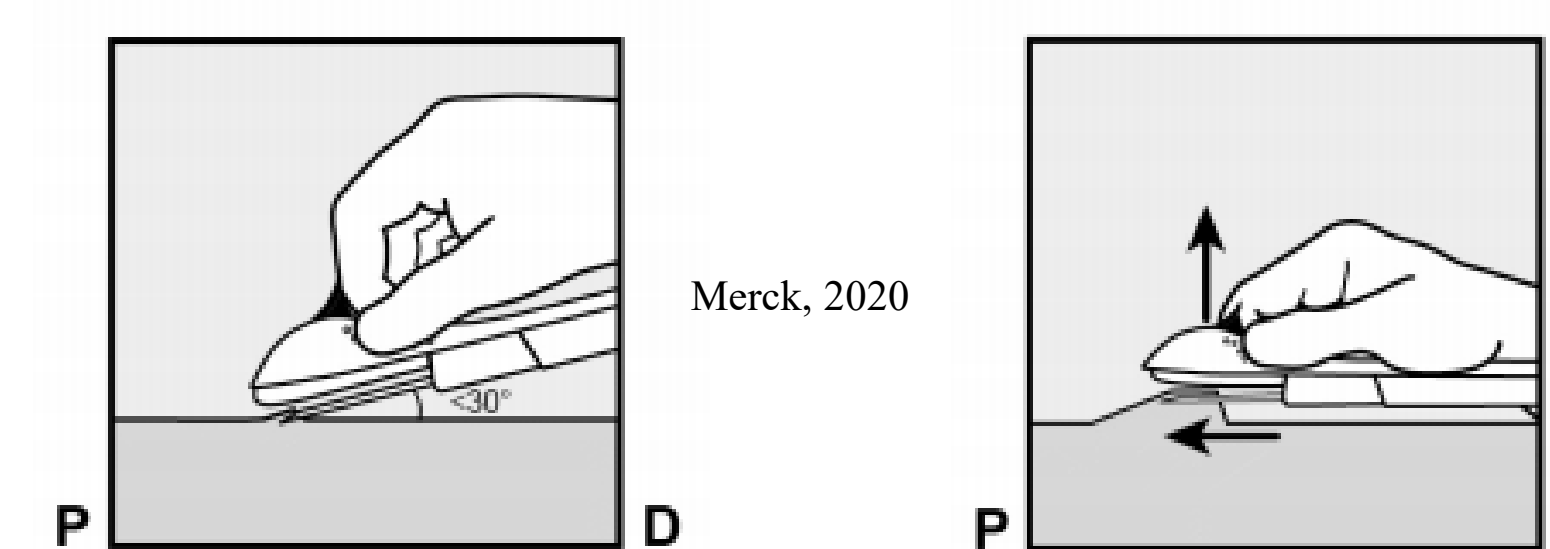
- NSAIDs- Ibuprofen 800 TID or Naproxen 500 BID for 5 days
- COCs- EE 0.3 / Levonorgestrel 1.5 or EE 0.35/ Norgestimate 0.25 (1 pack). Do not use if estrogen is contraindicated a particular patient.
- Norethindrone Acetate- 5 mg daily x 30 days (Nationwide Children's, 2020)
- Tranexamic acid 500 mg 2-3 x day for 5 days (Family Planning Alliance Australia. (n.d.)
- Tamoxifen 10 mg BID x 7 days (Simmons, 2017)

Insertion:

- Determine pregnancy status and identify if there are any contraindications.
- Have the patient sign the consent.
- Measure and mark the insertion site on the nondominant inner upper arm about 8-10 cm from the medial epicondyle of the humerus and 2 cm below the groove between the biceps and triceps muscle.



- Clean the area with alcohol swab and inject with 2 ml of 1% lidocaine along the insertion track.
- Clean the area with betadine swabs.
- Open the applicator and be sure that there is an implant visible in the barrel.
- Pierce the skin at the insertion site keeping bevel down, skin taught and gently lift the applicator as you slide the needle under the skin to keep it subdermal. Do not touch the purple slider that will release the implant until you have fully inserted the needle. It is best to observe from the side and not looking down as you are inserting.



