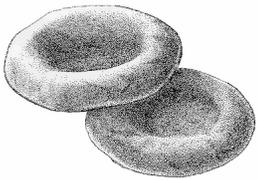# BLOOD TYPING BOOKLET

NAME: _____

ANTIGEN: molecule (protein) that stimulates an immune response
      ex: An allergen is a substance that causes the allergic reaction
In blood typing, they are called agglutinogens

ANTIBODY: proteins that are found in blood or other bodily fluids of vertebrates, and are used by the immune system to identify and neutralize foreign objects, such as bacteria and viruses
   in blood typing, they are called agglutinins

If an individual is exposed to a blood group antigen that is foreign, the immune system will produce _____antibodies_____that can specifically bind to that particular blood group antigen and cause _____clotting_____
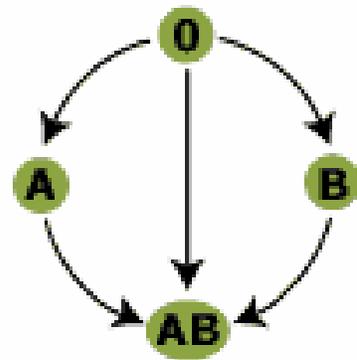
People with blood group O are called "universal donors" and people with blood group AB are called "universal receivers."
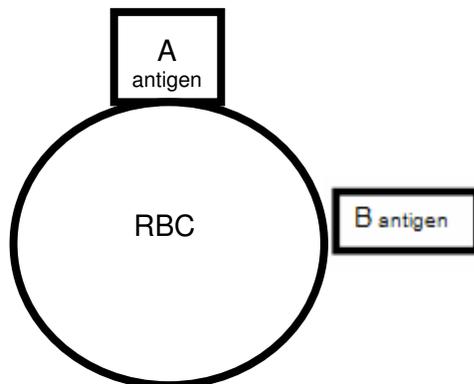
TYPE A Blood:

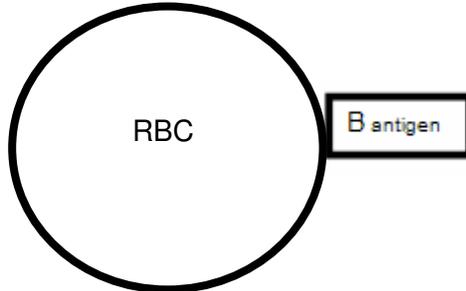Has __A____ antigens and will produce __B____ antibodies

A
antigen

RBC
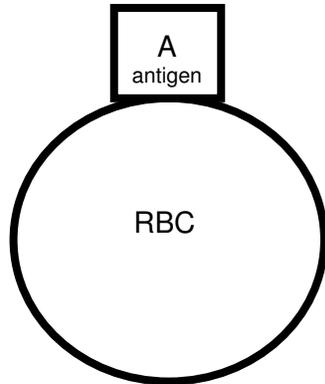
TYPE AB Blood:

Has __A & B____ antigens and will produce ___no__ antibodies

A
antigen

RBC

B antigen

TYPE B Blood:

Has _B_____ antigens and will produce __A____ antibodies
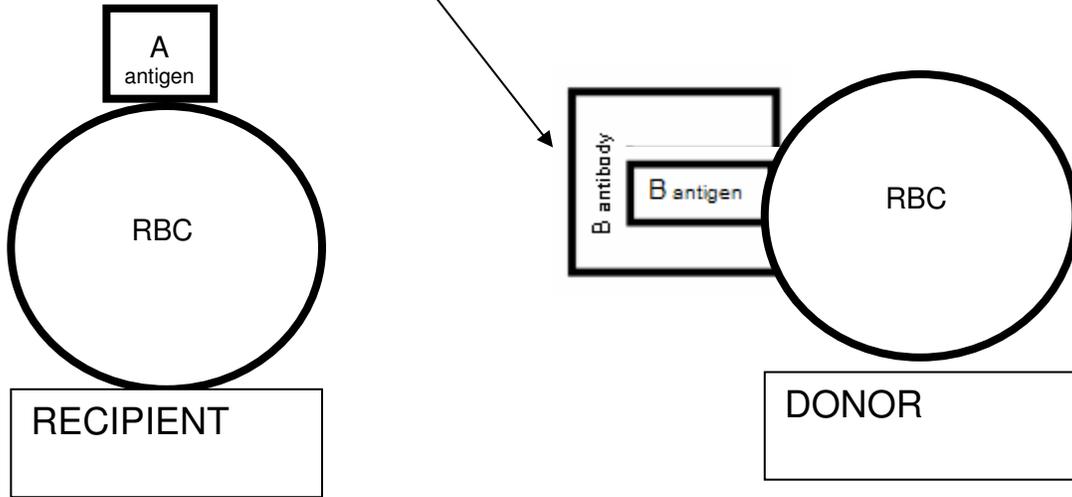
RBC

B antigen

TYPE O Blood:

Has _no_____ antigens and will produce __A & B___ antibodies

RBC
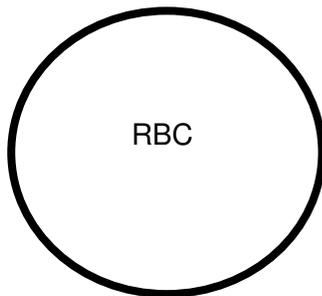
When a person with **A Blood** receives **B Blood** in a transfusion, what happens? CLOTTING

Here's a picture demonstrating why: B antigens are foreign so recipient produces antibodies

