**Human Immunity against Parasites:**

* Its intensity and specificity are usually at a lower level than those produced by bacteria and viruses.
* Mostly refers to ''non-sterilizing immunity''.
* The host may be protected from superinfection as long as the adult parasites remain in the body. This situation is known as ''premonition'' or ''concomitant immunity''. This may be of great importance in endemic areas in limiting the severity of infection with *Plasmodium,* *Schistosoma*, hookworms and other parasites.

**Clinical manifestations of acquired immunity:**

**1.Absence of an effective immune response:**

 In this case the patients do not develop any effective immunity although signs of the host immune response are present e.g specific antibodies . Typical examples are african trypanosomiasis, visceral leishmanasis& amoebiasis .

**2.Non-sterilizing immunity (incomplete immunity):**

 The majority of parasitic infection induces this type of immunity which is only partially effective as it causes clinical recovery associated with persistence of the parasite at relatively low density. This phenomenon has been referred to as " Premunition" which is characteristic for humen malarias , toxoplasmosis & chagas disease.

 In henlminthiasis, it corresponds to "concomitant immunity" which protects the host against reinfection but is inactive against established worms from primary or previous infections (e.g Schistosomiasis).

**3. Sterilizing immunity:**

 This is very rarely met with in human parasitic infections e.g cutaneous leishmaniasis

**Types of Parasite Antigens**

1. Soluble exoantigens :

 Released from living parasites, parasitized cells or cultured helminth cell lines and termed as excretory / secretory (ES); excretory / secretory / tissue turnover (EST) or metabolic antigens.

2.soluble somatic antigens:

 Extracted from parasites or parasitized cells and may be surface or internal antigens. Examples: adult worm extract (AWE); larval somatic antigens (LSA); detergent solubilized protozoa surface antigens of infected cells and parasites… etc.

3. Dead or fragmented parasites .

4. Whole living parasite.

5. Body fluids of nematodes.

6. Cystic fluid of larval cestodes.