The term nonhemolytic febrile transfusion reaction defines an acute complication of blood transfusion characterized by fever with or without chills and rigors. These reactions are generally not life-threatening, but they cause discomfort; involve the use of medications; and employ resources of medical, nursing, and laboratory personnel. The use of leukocyte-depleted blood products minimizes the likelihood of nonhemolytic febrile transfusion reaction.

Delayed haemolytic reactions:
- Most delayed haemolytic reactions are also immune in nature and usually cannot be prevented because the blood is serologically compatible at the time of transfusion. The clinician should always be on the lookout for the possibility of haemolytic episodes in critically ill patients because these are commonly due to reactions to blood transfusions or medications.

Acute haemolytic transfusion reactions:
- Most severe acute haemolytic transfusion reactions usually have an identifiable and avoidable cause and result from an error at some point along the compatibility chain, most commonly incorrect patient identification.
- Coagulopathy due to disseminated intravascular coagulation may be a feature, resulting in generalized haemostatic failure, with haemorrhage and coagulation failure.

Clinical features
- Initial symptoms and signs:
  - (i) apprehension,
  - (ii) flushing,
  - (iii) pain (e.g. infusion site, headache, chest, lumbosacral, and abdominal),
  - (iv) nausea, vomiting,
  - (v) rigors,
  - (vi) tachypnoea, and circulatory collapse.

Pathophysiology of transfusion reactions
1. Reactions may occur due to IMMUNOLOGICAL DIFFERENCES between the donor and recipient.
2. A wide range of INFECTIOUS AGENTS may be transmitted by homologous blood component therapy.
3. Alterations in blood products due to PRESERVATION & STORAGE.

Massive transfusion:
- Due to the infusions of immunocompetent lymphocytes precipitating an immunologic reaction against the host tissues. The most commonly observed in immunocompromised patients, but also may be seen in recipients of directed blood donation.

Pre-existing haemostatic defect:
- Loss of coagulation factors, platelets and inhibitors
- Pulmonary reactivity
- Impaired hepatic function
- Immunosuppression
- Hypermetabolism
- Neutropenia
- Thrombocytopenia
- Anaphylactoid reactions
- Clinical severity may range from minor urticarial reactions or flushing to fulminant cardiorespiratory collapse and death.

- A potentially life-threatening complication of transfusion in which platelet-specific alloantibodies develop at 5 to 10 days with the patient developing severe thrombocytopenia.

- Clinical severity may range from minor urticarial reactions or flushing to fulminant cardiorespiratory collapse and death.

- The pathophysiology of transfusion reactions can be divided broadly into three categories:
  1. Reactions may occur due to IMMUNOLOGICAL DIFFERENCES between the donor and recipient.
  2. A wide range of INFECTIOUS AGENTS may be transmitted by homologous blood component therapy.
  3. Alterations in blood products due to PRESERVATION & STORAGE.