

# FETAL DEVELOPMENT

&

*Family  
Planning*



*All photos by Lennart Nilsson, of Sweden, A Child is Born, 1986, Dell Publishing, except page 4, by Robert Wolfe. All photos used by permission.*

*Lennart Nilsson is a pioneer in medical photography, credited with inventing numerous devices and techniques in his field.*

*The photos used in this booklet have been published internationally in scientific periodicals and used in the popular press and television.*

*Robert Wolfe is a medical photographer in Minnesota. He made the photo on page 4 of an ectopic pregnancy while working at the Bell Museum of Pathology, at the University of Minnesota.*

## Introduction

*T*his brochure is designed to give you some basic information before deciding whether or not to have an abortion. It tells about normal human embryonic and fetal development.

Ages are listed from both the estimated day of conception and from the first day of the last normal menstrual period. The lengths are measured from top of the head to the rump.

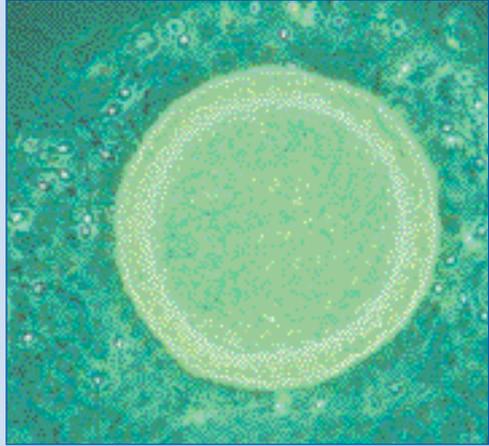
The law requires your doctor to tell you about the nature and physical and emotional risks of both the abortion procedure and carrying a child to term. The doctor must tell you how old the embryo or fetus is and must give you a chance to ask questions in private. You should discuss your decision carefully with your doctor.

There are public and private agencies that can give you medical and financial help as well as counseling. A list is included in the Directory of Services accompanying this booklet.

# *Fetal Development*

## *Day one*

*Development  
begins on  
the day of  
fertilization*



*The human egg surrounded by spermatozoa.  
Too small to be seen by the human eye.*

*A* pregnant woman may notice her first missed menstrual period at the end of the second week after conception, or about four weeks after the first day of her last normal period.

There are different kinds of urine tests for pregnancy. Some may not be accurate for up to three weeks, or five weeks after the first day of your last normal period.

## 2 weeks

*(4 weeks after the first day of the last normal menstrual period)*

- The human embryo is about one-hundredth ( $\frac{1}{100}$ ) of an inch long.
- Implantation began the first week and continues.

*By the  
25th day,  
the heart  
begins to beat*

## 4 weeks

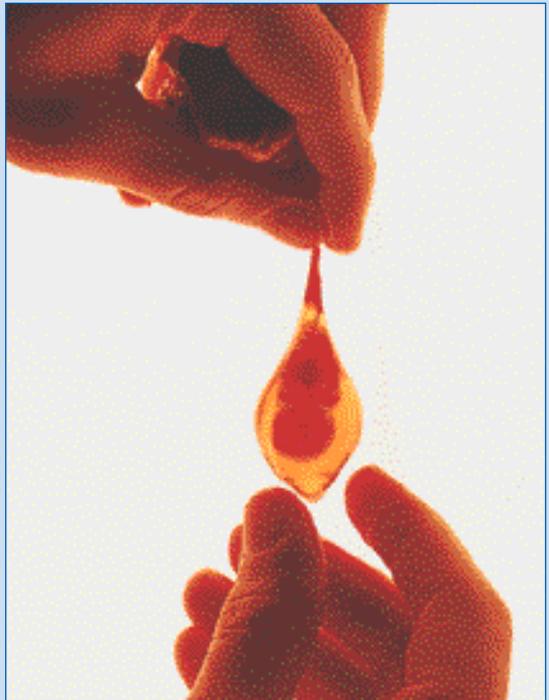
*(6 weeks after the first day of the last normal menstrual period)*

- The embryo is about one-sixth ( $\frac{1}{6}$ ) of an inch long.
- By the end of the first month, the embryo has a head and a trunk.
- Structures that will become arms and legs, called limb buds, begin to appear.
- The heart, now in a tubular form, begins to beat by the 25th day.

