

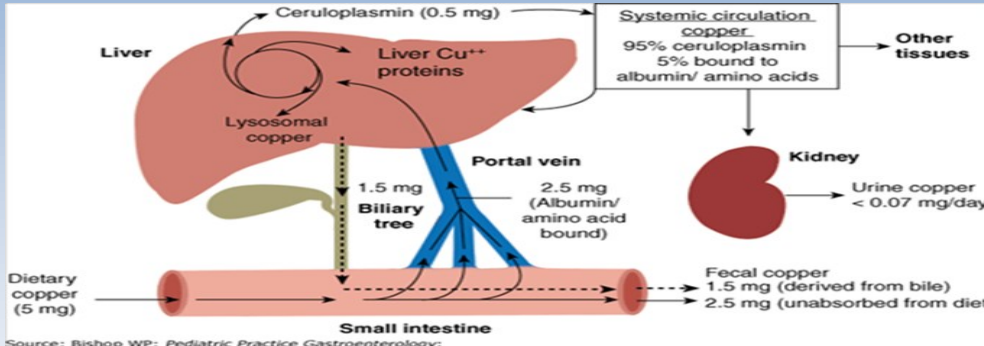
# RELATIONSHIP BETWEEN URINARY COPPER EXCRETION BETWEEN PATIENTS WITH WILSON DISEASE, BEFORE AND AFTER THE TREATMENT

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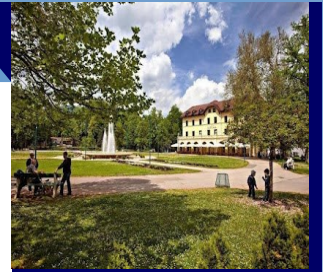
North Macedonia



Source: Bishop WP: Pediatric Practice Gastroenterology: www.accesspediatrics.com

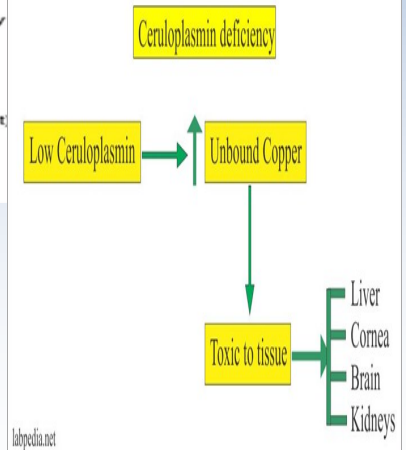
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The biochemical characteristics of WD include decreased serum ceruloplasmin and copper concentrations and increased urinary copper excretion. Determination of copper in the urine by atomic absorption spectrometry is a rapid method for determining excess copper in the body which helps to remove the excess copper in the body through the urine.



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The aim of this study task is to point out the importance of biomonitoring of urinary copper excretion, using atomic absorption spectrometry, in patients with WD, before and after chelating agent therapy or treatment.

**Material and methods:** The laboratory examination of the copper content in 24-hour urine was performed at the PHI University Institute of Clinical Biochemistry in Skopje, at the Clinical Center "Mother Teresa" using atomic absorption with a PinAAcle 900F spectrometer.



Cu in 24h urine	Patients with nonspecific symptoms	Patients with liver disease	Patients with Wilson's disease
<60µg mean ± SD	9,71 ± 7,37	58.42 ±25.81	60.67±49.6

Patients without therapy	Cu in 24 urine <60µg/24ч	Patients on therapy	Cu in 24 urine <60µg/24ч.
1	118.33	1	39.67
2	103.28	2	8.74
3	91.39	3	4.44
4	172.88	4	33.29
5	99.72	5	28.04
6	67.96	6	42.94
		7	19.25
		8	19.55
mean ± SD	108,92±35,44		24,49±13,95

## Conclusions:

Determining the concentration of copper in various biological media is becoming increasingly important, but in WD it has been shown that determining 24-hour urinary copper excretion is important for diagnostic purposes and monitoring treatment.