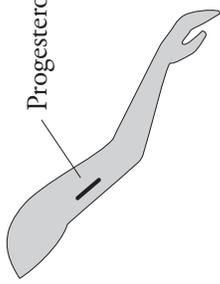
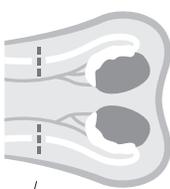
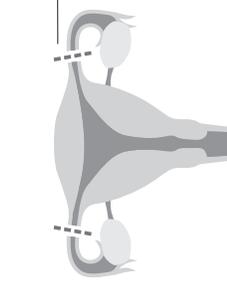


Birth Control Methods

Pregnancy is considered high risk for women with pulmonary hypertension. Some birth control methods are more effective than others. You might have to use more than one method at the same time. Talk with your PH specialist to determine the best choice for you and your partner.

Birth Control Options From Most to Least Effective		Notes
Non-permanent contraception	 <p>Intrauterine device (IUD)</p> <p>OR</p>  <p>Progesterone implant</p>	Long-acting reversible contraception is effective and generally considered safest for people with PH.
Permanent sterilization	 <p>Vasectomy</p> <p>OR</p>  <p>Partner's vasectomy</p> <p>Tubal ligation*</p> <p><i>*Discuss procedural risks of permanent tubal sterilization with medical professional.</i></p> <p>Second form of contraception</p>	PH specialists recommend using additional contraception for first three months after procedure.
Progesterone injections or pills plus second contraception method	 <p>Progesterone injection</p> <p>OR</p>  <p>Progesterone pills</p> <p>+</p>  <p>Male condom</p> <p>+</p>  <p>Diaphragm or cervical cap (with spermicide)</p>	Progesterone injection can be used alone. Progesterone pills must be used with second contraception method, such as male condom, diaphragm with spermicide or cervical cap with spermicide.

Less preferable methods are combined hormonal contraceptives, or methods that contain estrogen, such as pills, patches or vaginal rings, which can increase the risk of blood clots in your legs and lungs. Barrier methods alone, such as condoms or diaphragms without a secondary method, aren't recommended.

PH, Pregnancy and Contraception

Women with pulmonary hypertension (PH) should avoid becoming pregnant because of the dangerous risks involved.

If you are a woman with PH and considering pregnancy, discuss your questions about pregnancy, family planning and birth control with your PH specialist and your gynecologist. Information in this document is no substitute for a personal discussion with your PH specialist and obstetrician-gynecologist about your situation. This document is meant to answer basic questions about this difficult issue.

Why should I avoid pregnancy?

Pregnancy can cause life-threatening complications during pregnancy or shortly after birth. Pregnancy can worsen your PH symptoms and shorten your life. The risk of pregnancy-related heart failure is 30% to 50%. PH also can threaten the health and survival of the child due to pregnancy complications and prematurity.

What are the risks for women?

The heart and lungs can't easily adjust to the extra demands of pregnancy and giving birth.

- As the pregnancy progresses, body fluid and blood volume increase, which increases cardiac output (the amount of blood pumped from the heart with every beat) and increases pulmonary artery pressure.
- The increased blood volume can cause right heart failure. This happens because the heart is unable to handle the increased workload, impairing your physical capacity to handle the stress of pregnancy.
- The body's changes during pregnancy increase the risk of blood clots, which can lodge in the lungs and cause a pulmonary embolism, which will further worsen your PH.
- Blood oxygen levels can decrease during pregnancy, creating the need for supplemental oxygen to support mother and child.

Medications used to treat pulmonary arterial hypertension, such as ambrisentan, bosentan, macitentan and riociquat are toxic to fetuses. Discontinuing the medication puts the mother at risk of worsening PH. Some blood thinners increase the risk of fetal defects when used during pregnancy.

Typical delivery-related blood loss can cause blood pressure to fall, which can lead to right heart failure and death. Anesthesia and pain medication used for C-sections also can lower blood pressure.

What are the risks for babies when women have PH?

- Increased risk of preterm birth.
- Low birth weight.
- Prematurity and lower survival rate.
- Some medications prescribed to PH patients can harm the developing fetus, causing death or birth defects. If you learn you are pregnant, don't stop your medications without consulting your PH specialist.

What type of birth control should I consider?

Talk with your PH specialist to determine the best choice for you and your partner. Almost all birth control choices are safer than pregnancy. Some options are more effective than others. You might have to use more than one method at the same time.

Less preferable methods are contraceptives that contain estrogen (combined estrogen-progestin birth control pills, the patch or vaginal rings), which can increase the risk of blood clots developing in your legs or your lungs. Some PH medications, like bosentan, can decrease the effectiveness of some contraceptives. Ask your PH specialist about your specific situation.

What should I do if I become pregnant?

If you become pregnant, contact your PH specialist and alert your specialty pharmacy as soon as possible. Don't stop your medications without consulting your PH specialist.

For more information about contraceptive methods, visit: [cdc.gov/mmwr/volumes/65/rr/rr6504a1.htm#](https://www.cdc.gov/mmwr/volumes/65/rr/rr6504a1.htm#)