

CHECKLIST OF KEY CONCEPTS

Functions of the pentose phosphate pathway

1. The pentose phosphate pathway (PPP) functions to supply 5 carbon sugars for nucleotide and nucleic acid synthesis, as a source of NADPH and to allow for the metabolism of 5 carbon sugars.
2. In the first stage of the PPP ribose-5-phosphate is formed together with the reduction of NADP^+ to NADPH.

Mechanism of the pentose phosphate pathway

3. If the ribose-5-phosphate produced is more than is required it is reconverted to glucose-6-phosphate in a series of steps catalysed by transaldolase and transketolase.
4. In situations where there is little demand for NADPH conversion of glucose-6-phosphate to ribose-5-phosphate can occur without NADPH generation.