

# Birth Control Effectiveness and Safety Guide - for Blood Clots (VTE: Deep Vein Thrombosis or Pulmonary Embolisms)

Always use some form of birth control. This information is not meant to replace information you should be discussing with a knowledgeable medical professional.

Methods	Effectiveness	Effectiveness	Safety		Safety	Use & Important Safety Information
			Blood Clots (VTE) developed annually [1, 5]	Blood Clots (VTE) annually in 1,000 women in the U.S.		
Sterilization Surgery for Women	Less than 1 in 100	Effectiveness ↑	2 in 10,000 Women	about 0.2 per 1,000	Safety ↑	One-time procedure; permanent; Increased risk for blood clots at time of surgery.
Surgical Sterilization Implant for Women - Essure	Less than 1 in 100		2 in 10,000 Women	about 0.2 per 1,000		One-time in office procedure; nothing to do or remember; permanent. Potential serious side effects include migration of coils, nickel allergies, swelling.
Implantable Rod (Progestin Only)	Less than 1 in 100		2 in 10,000 Women	about 0.2 per 1,000		One time procedure; inserted by a healthcare provider; lasts up to 3 years; reversible.
IUD Copper - No Hormones	Less than 1 in 100		2 in 10,000 Women	about 0.2 per 1,000		Safest & most effective reversible method; one-time procedure; inserted by a healthcare provider; lasts up to 10 years; reversible.
IUD w/ Progestin Only	Less than 1 in 100		2 in 10,000 Women	about 0.2 per 1,000		One-time procedure; inserted by a healthcare provider. Lasts up to 3-7 years depending on type; reversible.
Shot/Injection (Progestin Only (Depo Provera - DMPA))	6 in 100		6 - 8 in 10,000 women[[6]]	up to 0.6 per 1,000		Need a shot every 3 months. Known to cause bone density loss. Effect in later life not known. Slightly Increased risk of HIV infection. Increased risk of harm or death from blood clots.
Progestin Only Pill - Mini Pill Norethindrone or Norgestrel	4 in 100		2 in 10,000 women [6]	up to 0.2 per 1,000		Must swallow a pill same time every day. May have small increased risk for blood clots.
1st & 2nd Generation Oral Contraceptives (Combined Pill) "The Pill" w/ Levenorgestrel, Norethisterone or Norgestimate	9 in 100		5 - 7 in 10,000 Women	up to .7 per 1,000		Must swallow a pill near the same time every day. Increased risk of harm or death due to blood clots.
3rd Generation Contraceptives (Vaginal Contraceptive Ring - NuvaRing) w/ Etonogestrel	9 in 100		6 - 12 in 10,000 Women	up to 1.2 per 1,000		Insert a ring into the vagina yourself. Keep the ring in for 3 weeks and then remove it for 1 week. Increased risk of harm or death due to blood clots.
3rd Generation Contraceptives (Patch) w/ Norelgestromin	9 in 100		6 - 12 in 10,000 Women	up to 1.2 per 1,000		Put on a new patch each week for 3 weeks (21 total days) then 1 week off. Increased risk of harm or death due to blood clots.
4th Generation Oral Contraceptives (Combined Pill) w/ Drospirenone	9 in 100		9 - 12 in 10,000 Women	up to 1.2 per 1,000		Must swallow a pill near the same time every day. Increased risk of harm or death due to blood clots.
Diaphragm with Spermicide	12 in 100		2 in 10,000 Women	0.2 per 1,000		Must use every time you have sex.
Natural Birth Control (Billings, Sympto-thermal, Creighton, Marquette methods)	1 to 12 in 100 [6]		2 in 10,000 Women	0.2 per 1,000		Must learn method to chart or monitor fertility daily throughout the month.
Sponge with Spermicide	12 to 24 in 100		2 in 10,000 Women	0.2 per 1,000		Must use every time you have sex.
Cervical Cap with Spermicide	17 to 23 in 100		2 in 10,000 Women	0.2 per 1,000		Must use every time you have sex.
Male Condom	18 in 100		2 in 10,000 Women	0.2 per 1,000		Must use every time you have sex. Latex condoms reduce risk of STDs.
Female Condom	21 in 100		2 in 10,000 Women	0.2 per 1,000		Must use every time you have sex. Can reduce risk of STDs.
Spermicide Alone	28 in 100		2 in 10,000 Women	0.2 per 1,000		Must use every time you have sex.

Other factors that increase risk of blood clots: Inherited Clotting Disorders; BMI >30; Smoking; Previous Blood Clot; Migraine with Aura; Travel or sitting for long periods; Recent surgery or injury (within 3 months), Pregnancy or After Delivery, and Cancer. This is not a complete list. [7, 8]

There is a natural occurrence of blood clots in women of at least 2 per 10,000 women. Any combination hormonal birth control INCREASES that risk. See References on page 2.

