

# Atenolol

## General:

Atenolol is a selective  $\beta_1$  receptor antagonist, a drug belonging to the group of  $\beta$ -blockers, a class of drugs used primarily in cardiovascular diseases. Introduced in 1976, atenolol was developed as a replacement for propranolol in the treatment of hypertension. The drug works by slowing down the heart and reducing its workload. Unlike propranolol, atenolol does not pass through the blood-brain barrier thus avoiding various CNS side effects.

The maximal serum concentration is 2 to 4 hours after oral dosing (time elapsed before maximal concentration in the blood plasma is reached). The mean elimination half-life is 6 hours. However, the action of the usual oral dose of 25 to 100 mg lasts over a period of 24 hours.

Atenolol is a hydrophilic drug. The concentration found in brain tissue is approximately 15% of the plasma concentration only. The drug crosses the placenta barrier freely. In the milk of breastfeeding mothers, approximately 3 times the plasma concentrations are measured. Atenolol is almost exclusively eliminated renally and is well removable by dialysis. A compromised liver function does not lead to higher peak-activity and/or a longer half-life with possible accumulation.

Indication: Therapy monitoring

Material: 1 ml serum

TAT: 7-10 days\*

Method: HPLC

Units:  $\mu\text{g/l}$

Ref.- range: 100-1000

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>