

## Metabolic pathway of copper



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Copper is present in most foods and is necessary for normal growth and development. Diagrams I-IV show the way copper is metabolized in healthy subjects, and in people with Wilson's disease (without treatment and with treatment).

Diagram I: healthy subjects: intake and excretion is well balanced

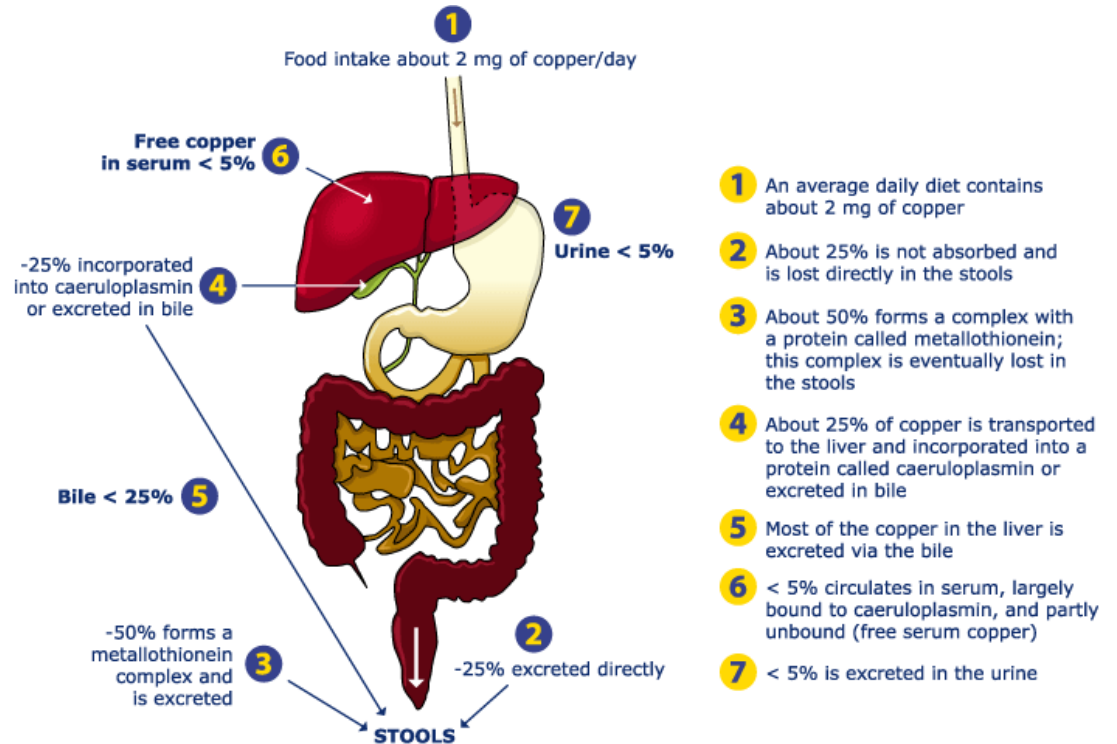
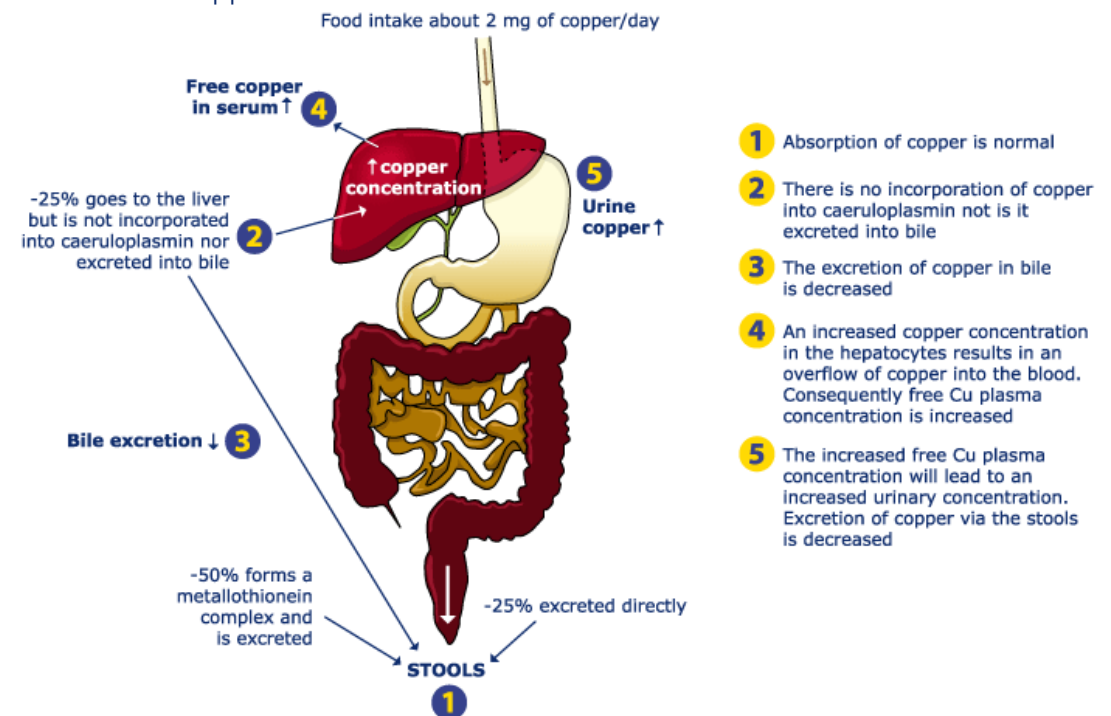
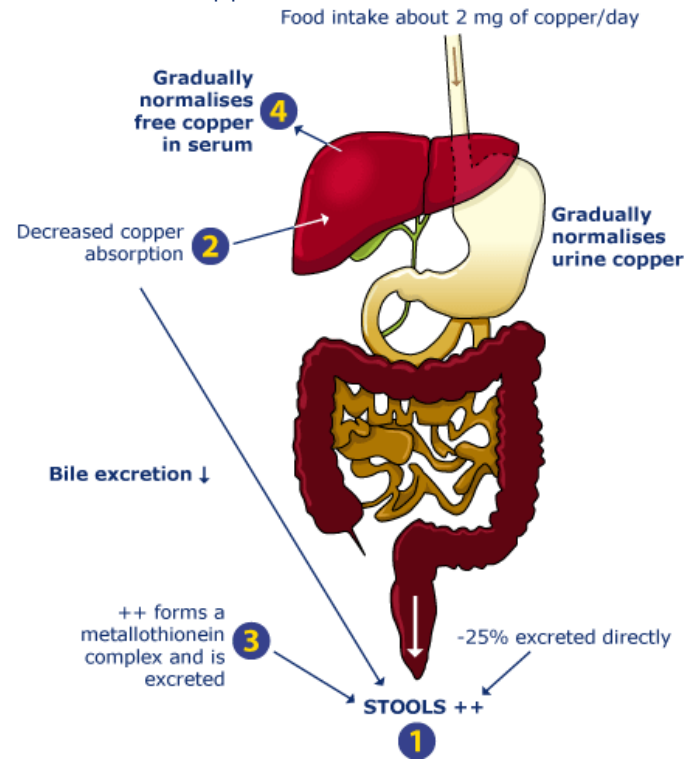