Pills, Patch & Ring

## References

1. EMA (European Medicines Agency) - Assessment report for combined hormonal contraceptives containing medicinal products Jan. 2014 EMA/739865/2013. Retrieved from: [http://www.ema.europa.eu/docs/en\\_GB/document\\_library/Referrals\\_document/Combined\\_hormonal\\_contraceptives/Recommendation\\_provided\\_by\\_Pharmacovigilance\\_Risk\\_Assessment\\_Committee/WC500160272.pdf](http://www.ema.europa.eu/docs/en_GB/document_library/Referrals_document/Combined_hormonal_contraceptives/Recommendation_provided_by_Pharmacovigilance_Risk_Assessment_Committee/WC500160272.pdf)
2. Nelson AL, MD & Cwiak C, MD, MPH. Two-thirds of VTE cases are deep vein thrombosis (DVT's); DVT carries a 6% mortality rate. Contraception Technology (20th Edition) Chapter 11:275, Bridging the Gap Communication
3. Center for Disease Control. Women (aged 15 - 44) in US using either Pill / Patch / Ring during 2013; CDC Survey NCHS Data Brief, No. 173, Current Contraceptive Status Among Women Aged 15-44: United States 2011 - 2013. Retrieved from: <http://www.cdc.gov/nchs/data/databriefs/db173.pdf>
4. ARHP, June 2014, Contraceptive failure rates, Typical Use. Retrieved from: <https://www.arhp.org/Publications-and-Resources/Quick-Reference-Guide-for-Clinicians/choosing/failure-rates-table>.
5. Clot Connect. Progestin-only Contraceptives and Blood Clots. Retrieved from: <http://patientblog.clotconnect.org/2011/02/02/progestin-only-contraceptives-and-blood-clots/>
6. Natural Womanhood. Natural birth control methods. Retrieved from <https://naturalwomanhood.org/learn/natural-birth-control-methods/>
7. Nappi et al.: Hormonal contraception in women with migraine: is progestogen-only contraception a better choice? The Journal of Headache and Pain 2013 14:66. Retrieved from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3735427/pdf/1129-2377-14-66.pdf>
8. Prandon, P. iASH Education Book January 1, 2005 vol. 2005 no. 1 458-461. Retrieved from: <http://asheducationbook.hematologylibrary.org/content/2005/1/458.long>

## Know the Signs and Symptoms - Remember the word A.C.H.E.S.

The following are the most common symptoms of a blood clot or Deep Vein Thrombosis (DVT) or Pulmonary Embolism (PE) that occur in the affected part of the body. About half of people with Deep Vein Thrombosis have no symptoms at all. (DVT symptoms are usually in the leg and sometimes arm). You can have a Pulmonary Embolism without any symptoms of a PE or DVT.

**Seek immediate medical attention if you believe you have a Blood Clot**

### Abdominal Pain

Blood clot in pelvis or liver

Tubal Pregnancy

### Chest Pain

*Blood clot in lungs*

Sudden rapid breathing or shortness of breath

Chest pain that is worse when you cough or take a deep breath

Rapid heart rate

Unexplained low energy

Severe lightheadedness

#### Heart Attack

Chest heaviness/pain

Unexplained shoulder pain

Weakness

### Headaches

*Stroke*

Migraine headache, blurred vision or spots, sudden numbness

Difficulty speaking, Sudden intellectual impairment, Dizziness

### Eye Problems

*Stroke*

Blurred vision, double vision, partial loss of vision

Headache or Migraine

Blood clot in eye

### Sore Leg Or Arm

*Blood Clot*

Leg or Arm Fatigue

Pain or tenderness in one or both legs or arms, which may occur while standing or walking

Swelling in one or both legs or arms

Warmth in the skin of the affected leg or arm

**Women are more likely than men to have heart attack symptoms unrelated to chest pain, such as:**

Neck, jaw, shoulder, upper back or abdominal discomfort.

Shortness of breath.

Right arm pain.

Nausea or vomiting.

Sweating.

Lightheadedness or dizziness.

Unusual fatigue.

*A doctor cannot diagnose a blood clot with a stethoscope or x-ray*

### Making the Diagnosis

Tests to check for presence of blood clots may include:

- Computed tomography (CT or CAT a special technique that uses a computer to combine many X-ray images into a detailed image of an area of the body that is 100 times more clear than a regular X-ray)

- Magnetic resonance imaging (MRI)

- Ultrasound studies of leg veins or the arteries of the head and neck

- Angiograms or venograms

- An ultrasound of the heart (echocardiogram)

- Electrocardiograms (ECGs)

- Certain specialized blood tests may indicate if someone has had a recent heart attack.

You may need to be screened for thrombophilia (a disorder in which blood abnormally coagulates, leading to an increased risk of blood clots) if you have a family history of thrombophilia or are under 40 years of age and experiencing recurrent blood clots.

A diagnosis of DVT is usually confirmed with a compression ultrasound. Compression ultrasound detects differences in echoes or sounds made by flowing blood, and can easily detect the presence of blood clots in deep veins.