TABLE OF DIFFERENCE FOR ATROPHY, HYPERPLASIA, HYPERTROPHY

No.	Item	Hypertrophy	Hyperplasia	Atrophy
1	Definition	Increase in the size of cells resulting in increase in the size of the organ.	Increase in the number of cells with a resulting increase in the size of organ. ⇒ Adaptive response in cells capable of replication	Decrease in the size and number of cells by loss of cell substance ultimately resulting in decreased size of the tissue or organ. ⇒ NOTE: The atrophy cellshave diminished function BUT are not dead
2	Types:	A. Physiological: body builders and pregnant uterus B. Pathological: Adaptive -Increase intraluminal pressure in a hollow organ Compensatory: -Hypertrophy of one kidney following nephrectomy of the other	A. Physiological: Hormonal: -Breast at puberty, during pregnancy and lactation -Proliferative endometrium after menstruation due to estrogen stimulation Compensatory: -Bone marrow hyperplasia following haemorrhage -Liver cell hyperplasia following partial hepatectomy B. Pathological: Hormonal: -Endometrial hyperplasia -Benign prostatic hyperplasia. -Hyperplasia of thyroid epithelium in thyrotoxicosis I Irritation: -Hyperplasia of lymphoid tissue in infections -Epidermal hyperplasia	A. Physiological. Generalized: senile atrophy Localized: -Atrophy of thymus gland after puberty -Breast and ovaries after menapause B. Pathological Generalized: -Chronic malnutrition -Chronic diseases (TB and Malignancy) Localized: -Disuse atrophy -Neurogenic -Pressure -Ischemic (Vascular) Atrophy -Hormonal
3	Aetiology	1. Increased functional demands causing increased protein synthesis		When nutrition, blood supply or other cell stimulants are decreased

		2. Specific hormonal stimulation.		the cell retreats to a smaller size to achieve a new equilibrium. This takes place through decreased cell anabolism or increased cell catabolism with resulting decrease in cell organelles.

**this note was taken from Pathology Text Book of University Of Zagazig. Page: 4 and 5 under topic of Cell Injury, Chapter One.*