

<https://doi.org/10.46344/JBINO.2024.v13i03.06>

IS THERE ANY RELATIONSHIP BETWEEN HUMAN BODY WEIGHT AND URINE NITRITE

Muhammad Hammad Ahmad, Muhammad Imran Qadir, Hafiz Shahid Hussain, Asifa Sadaf

Institute of Molecular Biology and Biotechnology, Bahauddin Zakariya University, Multan, Pakistan

ABSTRACT

The objective of this project was to draw a relation between body weight and urine nitrites. If nitrates are in urine, it is considered as normal condition, but if nitrites are present in urine, it is an indication of any infection we have. When a bacterial infection in urinary tract occurs, this is an indication of the presence of nitrites in urine. This is known as urinary tract infection. This tract involves kidneys, ureters, bladders and urethra. Bacteria reproduce fast in urinary tract. There are certain bacteria that converts nitrates into nitrites enzymatically. Nitrituria, is a condition when results for nitrites in urine is positive. In this case, doctor recommends for urine culture test. By this test, we can check the type of bacteria that is actually the cause of urinary tract infection. We took 100 samples of urine of people and performed urinalysis. Urine was physically analyzed and applied the dip stick method. In this project, nitrites presence in the urine was tested. This project was depended on the questionnaire and asked the participants about their urinalysis and body weight. Particularly we asked about their nitrites in their urine. Majority of them was not aware about the nitrites. There was only a small fraction of female in the range of their body weight of 50kg-60kg had positive results. This fraction was only 4% and only 2% males in the range of 50kg-70kg of their weights. It was inferred that there was no significant relationship between normal body weight and nitrites in urine.

Keywords: Nitrituria, Urine nitrites, Body weight.

Introduction

There are two types of nitrogen. Nitrates constitute three oxygen atoms while nitrites have two oxygen atoms. Nitrates and nitrites are found naturally in vegetables. Cabbage, celery, leafy greens composed of nitrogenous compounds. If nitrates are in urine, it is considered as normal condition, but if nitrites are present in urine, it is an indication of any infection we have. When a bacterial infection in urinary tract occurs, this is an indication of the presence of nitrites in urine. This is known as urinary tract infection. This tract involves kidneys, ureters, bladders and urethra.

Bacteria reproduce fast in urinary tract. There are certain bacteria that converts nitrates into nitrites enzymatically. The presence of nitrites shows that there is an infection in urinary tract. There are certain symptoms may include like, urination with burning sensation, urination with increased urgency, urine with strong smell and cloudy urine.

Urinalysis is a test that is used for the diagnosis of nitrates in urine. Nitrituria, is a condition when results for nitrites in urine is positive. In this case, doctor recommends for urine culture test. By this test, we can check the type of bacteria that is actually the cause of urinary tract infection. This condition may lead to a specific condition known as sepsis, when infection spread to upper urinary tract. Sepsis is fatal. In pregnant women, urinary tract infection is dangerous for the baby and mother. Antibiotics are used for treatment. Drinking

a lot of water can flush out bacteria. During treatment, proper diet plan is necessary for perfect functioning of immune system.

Human body weight is a crucial factor for normal health. Weight is determined by weight balance and it is equal to the sum of the bones and flush of body. Food also helps to increase or to maintain health of a person. Carrots, potatoes can be used as the best source of energy and a rich in carbohydrates. We focus mainly on the eating habit and control on eating pattern. Slow down our eating time.

The objective of this project was to draw a relation between body weight and urine nitrites. (References1-5)

Materials and Methods

Measurements of Urine Nitrites

We collected 100 samples of urine of people and performed urinalysis. We analyzed the urine and applied the dip stick method. In this project, we analyzed the results for nitrites presence in the urine. These values or readings taken after comparing with the standard colored chart of urinalysis.

Results

There was only a small fraction of female in the range of their body weight of 50kg-60kg had positive results. This fraction was only 4%. Overall the results were negative so that there was not a significant relationship between normal body weight and nitrites in urine. only 2% males in the range of 50kg -70kg of their body weights.

