It has three stages:—

- (i) Vascular spasm, Vasoconstriction, or intense Contraction of blood vessels.
- (ii) Formation of a platelet plug.
- (iii) Blood clotting or coagulation, once the flow of blood has been stopped, tissue repair can begin.

1. VASCULAR SPASM OR VASOCONSTRICTION —— :

In a normal individual, immediately after a blood vessel has been cut and endothelial cells are damaged, Vasoconstriction occurs, thus slowing blood flow to the area. Smooth muscle in the vessel wall goes through spasms or intense Contractions that Constrict the vessel. If the vessels are small, spasms Compress the inner walls together and may be able to stop the bleeding Completely. If the vessels are medi-um to large-sized, the spasms t slow down immediate out-flow of blood, lessening the damage but still preparing the vessel for the later steps of haemostasis. These vascular spasms usually last for about 30 min, long enough for the next two stages of haemost-asis to take place.

2. FORMATION OF A PLATELET PLUG: ——

clotting at a cut on the skin is not initiated by air or drying out, but by platelets adhering to and activated by Collagen in the blood vessels endothelium. The activated platelets then release the Contents of their granules, when the lining of blood vessels breaks and endoth-elial cells are damaged, revealing Collagen proteins in the vessels walls, platelets swell, grow spikey extensions and start clumping togeth

This continues as more platelets congregate and undergo these same transformations. This process results in a platelet plug that seals the injured area. If the injury is small, a platelet plug may be able to form and close it within several seconds. If the damage is more serious. The next step of blood clotting will take place.

3. BLOOD CLOTTING OR COAGULATION.

The platelet plug is not enough to stop the bleeding, the third stage of haemostasis begins; The formation of a blood clot. First, blood changes from a liquid to a gel. Atleast 12 substances called clotting factors take part in a series of chemical reactions that create a mesh of protein fibres within the blood. Each of the clotting factors has a very specific function. Three of the substances discussed here:— prothrombin, Thrombin and fibrinogen.

PROTHROMBIN:—

When blood vessels are damaged, vessels and nearby platelets are stimulated to release a substance called prothrombin activater.

which in turn activates the conversion of prothrombin, a plasma protein, into an enzyme called thrombin. This reaction required Calcium ions.

ASPIRIN—

By inhibiting platelet activation, aspirin limits blood clotting in general. Aspirin is used clinically as a blood thinner. In individuals that are at risk for developing life-threatning clots. patients with advanced atherosclerosis take one baby aspirin per day to reduce the probability of heart attack and stroke.

THROMBOCYTOPENIA → In the absence of adeq
-uate numbers of platelets these micro-tears allow blood to seep into the tissues. This is evidenced by purple blotches (Thrombocytopenia) Can be acute or chronic and has many causes. ~~Sev~~ Severe, untreated cases result in death.