

There is no formation and fusion of gametes. The young ones formed are almost identical to each other as well as to the parent cell. Asexual reproduction generally occurs during favourable environmental conditions and when there is an abundance of food. It is a faster method of reproduction. Types of Asexual Reproduction is Unicellular Organism. Binary Fission is Seen in bacteria, protozoa like Amoeba, Paramecium. In these first pseudopodia withdrawn (karyokinesis) the nucleus of the parent cell divides and then the cytoplasm divides (cytokinesis) resulting in the formation of two daughter cells. It occurs during highly favourable conditions. The cell division can occur in any plane as in case of Amoeba. However, organisms like Leishmania, (cause Kala-azar), which have a whip like flagella at one end, binary fission occurs in a definite orientation in relation to the flagellum. Cytokinesis is the Division of cytoplasm. Karyokinesis is Division of Nucleus. Multiple Fission is Seen in Plasmodium, a malarial parasite. In this during unfavourable conditions, the parent cell develops a thick resistant wall around itself forming a cyst. Within the wall, the cytoplasm divides many times to form many plasmodia. When conditions become favourable, the cyst wall breaks. Budding is seen in Yeast (a fungus). The parent yeast cell develops a protrusion or an outgrowth at its upper end. The nucleus of the parent cell divides and one of them moves into the outgrowth which grows bigger and finally separates from the parent cell to lead an independent existence. Very often if the conditions are highly favourable, a chain of buds is formed. Fragmentation is Seen in multicellular organisms which have a relatively simple body organisation like Spirogyra. Spirogyra has a filamentous body. If it breaks into smaller pieces or fragments. Each fragment has the capacity to form a new individual. However, all multicellular organisms cannot show cell-by-cell division as cells from tissues which form organs. These organs are placed at definite positions in the body. Hence, they need to use more complex methods of reproduction.