

NAME: SHUTTI AISHAT OLANSILE

MATRIC NO: 18/MHS02/178

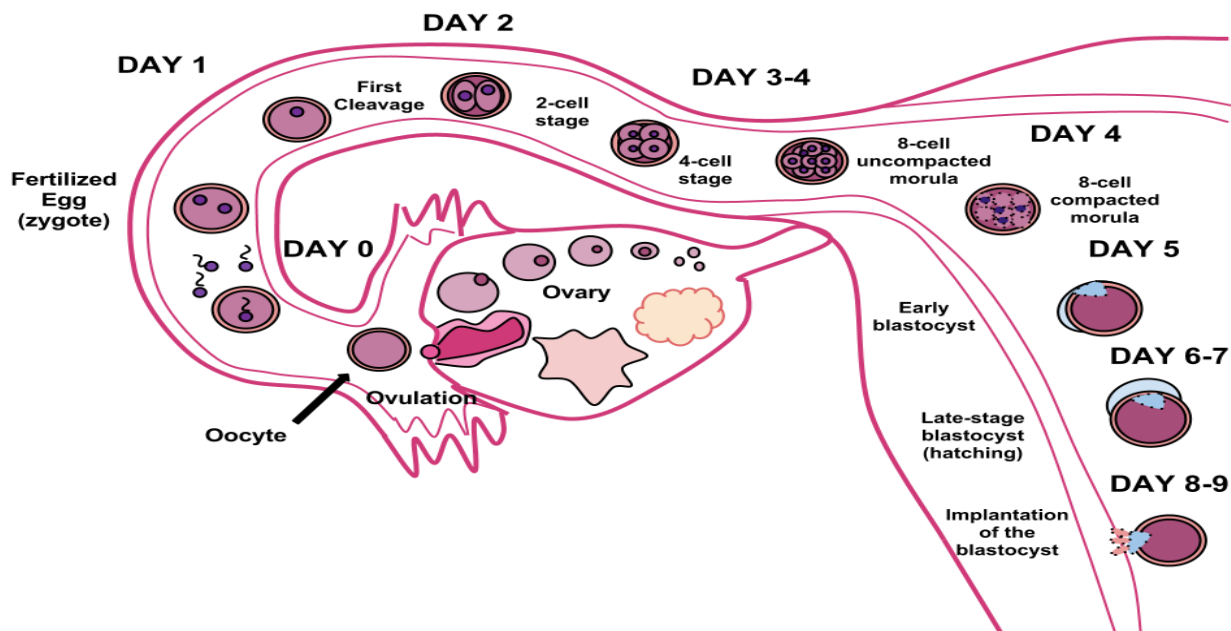
DEPARTMENT: NURSING

COURSE CODE: PHS 212

## ASSIGNMENT

Write a short note on implantation

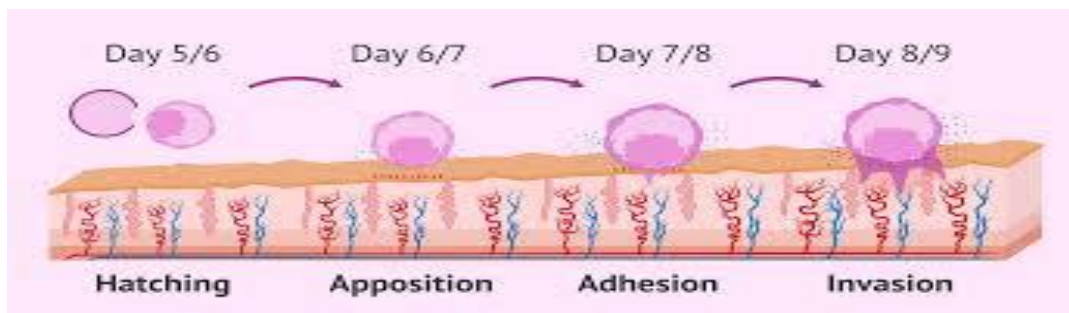
Implantation is the stage of pregnancy at which the embryo adheres to the wall of the uterus. At this stage of prenatal development, the conceptus is called a blastocyst. In humans, implantation of a fertilized ovum is most likely to occur around nine days after ovulation; however, this can range between six and 12 days.



The reception-ready phase of the endometrium of the uterus is usually termed the "implantation window" and this occurs during the first 4 days. The

implantation window occurs around the 6th day after the peak in luteinizing hormone levels. With some disparity between sources, it has been stated to occur from the 7th day after ovulation till the 9th day after ovulation, or 6 to 10 days post ovulation. On average, it occurs during the 20th to the 23rd day after the last menstrual period.

Implantation entails the process of embryo apposition or hatching, adhesion and invasion into the endometrium.



## EMBRYO APPPOSITION

- The human blastocyst remains in the uterine secretions for approximately 1 to 3 days and then hatches from its zona pellucida in preparation for attachment.
- Apposition of the blastocyst to the uterine epithelium is usually about 2-4 days after the morula enters the uterine cavity.

## ADHESION

- The trophoblasts adhere by penetrating the endometrium, with protrusions of trophoblast cells.
- the polarized interaction between blastocyst and endometrium is established and becomes stronger, a process mediated by adhesion molecules, immune cells, and cytokines

## INVASION

- The protrusions of trophoblast cells that adhere into the endometrium continue to proliferate and penetrate into the endometrium.
- invasion continues with the syncytiotrophoblasts reaching the basal membrane beneath the decidual cells, penetrating it and further invading into the uterine stroma. Finally, the whole embryo is embedded in the endometrium.