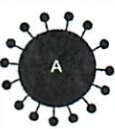
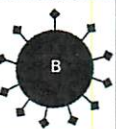
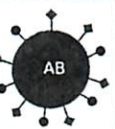



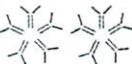


# Blood Type Genetics

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	Group A	Group B	Group AB	Group O
Blood Cell Type				
Antibodies present	 Anti-B	 Anti-A	None	 Anti-A and Anti-B
Antigens present	A antigen	B antigen	A and B antigens	None

## How is blood type inherited???

### Codominance

The allele for antigen A and the allele for antigen B are CODOMINANT. Both traits are expressed completely when the allele for A is inherited from one parent and the allele for B is inherited from the other parent.

### But is codominance the only way???

Blood type can also be inherited as a result of:

### Dominant/Recessive Alleles

O alleles are RECESSIVE and are masked by an A or B allele.

You have to be homozygous/pure to have type O blood.

AA or AO-Type A blood

BB or BO-Type B blood

OO- Type O blood



Are you my TYPE?

## Blood Genotypes and Phenotypes

Genotype		Phenotype
AA	or	AO*
↑		↑
homozygous		heterozygous
↓		↓
BB	or	BO*
	AB (codominant)	
	OO	

Type A

Type B

Type AB

Type O

### Punnett square example



Father has AB genotype

Mom has BO genotype (heterozygous type B)

	B	O
A	AB	AO
B	BB	BO

Possible blood types  
for offspring:

Type AB 25%

Type A 25%

Type B 50%