

Solutions

2.1

- Type IV.

2.2

- IgE ✓.

2.3

- Type III: antibody must first form, then complexes must deposit – an assembly lag of days ✓.

3.1

- Type III: antibody–antigen complexes deposit in vessels, joints and kidneys.
- Days: the immune response to the serum must mature first; then complexes form and deposit ✓. Complement consumed → low C3/C4.
- Stop exposure, supportive care ± steroids/antihistamines for symptoms.

3.2

- Pre-formed anti-A (naturally occurring IgM) binds the transfused cells → complement lysis: type II, minutes–hours.
- Immediate fever, loin pain, haemoglobinuria, low haptoglobin ✓.
- Delayed (days–weeks): anamnestic IgG to minor antigens – extravascular clearance, falling haemoglobin.