Diagram II: Wilson's disease patients before treatment: reduced excretion and retention of copper



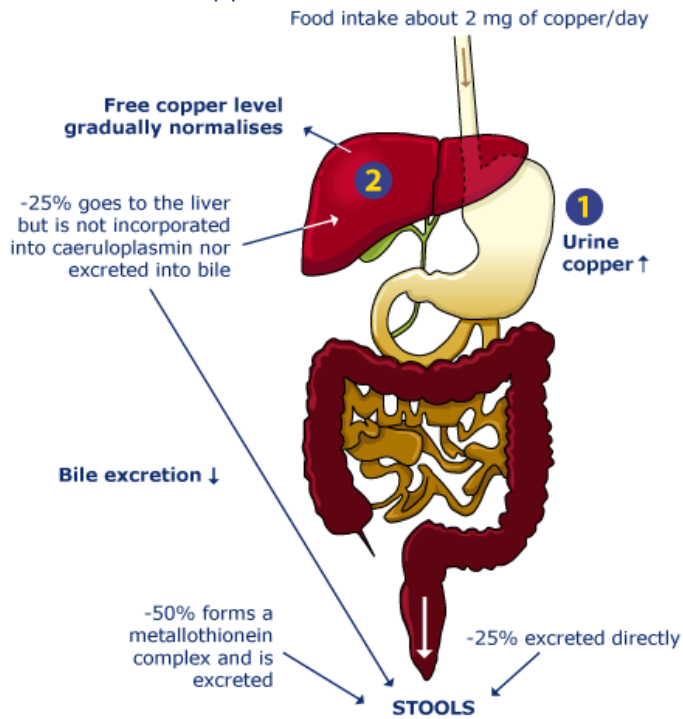
- Wilson's disease for younger people
- Wilson's disease for patients and families
- What is Wilson's disease?
- What are the signs and symptoms of Wilson's disease?
- Metabolic pathway of copper
- How have I or my child got this condition?
- How does this occur?
- Diagnostic tests for Wilson's disease
- What is the treatment?
- Treatment compliance
- Pregnancy
- Is carrier detection available?
- Glossary of terms used

Diagram III: Wilson's disease patients on zinc therapy: enhanced faecal excretion of copper



- 1 Zinc increased the concentration of metallothionein in the intestine and thus:
- 2 decreased Cu absorption from the diet and from the gastric juices
- 3 increased Cu excretion in stools
- 4 gradually reduces copper overload in the body and normalises free copper

Diagram IV: Wilson's disease patients on chelator therapy: enhanced urinary excretion of copper



- 1 The chelator binds with the copper enabling more of it to be excreted in the urine
- 2 It may reduce the toxicity of copper which stays within the liver