## 6 weeks

*(8 weeks after the first day of the last normal menstrual period)*

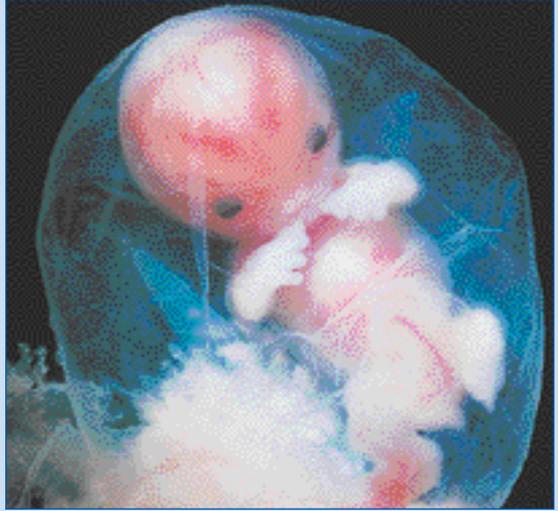
- The embryo is about half an inch long and has a four-chambered heart.
- Electrical activity begins in the developing brain and nervous system.
- The fingers begin to develop.
- The embryo has nostrils.



*The photo here is three-fourths the actual size.*

*The embryo  
begins to form  
arms, legs, hands,  
toes and  
a face*

**8 weeks**



*The photo here is just over two times actual size.*

*(10 weeks after the first day of the  
last normal menstrual period)*

- The embryo is about one and one-fifth (1 $\frac{1}{5}$ ) inches long.
- The head is about half the size of the embryo.
- The beginnings of all key body parts are present, although they are not completely developed or positioned in their final locations.
- The embryo has ears, fingers, and toes.

*The fetal  
heart beat  
can be  
detected  
electronically*

## 10 weeks

*(12 weeks after the first day of the last normal menstrual period)*

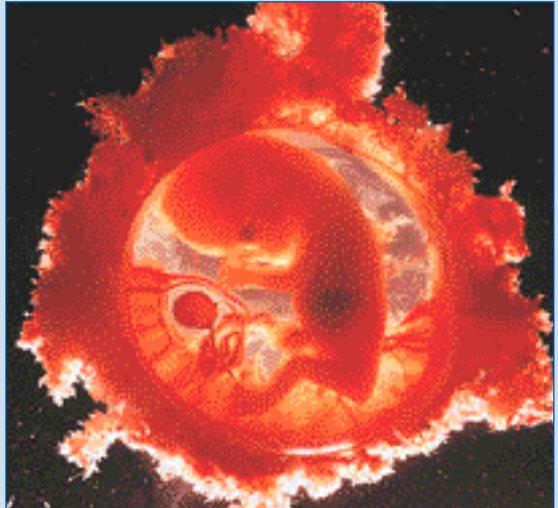
- The fetus is about two and one-half (2½) inches from head to rump.
- The fingernails are developing.
- Between 8 and 10 weeks, the fetus begins small, random movements, though they are too slight to be felt yet.
- The fetal heart beat can be detected electronically.

*The doctor can  
often tell you if  
the fetus is a boy  
or a girl by  
special tests*

## 12 weeks

*(14 weeks after the first day of the last  
normal menstrual period)*

- The fetus is about three and one-half (3½) inches from head to rump.
- The fetus is able to swallow, and the kidneys are able to make urine.
- A doctor may be able to tell you if it's a boy or a girl by special tests.
- Blood begins to form in the bone marrow.



