



# Is there any Relationship between Human Eyesight and Urine Nitrites?

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## Abstract

Nitrituria is a presence of nitrites in urine. Nitrites are formed from the chemical conversion of nitrates by bacteria. Eyes are optical complexed system and are a major organ of a human body. Any abnormality in this organ may lead to very serious conditions. Myopia is characterized by a refractory disorder in which eye is not able to focus light onto the retina. The objective of the present study is to check the association of nitrates in urine with eyesight. 100 participants accepted to take part in this project. Urinalysis was done of the participants using a urine strip test. The participants were the pupils from the Bahauddin Zakariya University, Multan. In 18% male and 39% female respondents with eyesight between 0 to -1 dioptre(D), normal results were observed. The research concludes that there is no relation between eyesight and urine nitrites [1-3].

**Keywords:** Urinalysis; Urine nitrites; Myopia; Refraction Error; Eyesight

## Introduction

Nitrituria is a presence of nitrites in urine. Nitrites are formed from the chemical conversion of nitrates by bacteria. Both are nitrogen molecules. It is normal to have nitrates in urine but an indication of nitrites in urine point towards bacterial urinary infection which is called a urinary tract infection (UTI) [4]. This infection is common in females. A person suffering from this infection may have urination problem, frequent urination but less in amount, pain during urinate, red-colored and foul smelled urine, back and pelvic pain and pelvic pressure. This infection can spread to ureters and kidney. The symptoms of a kidney infection are chill, fever, nausea, vomiting, and malaise. To check UTR, a urine test is recommended. It can also be recommended in case of pregnancy, routine check-up, diabetes or kidney failure [5-7].

Eyes are optical complexed system and are a major organ of a human body. Any abnormality in this organ may lead to very serious conditions. Eyes may be affected at any age at any stage of life. Abnormal eye conditions are myopia, hyperopia, glaucoma, cataracts, and many others. Myopia ranges from mild to severe where vision will be badly affected. It can affect any age group from child to adults. Children may suffer from myopia if they are rubbing their eyes, finding difficulty to see the board and such others. If parents have myopia, then the child will also receive it because it is inherited. Between the age of 20-40, it is quite rare. Reflection

is basically focusing of light into eyes. Myopia is characterized by a refractory disorder in which eye is not able to focus light onto the retina. Myopia occurs when the cornea is so steep, or eyes become larger than normal and eye focuses light in front of the retina. Major sign and symptoms of myopia include eyestrain, headache, and difficulty to see distant objects such as billboards, tv etc. Eyes should be checked properly at regular intervals. Diabetic patients are at high risk of damaging eyes especially myopia or hyperopia. The objective of the present study is to check the association of nitrates in urine with eyesight [8-11].

## Materials and Methods

### Project designing

100 participants accepted to take part in this project. The participants were the pupils from the Bahauddin Zakariya University, Multan. Urinalysis was done of the participants using a urine strip test. The sterilized cups were provided to the participants. The participants were asked to fill the cup with one or two ounces of urine fluid. The urine strips are immersed in a urine sample. After half a second or one minute, the strips color are compared with a standard color chart. The reports were prepared. The query was asked about their eyesight. Eyesight number was jotted down on the reports [12].

## Results

Table 1 shows the results of the relationship between human eyesight and urine nitrites. In 18% male and 39% female

respondents with eyesight between 0 to -1 dioptre (D), normal results were observed. Only 1% female with 0 to -1 D showed positive results. Other respondents with myopic refractive error showed normal results.

**Table 1:** Relationship between Urine Nitrites and Eyesight.

Visual Acuity	0 to -1D		-1D to -2D		-2D to -3D		-3D to -4D	
	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive
Male	18%	-----	3%	-----	8%	-----	----	----
Female	39%	1%	16%	-----	10%	-----	6%	----

## Discussion


This study made advancement in recent scientific studies. In one of the recent researches, it is concluded that there is a reciprocal association between urine cotinine and myopic refractive error [13].

## Conclusion

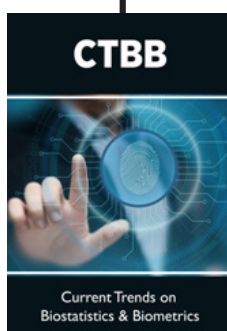
The research concluded that there is no relation between eyesight and urine nitrites.

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