



# Is Vitamin D Deficiency Correlated to Asthma ?

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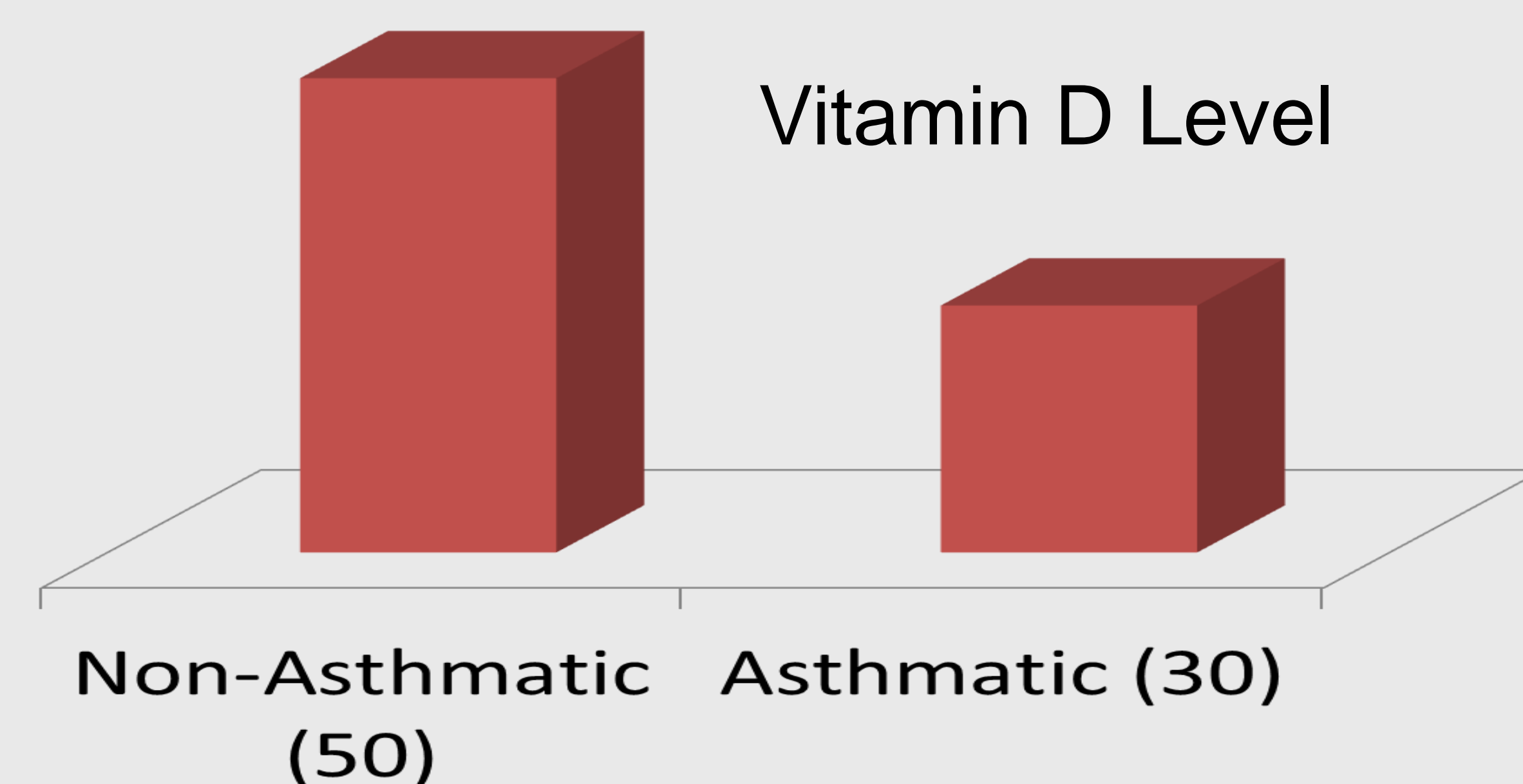


## Introduction

- Vitamin D required for bone mineralization, is also a potent immune system regulator having a potential role in various allergic diseases.
- Bronchial Asthma is a chronic airway inflammation with a very high incidence in children. The occurrence of asthma in children can be caused by many factors, including environmental, gender, genetic, and ethnic factors. [1]

