

# Improving dietary quality through micronutrient density.

Uzma Hanif\*

Department of Food Science, University of Edinburgh, Edinburgh, UK

## Introduction

Micronutrients, such as vitamins and minerals, are essential for our bodies to function properly. They play a vital role in maintaining optimal health, preventing chronic diseases, and promoting overall wellbeing. Unfortunately, many people do not consume enough micronutrients in their diet, leading to deficiencies and health problems. One way to improve dietary quality and ensure adequate intake of micronutrients is through the concept of micronutrient density.

Micronutrient density refers to the amount of micronutrients per calorie in a particular food or diet. Foods that are high in micronutrient density provide a significant amount of vitamins and minerals per calorie, while those with low micronutrient density provide very little. For example, spinach is considered a highly micronutrient-dense food because it is rich in vitamins and minerals but low in calories. In contrast, a sugary soda is low in micronutrient density because it provides a lot of calories but few micronutrients [1].

Eating a diet that is high in micronutrient density is important for several reasons. Firstly, it helps to prevent micronutrient deficiencies that can lead to health problems such as anemia, weakened immune system, and poor bone health. Secondly, a diet high in micronutrient density can help to prevent chronic diseases such as heart disease, diabetes, and cancer. Lastly, a diet high in micronutrient density can help to promote satiety, or feelings of fullness, which can aid in weight management. So how can you improve your dietary quality through micronutrient density? Here are some tips:

### ***Eat a variety of colorful fruits and vegetables***

Fruits and vegetables are some of the most micronutrient-dense foods available. Aim to eat a variety of colors, including red, orange, yellow, green, blue, and purple. This ensures that you are getting a wide range of vitamins and minerals [2].

### ***Choose whole grains over refined grains***

Whole grains, such as brown rice and whole wheat bread, are higher in micronutrient density than refined grains, such as white rice and white bread. They contain more fiber, vitamins, and minerals, and can help to promote satiety.

### ***Incorporate lean protein sources***

Lean protein sources, such as chicken, fish, and beans, are important for maintaining muscle mass and promoting overall health. They are also often high in micronutrient density,

providing a range of vitamins and minerals.

### ***Limit processed and sugary foods***

Processed and sugary foods, such as candy, soda, and chips, are low in micronutrient density and can contribute to weight gain and chronic diseases. Try to limit these foods and replace them with more micronutrient-dense options.

### ***Use herbs and spices***

Herbs and spices, such as turmeric, ginger, and garlic, are often high in micronutrient density and can add flavor to your meals without adding extra calories. They may also have health benefits, such as anti-inflammatory properties.

Another way to improve dietary quality through micronutrient density is by incorporating superfoods into your diet. Superfoods are foods that are particularly high in micronutrients and other health-promoting compounds. Some examples of superfoods include blueberries, kale, salmon, and quinoa. By adding these foods to your diet, you can increase your intake of micronutrients and improve your overall health [4].

Another important aspect of improving dietary quality through micronutrient density is by paying attention to your cooking methods. Cooking methods such as boiling, steaming, and baking can help to preserve the micronutrient content of foods. On the other hand, frying and grilling can lead to a loss of micronutrients. Therefore, it is important to choose cooking methods that preserve the micronutrient content of your foods.

Finally, it is important to note that while improving dietary quality through micronutrient density is important, it should not be the only factor considered when planning a healthy diet. Other factors, such as macronutrient balance, calorie intake, and food safety, should also be taken into consideration. It is recommended to follow a balanced diet that includes a variety of foods from all food groups.

In conclusion, improving dietary quality through micronutrient density is a simple and effective way to improve your overall health and prevent chronic diseases. By incorporating a variety of colorful fruits and vegetables, whole grains, lean protein sources, superfoods, and herbs and spices into your diet, you can ensure that you are getting the micronutrients that your body needs to function properly. Remember to also pay attention to your cooking methods and to follow a balanced diet that meets your individual nutritional needs. By making small changes to your diet, you can make a big difference in your long-term health and wellbeing [5].

---

\*Correspondence to: Uzma Hanif, Department of Food Science, University of Edinburgh, Edinburgh, UK, E-mail: Uzmahanif456@ed.ac.uk

Received: 27-Jan-2023, Manuscript No. AAJFSN-23-90112; Editor assigned: 30-Jan-2023, PreQC No. AAJFSN-23-90112 (PQ); Reviewed: 13-Feb-2023, QC No. AAJFSN-22-90112;

Revised: 20-Feb-2023, QC No. AAJFSN-23-90112 (R); Published: 27-Feb-2023, DOI:10.35841/aaajfsn-6.2.175

---

## Conclusion

Improving dietary quality through micronutrient density is an important step towards maintaining optimal health and preventing chronic diseases. By choosing a variety of colorful fruits and vegetables, whole grains, lean protein sources, and limiting processed and sugary foods, you can ensure that your diet is high in micronutrient density. Incorporating herbs and spices can also add flavor and health benefits to your meals. Remember, small changes to your diet can have a big impact on your health and wellbeing in the long term..

## References

1. Beal T, Massiot E, Arsenault JE, et al. Global trends in dietary micronutrient supplies and estimated prevalence of inadequate intakes. *PloS one*. 2017;12(4):e0175554.
2. Navaneethan SD, Zoungas S, Caramori ML, et al. Diabetes management in chronic kidney disease: synopsis of the 2020 KDIGO clinical practice guideline. *Ann Intern Med*. 2021;174(3):385-94.
3. Marangoni F, Pellegrino L, Verduci E, et al. Cow's milk consumption and health: a health professional's guide. *J Am Coll Nutr*. 2019;38(3):197-208.
4. Van Vliet S, Kronberg SL, Provenza FD. Plant-based meats, human health, and climate change. *Front sustain food syst*. 2020:128.
5. Barabási AL, Menichetti G, Loscalzo J. The unmapped chemical complexity of our diet. *Nature Food*. 2020;1(1):33-7.