**T CELL DEVELOPMENT**

**Double negative thymocyte**

These cells are produced in the bone marrow and develop in the thymus. Double negative thymocytes do not possess a CD4 or CD8 co-receptor.

**Double positive thymocyte**

The double positive thymocyte possesses both CD4 and CD8 co-receptors and begins to develop alpha and beta chains in its T cell receptor.

**POSITIVE SELECTION**

**DOES THE T CELL (TCR-CD COMPLEX) RECOGNISE MHC I OR MHC II?**

**NEITHER**

T cell can have one attempt at rearranging its TCR

**NEGATIVE SELECTION**

**DOES THE TCR RECOGNISE SELF ANTIGEN?**

**YES – with high affinity**

**NO**

A little

**YES**

Cell apoptoses

Survives as CD4+ Th cell

Becomes a natural T regulatory cell which regulates other T cell activity

Travels to secondary lymphoid organs i.e. spleen

You need to restrict T cells so that they’re only activated when presented antigen on an APC. You only want to activate them when they’re needed!