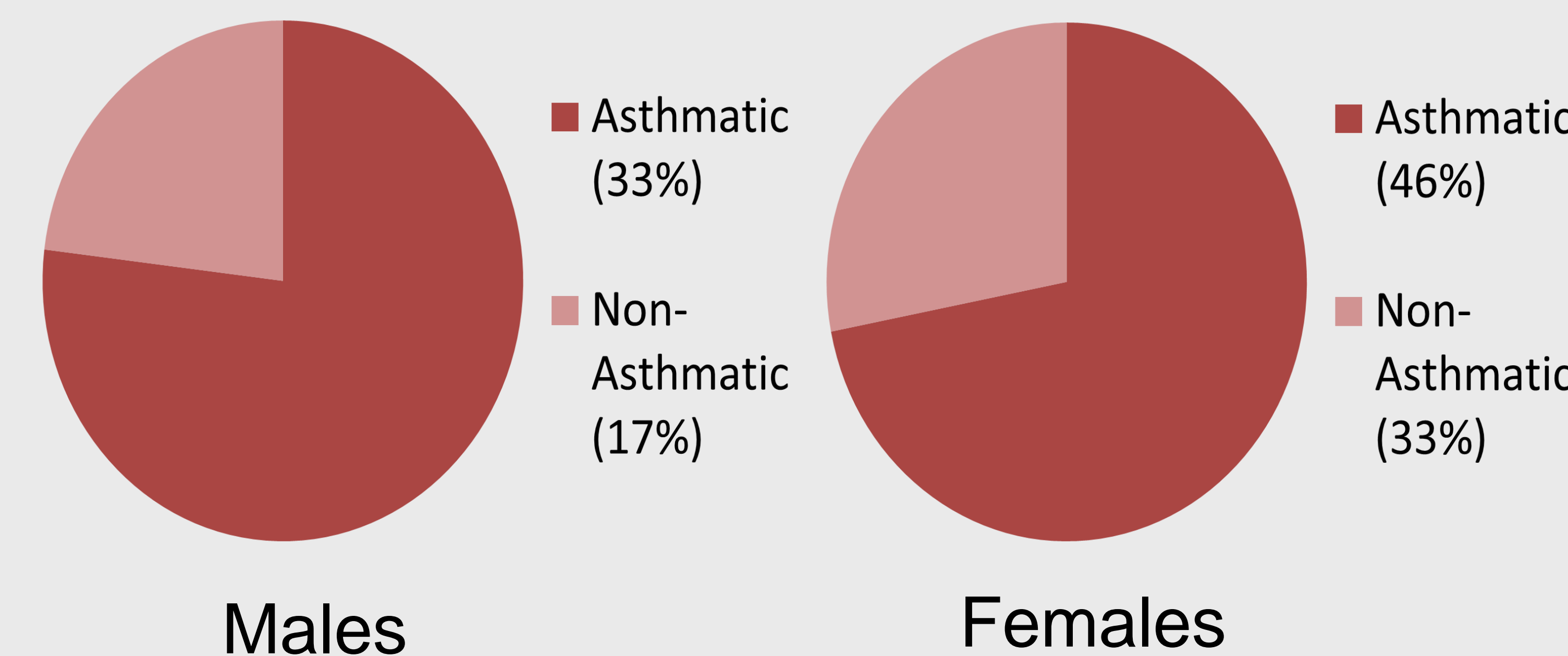
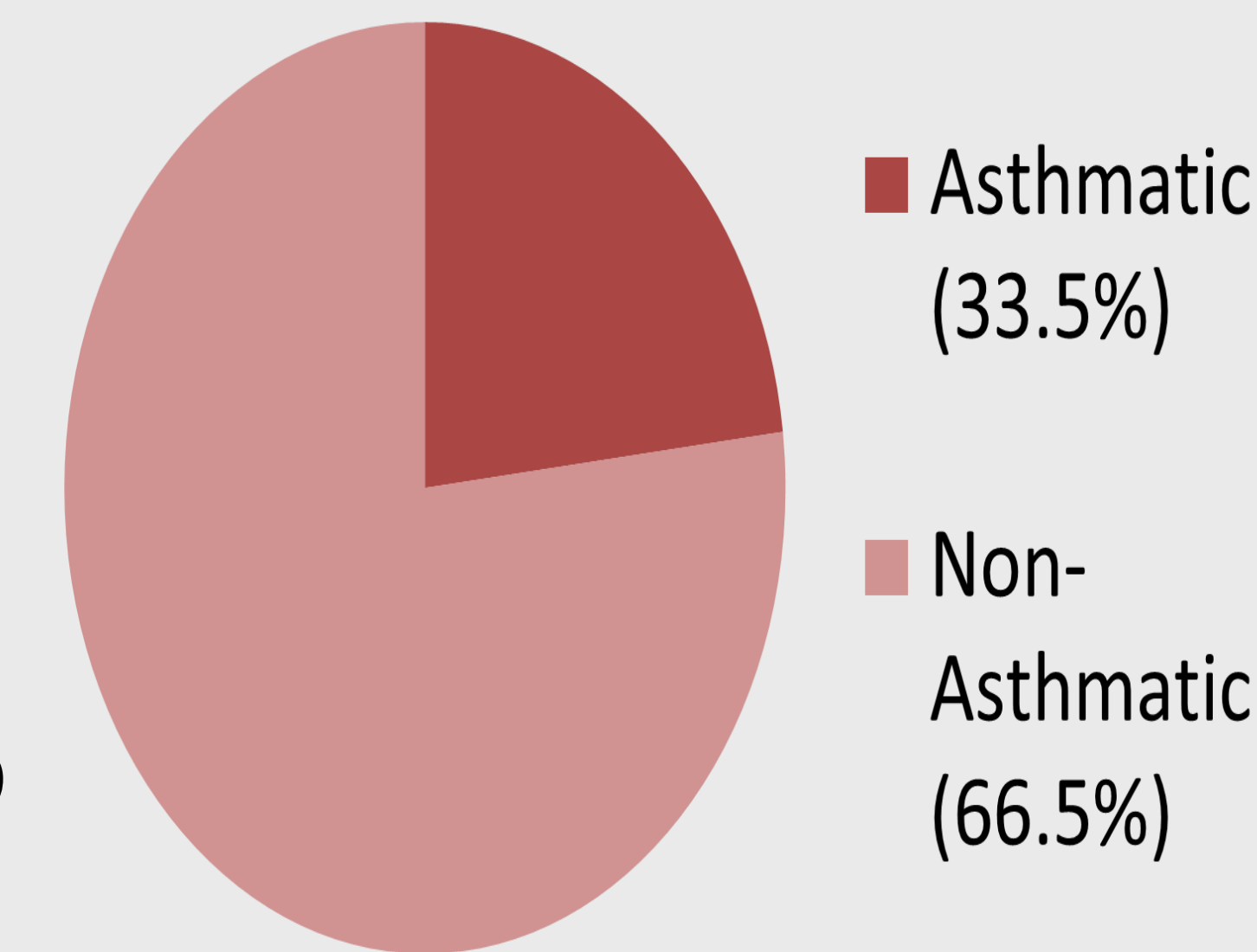
## First Study