*The photo here is half the size.*

## 14 weeks

*(16 weeks after the first day of the last normal menstrual period)*

- The fetus is about four and three-fourths (4<sup>3</sup>/<sub>4</sub>) inches from head to rump.
- The head is erect and the legs are developed.

*The fetus can  
kick, swallow  
and sleep*

## 16 weeks

*(18 weeks after the first day of the last normal menstrual period)*

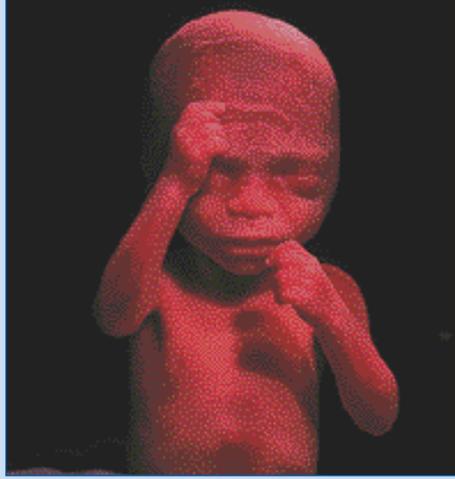
- The fetus is about five and one-half (5<sup>1</sup>/<sub>2</sub>) inches from head to rump.
- The ears stick out from the head.



*The photo here is nearly a third of the actual size.*

*The fetus has  
been moving for  
several weeks.*

*Now the  
woman begins  
to feel these  
movements*



*The photo here is two-thirds actual size.*

## *20 weeks*

*(22 weeks after the first day of the last  
normal menstrual period)*

- The fetus is about seven and one-half (7½) inches from head to rump.
- The fetus has fingerprints, and may have some head and body hair.
- Although the fetus has been able to move for several weeks, movements, known as “quickenings,” are now felt by the pregnant woman.

*About 4 out of  
10 babies born  
now will live*

## **24 weeks**

*(26 weeks after the first day of the last  
normal menstrual period)*

- The fetus is about nine (9) inches from head to rump.
- The fetus can respond to sound.
- About 4 out of 10 babies born now will live.

*At 28 weeks,  
the fetus  
has lungs  
that can  
breathe air*

## 28 weeks

*(30 weeks after the first day of the last normal menstrual period)*

- The fetus is about ten and one-half (10½) inches from head to rump.
- The fetus has lungs that are capable of breathing air, although medical help may be needed.
- The eyes are open.
- About 9 out of 10 babies born now will survive.

*The fetus can  
grasp firmly*

## **32 weeks**

*(34 weeks after the first day of the last normal menstrual period)*

- The fetus is about eleven and three-fourths ( $11\frac{3}{4}$ ) inches from head to rump.
- Almost all babies born now will live.

## **36 weeks**

*(38 weeks after the first day of the last normal menstrual period)*

- The fetus is about thirteen and one-half ( $13\frac{1}{2}$ ) inches from head to rump.
- The fetus can grasp firmly.

*The baby has  
reached full term  
and is  
ready to  
be born*

## **38 weeks**

*(40 weeks after the first day of the last normal menstrual period)*

- The fetus is about fourteen (14) inches from head to rump, and may be 20 inches or more overall.

**The baby is full term and ready to be born.**

If you decide to give birth, the services directory the doctor gave you with this book tells you where to find medical and financial help, as well as counseling.

## *What about adoption?*

*For more information, call 1-800-755-4769.*

*W*omen or couples facing an untimely pregnancy who choose not to assume the full responsibilities of parenthood have another option: adoption. There is a great demand for adoption, and many babies are placed as soon as the child is surrendered.

Placing a child for adoption is a loving decision, but is rarely an easy one. Counseling and support services are a key part of adoption and are available from a variety of adoption agencies and parent support groups across the state. The services directory that accompanies this booklet includes a list of adoption agencies in your county.

There are many ways to adopt—  
through a public or private agency,  
or through a private attorney.

