



<b>Requisition #:</b>	<b>9900001</b>	<b>Practitioner:</b>	<b>NO PHYSICIAN</b>
<b>Patient Name:</b>	<b>Report Masked</b>	<b>Date of Collection:</b>	<b>12/01/2022</b>
<b>Patient Age:</b>	<b>17</b>	<b>Time of Collection:</b>	<b>Not Given</b>
<b>Sex:</b>	<b>M</b>	<b>Report Date:</b>	<b>8/9/2023</b>

## Urine Calcium and Magnesium Profile

Metabolic Marker	Reference Range (mg/g Creatinine)	Patient Value	Reference Population - Adults Age 17 and Older
<b>Mineral Metabolism</b>			
<b>Calcium</b>	10 - 220	3.00 <b>L</b>	
<b>Magnesium</b>	30 - 100	7.00 <b>L</b>	

### Indicator of Fluid Intake

**Creatinine** **100.00 mg/dL**

### Interpretations

#### Low calcium

The most common reason for low urine calcium is inadequate calcium intake in the diet. One of the most common reasons for inadequate intake is a milk and/or dairy free diet without calcium supplementation. Urine calcium has been shown to be a more sensitive indicator of calcium deficiency than serum calcium because low calcium intake stimulates release of calcium from the bones which maintains blood calcium levels until deficiency is severe. Less common reasons for calcium deficiency include hypoparathyroidism, pseudohypoparathyroidism, vitamin D deficiency, nephrosis, nephritis, bone cancer, hypothyroidism, celiac disease, and malabsorption disorders. Low calcium in the diet may increase the incidence of oxalate crystal formation in the tissues and kidney stones. Low calcium intake in the diet associated with milk free diet without calcium supplementation may lead to rickets (bone malformation and weakening) and, in autism, to abnormal eye pain which can result in the loss of eyes due to excessive eye-poking behavior. (Coleman, M. Clinical presentations of patients with autism and hypocalcemia. *Develop. Brain Dys.* 7: 63-70, 1994)

#### Low magnesium

The most common reason for low urine magnesium is low magnesium in the diet. Low magnesium in the diet may increase the incidence of oxalate crystal formation in the tissues and kidney stones. Less common causes of low magnesium include celiac disease, other malabsorption disorders, dysbiosis, vitamin D deficiency, pancreatic insufficiency, and hypothyroidism. Early signs of magnesium deficiency include loss of appetite, nausea, vomiting, migraine headaches, fatigue, and weakness. As magnesium deficiency worsens, numbness, tingling, muscle contractions and cramps, seizures, personality changes, abnormal heart rhythms, and coronary spasms can occur. Low urinary magnesium for long time periods is associated with increased risk of ischemic heart disease.

#### PERFORMING SITE:

Calcium: KS QUEST DIAGNOSTICS LENEXA. 10101 RENNER BLVD. LENEXA, KS 66219-9752. Laboratory Director: WILLIAM BECKER, DO. MPH CLIA 17D06-48226

Magnesium: AMD QUEST DIAGNOSTICS NICHOLS CHANTILLY. 14225 NEWBROOK DRIVE, CHANTILLY, VA 20151-2228. Laboratory Director: PATRICK W. MASON, MD. PHD. CLIA:49D0221801

This test was developed, and its performance characteristics determined by Mosaic Diagnostics Laboratory. It has not been cleared or approved by the US Food and Drug Administration.