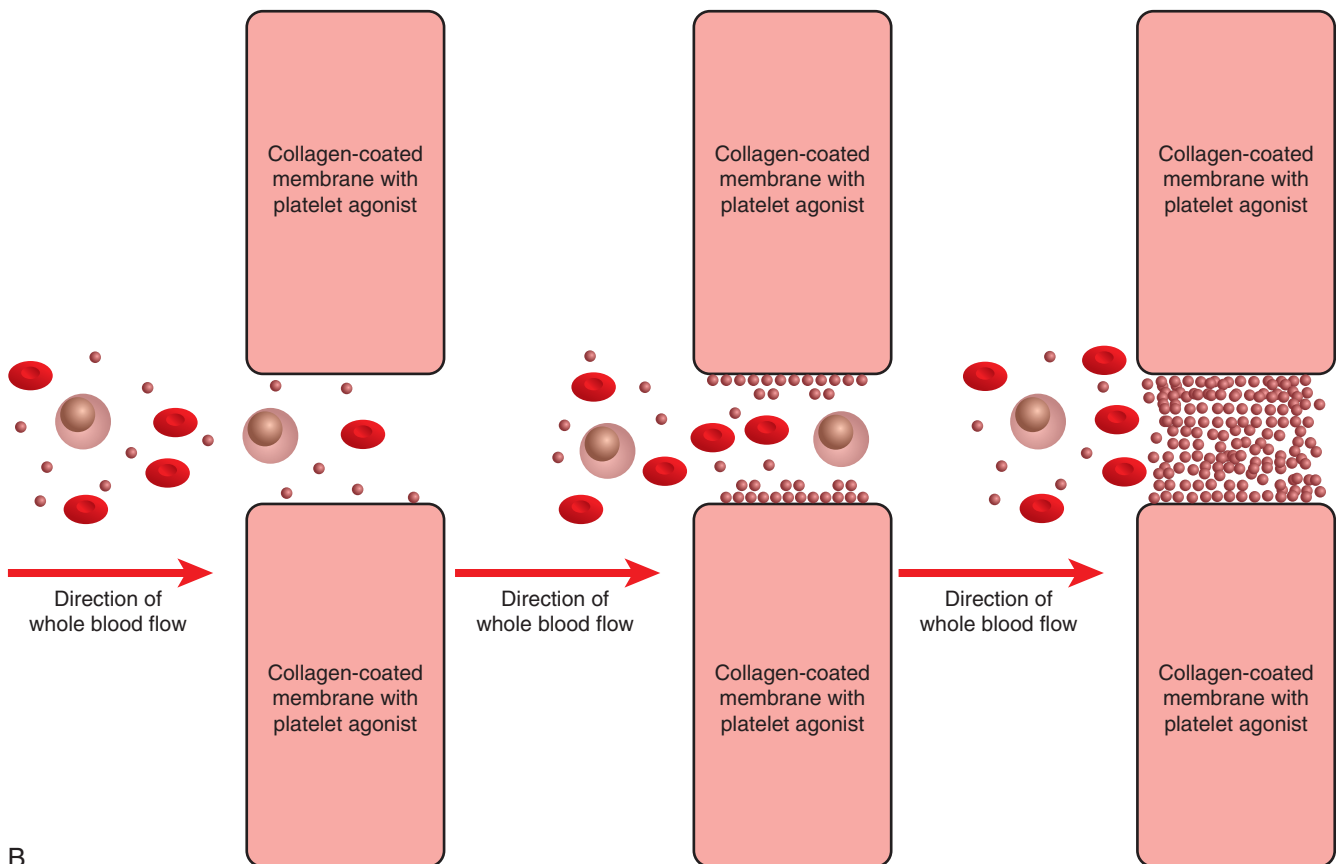




A



B

FIGURE 51-2 Methodology underlying the Platelet Function Analyzer-100 (PFA-100). **A**, Whole blood platelets are streamed toward a collagen-based aperture. The membrane is infused with a potent platelet agonist (i.e., adenosine diphosphate or epinephrine). **B**, Streaming the platelets through the instrument channels induces shear-based activation, which in conjunction with the agonists, should yield an initial wave of platelet adhesion and aggregation. Over time, activated platelets continue to aggregate, closing off the aperture to whole blood flow. The time it takes for aperture closing is measured in seconds and compared with a reference range. Abnormally prolonged closure times can be associated with von Willebrand disease due to the reliance on adhesion in this assay or with a platelet functional defect due to the reliance on aggregation for complete aperture closure.