For more information, call the  
Ohio Department of Health at  
1-800-755-4769.

You can also call your county children  
services agency, or a private adoption  
agency listed in your phone book.

*About next time...*

# Family Planning Information

<b>Method</b>	<b>What it is</b>
Abstinence	The decision to not have sex.
Condom	A cover for the penis during sex to keep sperm out of cervix.
Contraceptive Foam, Cream, Jelly, Suppositories, or Film	Items that kill sperm when properly placed in the woman's vagina before sex.
Fertility Awareness Method(s)	The decision not to have sex when the individual woman is most likely to become pregnant.
Sponge	A special soft sponge with sperm killing agents that is inserted in the vagina before sex.

*There are several ways to prevent an unwanted pregnancy.*

*The methods on these two pages are things you do on your own, and **do not** require a prescription from a doctor.*

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## **More information**

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You must decide not to have sex. Ask your partner to agree. This is the most successful way to avoid pregnancy.

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May be bought at many stores. Read and follow the instructions on the package. Condoms prevent pregnancy between 88% and 98% of the time.

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May be bought at many stores. Read and follow the instructions on the package. These methods prevent pregnancy between 79% and 97% of the time.

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Couples must learn how to calculate the individual woman's most fertile times and must abstain from sex during these most fertile times. Talk to an expert. Effective between 80% and 99% of the time, depending on the method used.

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May be bought at many stores. Read and follow the instructions on the package. Prevents pregnancy in women who have never had children between 82% and 94% of the time; it is less effective in women who have had children.

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*Effectiveness varies according to method, use and individual history. The range reflects the least expected incidence to the typical incidence during one year continuous use.*

## Family Planning Information *continued*

<b>Method</b>	<b>What it is</b>
Birth Control Pills	A hormone pill, taken as directed by a doctor, by a woman to prevent the release of an egg or implantation of a fertilized egg.
Cervical Cap	A cover for the cervix during sex to keep sperm out of the cervix.
Diaphragm	A cover for the cervical area during sex that holds sperm.
IUD	A small piece of plastic inserted by a physician in a woman's uterus to prevent the release of an egg or implantation of a fertilized egg.
Norplant	A series of six capsules placed in a woman's arm. The capsules release hormones for five years to prevent pregnancy.
Sterilization	A surgical operation for men or women, that permanently prevents pregnancy.

*These methods **require a prescription from your doctor.***

*Be sure to discuss possible side effects and risks with your doctor or other health care worker.*

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## **More information**

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A woman must get a prescription from a doctor. Follow doctor's instructions. This method is effective between 97% and 99.9% of the time.

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A woman must get her own cap from a doctor. Follow doctor's instructions. This method is effective between 82% and 94% of the time.

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A woman must get her own diaphragm from a doctor. Follow doctor's instructions. This method is effective between 82% and 94% of the time.

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The IUD must be inserted by a doctor. Follow doctor's instructions. This method is effective between 97% and 99.2% of the time.

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Must be placed by a doctor. Follow doctor's instructions. This method is effective 99% of the time.

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Outpatient surgery must be done by a doctor. This method is effective between 99.6% and 99.9% of the time.

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## *The father's duty*

*T*he father of a child has a legal duty to support his child. That duty can include child support payments and health insurance.

A child may be eligible through his or her father for social security, pension, veterans or disability benefits. He or she may have rights of inheritance or life insurance benefits. In addition, the child will know his or her medical history.

Paternity can be established two ways:

1. the father can sign the birth certificate or a statement of paternity, or
2. an action in court.

With paternity establishment, the child has a bond with his or her father. The child does not have to experience the problems often facing a child who does not know who his or her father is.

More information concerning paternity establishment may be obtained from the Ohio Department of Job and Family Services or the county Child Support Enforcement Agency, both of which may be contacted by calling 1-800-686-1556.





# Ohio Department of Health

John R. Kasich, Governor

Theodore Wymyslo, M.D., Director of Health

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