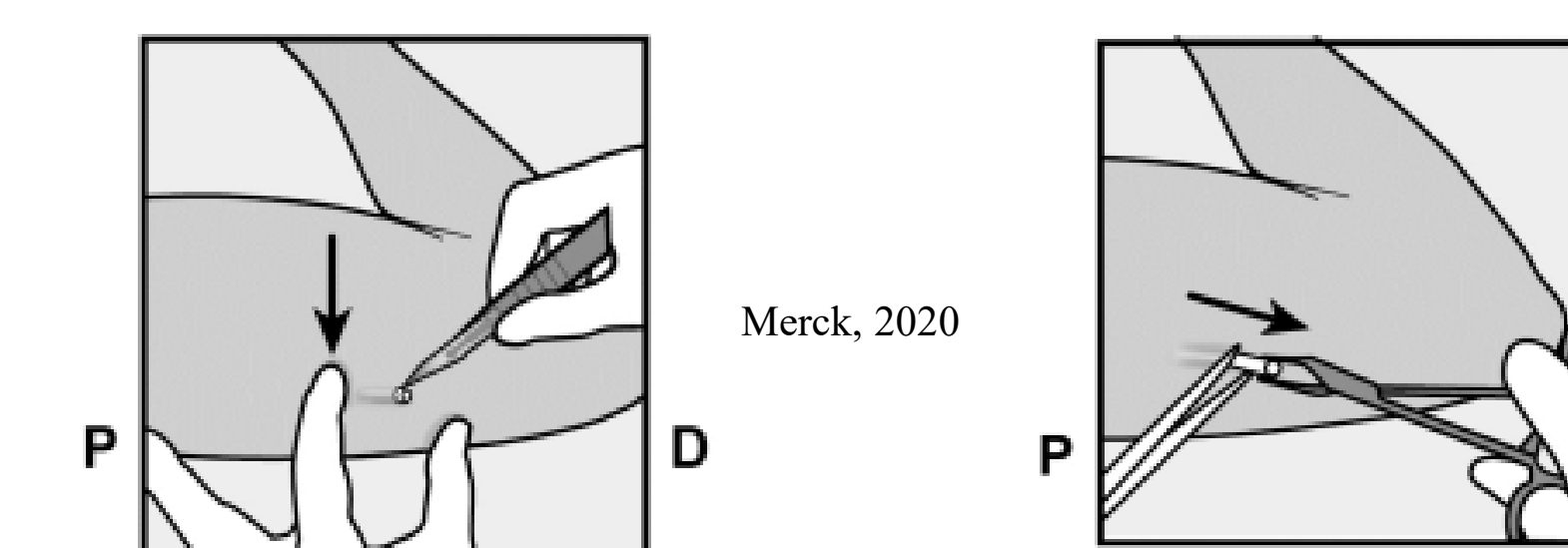
- Once you have fully inserted the applicator needle slide back the purple slide to release the implant.
- Close the wound with steri-strips.
- Palpate the implant to be sure it is present. Have the patient confirm placement also.
- Apply a pressure dressing to reduce bruising.
- Patient should be given the user card and the identification sticker affixed to the medical record.

Removal:

- Obtain signed consent for removal procedure.
- Palpate the implant, push down on the distal end and the proximal end should pop up. Mark the location. Pressure should remain on the distal end through out the procedure.
- Inject 1 ml of 1% Lidocaine under and along the implant.

Removal:

- Make a small incision parallel to the tip of the implant.
- The tip should pop through the opening.
- Grasp the implant with Sterile forceps or a Kelly and remove.



- Close the wound with Steri-strips and apply a pressure dressing for 24 hours.
- Measure the implant (4cm) to ensure that it was removed completely
- Removal can be complicated if the implant was placed more deeply, is not palpable, or fibrotic tissue has grown around the implant.
- A new implant may be placed at the same time as removal if desired.

Conclusion:

Nexplanon® should be a first line offering for contraception in adolescents. The contraceptive effect will last 3 years and is greater than 99% effective with no user. Clinicians should familiarize themselves with this method and be prepared to offer to adolescents looking for contraceptive options.

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