A antigen

RBC

RECIPIENT

B antibody B antigen

RBC

DONOR

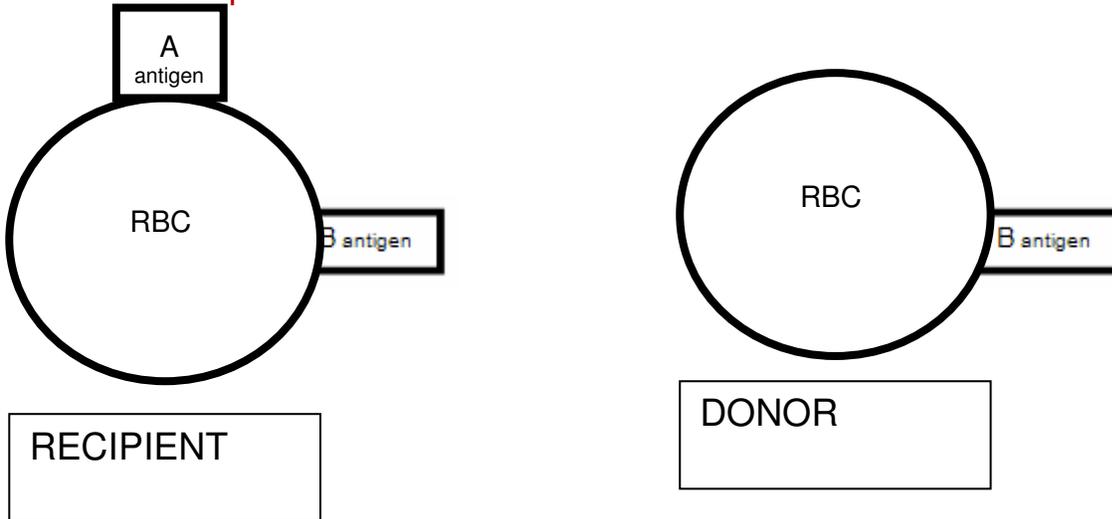When a person with **AB Blood** receives **B Blood** in a transfusion, what happens?   NOTHING

Here's a picture demonstrating why: B antigens are not foreign so no antibodies are produced

A antigen

RBC

B antigen

RECIPIENT

RBC

B antigen

DONOR

When a person with **O Blood** receives **A Blood** in a transfusion,

what happens? CLOTTING

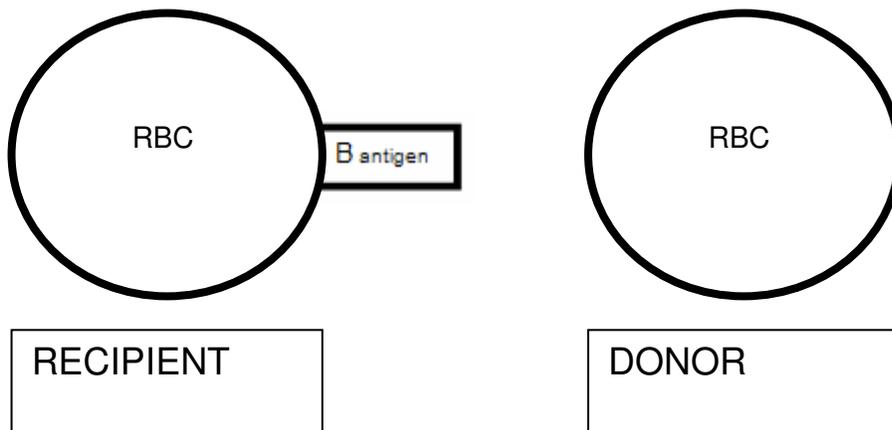Here's a picture demonstrating why: A antigens are foreign so A antibodies are produced

A antibody

A antigen

RBC

RECIPIENT

RBC

DONOR
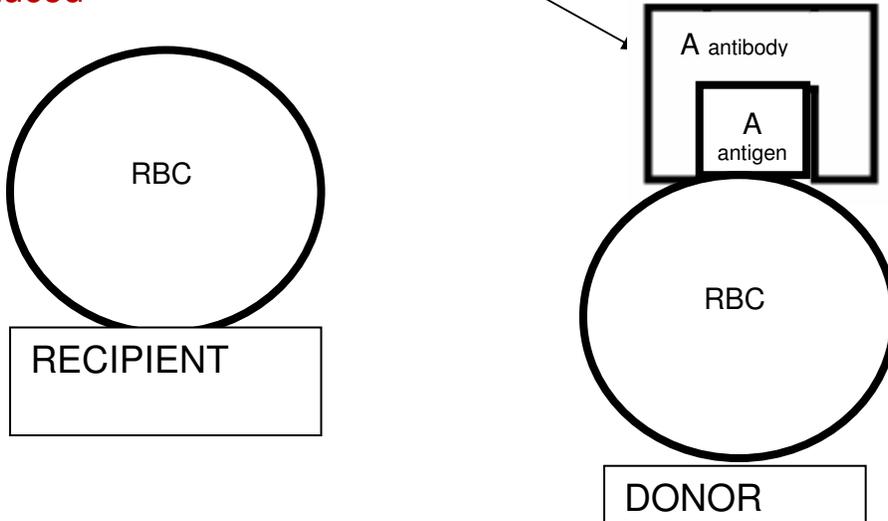
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When a person with **B Blood** receives **O Blood** in a transfusion,

what happens? NOTHING

Here's a picture demonstrating why: O has no antigens so it is not bringing anything foreign

RBC

B antigen

RECIPIENT

RBC

DONOR

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