- The study, published by the Korean society of Environmental Health and Toxicology, stated: "we observed that the serum vitamin D level in asthmatic children was significantly lower than that in non-asthmatic children.
- Eighty children between the ages of 6 and 14 participated in the study. [2]



## Second Study

- The study aimed to assess the differences and associations of vitamin D levels in Saudi adults. A total of 1070 adults aged 22 to 28 years.
- control females had a higher prevalence of vitamin D deficiency compared with control males. Furthermore, females in the asthma group had a higher prevalence of vitamin D deficiency than males in the asthma group.



- The overall incidence of vitamin D deficiency was 29.6% in controls and 35.6% in asthma group. The asthma group have a significantly lower serum vitamin D than the control group. [3]

## Vitamin D During Pregnancy

- A study found that children whose mothers who got the most vitamin D from their diet during pregnancy were least likely to develop asthma.
- A second study in the United Kingdom found that taking vitamin D during pregnancy reduced the risk of asthma at age 10. [1]

## Conclusion

- vitamin D plays a role in regulating the immune system.
- Bronchial Asthma is a common chronic inflammatory disorder of the airways in childhood.
- There is a direct and a significant relationship between vitamin D levels and bronchial asthma.
- measuring serum levels of vitamin D could be considered in the routine assessment of patient with bronchial asthma.

## References

- 1) Al-Daghri, N., Al-Attas, O., Yakout, S., Alnaami, A., Wani, K. and Alokail, M. (2018). The association of serum 25-OH vitamin D with asthma in Saudi adults. *Medicine*, 97(36), p.e12286.
- 2) Vitamin D deficiency linked to higher risk of asthma in children: Korean study. <https://www.nutraingredients-asia.com/Article/2017/05/18/Vitamin-D-deficiency-linked-to-higher-risk-of-asthma-in-children-Korean-study>. Published 2019. Accessed April 4, 2019.
- 3) Allan K, Craig L, McNeill G et al. Maternal D intakes during pregnancy are associated with childhood asthma at 10 years of age. *Proceedings of the Nutrition Society*. 2011.