

Authors E. Laird et al comment on response to their article entitled:
“Vitamin D and Inflammation - Potential Implications for Severity of Covid-19”

By E. Laird et al - Ir Med J; Vol 113; No. 5; P81

Response Letter: I. Zapata - Ir Med J; Vol 113; No. 6; P113

E. Laird¹, J. Rhodes², R.A. Kenny¹

1. The Irish Longitudinal Study on Ageing, School of Medicine, Trinity College Dublin, Ireland.
2. Institute of Translational Medicine, University of Liverpool.

Dear Editor,

We thank Dr Zapata for his interest in our paper¹.

We reassure the readers that our paper did go through a peer-review process and we utilised the most accurate data available at the time of submission. In relation to the other comments by Dr Zapata, we assert that Spearman’s correlation coefficient can be used for looking at the association between two continuous variables. Moreover, the P-values derived from his regression (ANOVA) and our analysis do not contradict each other. Different models, making different assumptions will usually lead to different P-values. Using linear regression in this case makes assumptions about linearity and normality which may not be satisfied. The relationship between historic vitamin D concentrations across populations and mortality may well change as we go into summer.

Vitamin D deficiency, like COVID-19 mortality, is associated with latitude, ethnicity, obesity, diabetes, hypertension and household wealth². These are just associations but, taken with the considerable experimental evidence showing the impact of vitamin D on cytokine response to pathogens, they make a causative biological link plausible. In our paper we have detailed the known caveats of analyzing multi-country data where there are different testing rates, different recording of infection and mortality and other variables which we could not control for. Papers such as this help build the observational evidence base which is needed to proceed further exploration of this important topic particularly given the current circumstances.

Signatories:

Dr Eamon Laird

Professor Jonathan Rhodes

Professor Rose Anne Kenny

References:

1. Laird, E., Rhodes, J. & Kenny, R. A. Vitamin D and Inflammation: Potential Implications for Severity of COVID-19. Ir Med J 113, 81 (2020).
2. Laird E, O’Halloran AM, Carey D, Healy M, O’Connor D, Moore P, Shannon T, Molloy AM, Kenny RA. The prevalence of vitamin D deficiency and the determinants of 25 (OH) D concentration in older Irish adults: Data from The Irish Longitudinal Study on Ageing (TILDA). The Journals of Gerontology: Series A. 2018 Mar 14;73(4):519-525.