Table 1: Relationship between nitrites in urine and normal body weight

Male	Urine Nitrites Positive%	Urine Nitrites Negative%
40-50(kilograms)	0	2
50-60(kilograms)	1	8
60-70(kilograms)	1	3
70-80(kilograms)	0	0

Table 2: Relationship between nitrites in urine and normal body weight

Female	Urine Nitrites Positive%	Urine Nitrites Negative%
40-50(kilograms)	0	17
50-60(kilograms)	4	36
60-70(kilograms)	1	8
70-80(kilograms)	0	1

Discussion

This project was depended on the questionnaire and we asked the participants about their urinalysis and body weight. Particularly patients were asked about their nitrites in their urine. Majority of them was not aware about the nitrites. It was also discussed that the diseases regarding having nitrite in their urine. After performing the analysis and measuring their body weights, the results were drawn that there was no significant relationship between the human body weight and nitrites in the urine as in both the cases of male and female did not have nitrites in their urine.

- Nitrites in urine happen in the condition of urinary tract infection by bacteria.
- Nitrites in urine recognized by urinalysis and anti-toxins used to kill bacteria for disposing of the disease.
- Nitrates present in healthy urine, when bacteria enter in urinary tract then convert nitrates into nitrites.
- Nitrituria is a clinical term for nitrites in urine.
- Bacteria are not found in healthy urine, when bacteria and nitrites are present it indicates a sign of urinary tract infection.
- The bacteria enter via the urethra causing urinary tract infections and travel to the bladder causing infection and spreading urinary tract infection to the kidneys.

- Mostly assigned females at birth (AFAB) are most likely to get urinary tract infections than assigned males at birth (AMAB).
- Abdominal pain, blood in urine, painful urination, leaking urine, the smell in urine, fever, fatigue, and lower back pain are symptoms of nitrites in urine.
- Urine dipstick positive test is an indication of urinary tract infection but a negative test is not 100% valid.
- Over-counter medicines and antibiotics are used to kill bacteria that nitrites in urine.
- Clean properly after urination, drink a lot of water to remain hydrated, avoid birth control pills, wear cotton underwear and avoid tight clothing is a few steps to reduce nitrites in urine.
- Call your doctor in case of fever, abdominal back pain, and changes in the urine for proper treatment.
- Human body weight is a necessary and an important factor for maintaining normal health.
- Weight is calculated by weight balance and it is equal to the sum of the bones and flush of body.
- Healthy food also helps to improve or to maintain health of a person.
- Grains, fruits, starchy vegetables, legumes, juices, dairy products, snack foods, and sweets potatoes can be used as the best source of energy and rich in carbohydrates.
- We can maintain and improve our health by focusing mainly on the eating habit and control on eating pattern.
- Body weight varies from person to person based on different factors such as age, height, and body composition.
- Consulting with a healthcare provider or a dietitian can help to improve health and daily life style in a sustainable manner.
- Balanced body weight improves overall health, quality of life, and protect from different disorders. (References 6-10)

Conclusion

It was inferred that there was no significant relationship between normal body weight and nitrites in urine.

References

1. Qadir MI, Bashir H, Ahmad MH. Human Oropharyngeal Candidiasis: From Etiology to Current Treatment. Crit Rev Immunol. 2023;43(3):15-24.
2. Qadir MI, Noor A (2018) Anemias. Rare & Uncommon Diseases. Cambridge Scholars Publishing. Newcastle, England. ISBN: 978-1-5275-1807-0.
3. Qadir MI, Javid A (2018) Awareness about Crohn's Disease in biotechnology students. Glo Adv Res J Med Medical Sci, 7(3): 062-064.
4. Qadir MI, Saleem A (2018) Awareness about ischemic heart disease in university biotechnology students. Glo Adv Res J Med Medical Sci, 7(3): 059-061.
5. Qadir MI, Ishfaq S (2018) Awareness about hypertension in biology students. Int J Mod Pharma Res, 7(2): 08-10.
6. Qadir MI, Mehwish (2018) Awareness about psoriasis disease. Int J Mod Pharma Res, 7(2): 17-18.
7. Qadir MI, Shahzad R (2018) Awareness about obesity in postgraduate students of biotechnology. Int J Mod Pharma Res, 7(2): 14-16.

8. Qadir MI, Rizvi M (2018) Awareness about thalassemia in postgraduate students. *MOJ Lymphology & Phlebology*, 2(1): 14-16.
9. Qadir MI, Ghalia BA (2018) Awareness survey about colorectal cancer in students of M. Phil Biotechnology at Bahauddin Zakariya University, Multan, Pakistan. *Nov Appro in Can Study*, 1(3): NACS.000514.2018.
10. Qadir MI, Saba G (2018) Awareness about intestinal cancer in university students. *Nov Appro in Can Study*, 1(3): NACS.000515.2018.

