

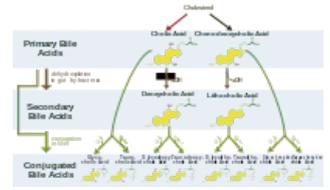
Bile acids



Bile acids are derivatives of cholanic acid, which is derived from cholate (5- β series). It belongs to C₂₄ steroids. Hydroxyderivatives of cholanic acid contain one OH group, which is always bound to the C₃ of the sterane nucleus. They are sparingly soluble in water but well soluble in alkaline media to form their salts.

division of bile acids:

- primary - formed directly from cholesterol in the liver (cholic acid, chenodeoxycholic acid)
- secondary - produced by the activity of the intestinal microbiome (deoxycholic acid, lithocholic acid)



Transformations of cholanic acid

Conversion of cholesterol to bile acids

Cholesterol is very low polar, insoluble in water (it cannot be removed by the kidneys), so it is processed in the liver - storage, transport, conversion to bile acids. Liver cells are able to convert 75% of cholesterol into bile acids. About 1 g of cholesterol is excreted daily as LDL, and free cholesterol can be reabsorbed in the intestine or converted to coprosterol by intestinal bacteria.

Links

related articles

- Bile
- Bile ducts
- Cholanic acid
- Cholesterol

Used literature

- MATOUŠ, Bohuslav. *Základy lékařské chemie a biochemie*. 1. edition. Praha : Galén, 2010. 540 pp. ISBN 978-80-7262-702-8.