

NAME: AFOKOLE EMUEJEVOKE LOVE

MATRIC NUMBER:18/MHS02/020

1. The term "implantation" is used to describe process of attachment and invasion of the uterus endometrium by the blastocyst (conceptus) in placental animals. In humans, this process begins at the end of week 1, with most successful human pregnancies the conceptus implants 8 to 10 days after ovulation, and early pregnancy loss increases with later implantation. The implantation process continues through the second week of development. The initial phase of the implantation process is "adplantation". This first phase requires the newly hatched blastocyst to loosely adhere to the endometrial epithelium, often "rolling" to the eventual site of implantation where it is firmly adhered. This process requires both the blastocyst adhesion interaction with the endometrium during the "receptive window".

Subsequent development of the placenta allows maternal support of embryonic and fetal development. If implantation has not proceeded sufficiently during the menstrual cycle to allow hormonal feedback to the ovary, then the next cycle may commence leading to conceptus loss. There is also evidence, from animal models, that a conceptus with major genetic does not develop or implant correctly leading to their loss during the first and second weeks of development.

Abnormal implantation is where this process does not occur in the body of the uterus (ectopic) or where the placenta forms incorrectly. In addition implantation can occur normally but with an abnormal conceptus, as in a hydatiform mole development.

Implantation consists of three stages: (a) the blastocyst contacts the implantation site of the endometrium (apposition)

(b) trophoblast cells of the blastocyst attach to the receptive endometrial epithelium (adhesion) and

(c) invasive trophoblast cells cross the endometrial epithelial basement membrane and invade

During fertilization, the sperm and egg unite in one of the fallopian tubes to form a zygote. Then the zygote travels down the fallopian tube, where it becomes a morula. Once it reaches the uterus, the morula becomes a blastocyst. The blastocyst then burrows into the uterine wall – a process called "implantation".

After the egg has been fertilized this takes place; it takes about 6-12 days for the fertilized egg to travel to the uterus and attach to the uterus in a process known as implantation.

Once it's big enough and in the uterus, the egg transitions from being known as a zygote to being called a blastocyst