

# *Uric Acid*

*Prepared By*

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## **What is uric acid?**

- **It is the end product of metabolism of purines which are present in nucleic acids of nucleoproteins**
- **It is formed endogenously from nucleoproteins and exogenously from metabolism of purines taken in food**

- **The enzyme xanthine oxidase makes uric acid from xanthine and hypoxanthine.**
- **It is formed in liver and filtered by kidneys to be excreted in urine with little amount passes in stool.**
- **High uric acid levels in blood occur when its formation is too much or its excretion is low**

# Why is uric acid test done?

- **Help diagnose gout**
- **Check for kidney stones**
- **Check if medicines that decrease uric acid level are working**
- **Check for uric acid level in patients on chemotherapy or radiation**

## Reference values:

- **Child : 2 - 5.5 mg/dl**
- **Men : 3.5 - 7.2 mg/dl**
- **Women : 2.6 - 6 mg/dl**



## **Hyperuricemia:**

➤ **It means high level of uric acid in the blood.**

### **Causes :**

- **Hereditary reasons**
- **High intake of dietary purines**
- **Reduced excretion by the kidneys**
- **Fasting or rapid weight loss can temporarily elevate uric acid levels**

- **Certain drugs such as thiazide diuretics**

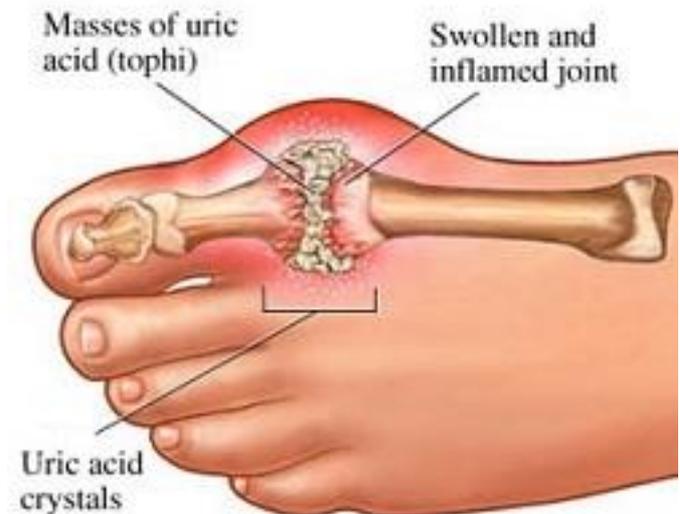
## **Examples of purines rich foods?**

- **Meat**
- **Meat organs (liver, kidney, brain)**
- **Poultry**
- **Seafood( scallops, sardines)**
- **Beans (moderate)**
- **Green peas (moderate)**
- **Spinach (moderate)**



# What can high uric acid level in blood lead to?

- It will form solid crystals within joints which is painful and called gout if remain untreated it will lead to hard lumpy deposits called tophi
- It can also cause kidney stones or kidney failure



## **Hypouricemia:**

- **It means low level of uric acid in the blood.**
- **It is seldom**

### **Causes:**

- **Some liver diseases**
- **Some kidney diseases**
- **Diet low in proteins**
- **Large dose of allopurinol**
- **Some toxic compounds**

THANK YOU

