Human Reproduction PowerPoint Notes

The reproductive organs of the human female and male generate eggs and sperm and how sexual activity may lead to fertilization and pregnancy. The umbilicus and placenta has an important function during pregnancy.

Like most animals, humans reproduce ______________. You started out as a single, fertilized egg called a ______________. The egg came from your mother and the sperm came from your father.

Fertilization and Pregnancy

The human reproductive process begins when a man ______________ sperm into a woman’s vagina during sexual intercourse. Some ______________ may exit the penis before ejaculation occurs. Thus, sexual activity that does not involve ejaculation could also lead to the release of sperm into the vagina, fertilization, and ______________. Once inside the vagina, many sperm die because of the ______________ environment. Surviving sperm use their flagella to swim through the uterus and up the ______________ tube. When they reach the egg, the sperm surround it. They release an ______________ that breaks down the proteins in the egg’s outer covering. As soon as a single sperm gets through that covering, a reaction occurs that keeps any other sperm from entering. The membrane of the egg then ______________ with the sperm. Next, the sperm’s flagellum and ______________ break down. At that point, the sperm is only a ______________. This explains why all mitochondrial DNA is inherited from the ______________. When the sperm and egg nuclei fuse, ______________ is complete.

Fertilized Egg Journey

The fertilized egg then begins a ____ day journey down the fallopian tube toward the ______________. During the journey, the zygote undergoes many ______________ divisions. By the time it reaches the uterus, it is an ______________ that looks like a tiny ball of ______________. The next step is called implantation.

Implantation

In ______________, the tiny embryo becomes embedded in the ______________ of the mother’s uterus. Implantation is successful only about ______ percent of the time. Once the embryo is implanted, ______________ begins. One of the first signs of pregnancy is that a woman’s regular ______________ cycle stops. A pregnant woman may give birth to a baby between ______________ and ______________ weeks later which is the gestation period for humans.
Development and Birth

Once the embryo is implanted in the uterus, the _____________ begins to grow. The placenta supplies _____________ and _____________ from the mother’s _____________ to the developing embryo. It contains a network of blood vessels that _____________ the embryo to the mother. By the fourth week of pregnancy, the embryo is about _____ millimeters long. It is surrounded by a thin, protective _____________ called the amnion. Inside the amnion and surrounding the embryo, is _____________ _____________ that protects the embryo from shocks. The _____________ cord has also formed. It contains a _____________ and veins that connect the embryo to the placenta. It enters the embryo’s body at the umbilicus, or _____________.

The developing fetus

At the eighth week, the embryo has developed enough to be called a _____________. A human fetus develops from the end of the eighth week of pregnancy (when the major _____________ have formed), until birth. The blood of the mother and fetus do not _____________ together. Oxygen and nutrients pass from the mother’s blood to the fetus through the _____________ and umbilical cord. Waste products like carbon dioxide pass from the fetus to the mother’s _____________ for removal.

Fetus

All _____________ systems are formed in the fetus. Growth & development continues. After 38 to 42 weeks, the fetus is ready to _____________ outside of the mother. The mother goes through a series of contractions called _____________. The fetus is pushed, headfirst, through her _____________. The baby is still connected to the placenta by the umbilical cord. When the doctor ties and cuts the umbilical cord, _____________ is complete. The mother continues with labor until the _____________ is pushed out of her body.