

## Do Immune Organ Weights Indicate Immunomodulation of Polyunsaturated Fatty Acids?

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**Abstract :** The main immune organs in poultry are the thymus, spleen and bursa of Fabricius. During an immune response, mature lymphocytes and other immune cells interact with antigens in these tissues. Consequently, the mass of these organs can in some cases indicate immune status. The objective of the current study was to investigate the effect of feeding flaxseed on immune tissue weights. Cobb 500 broiler chickens were fed flaxseed at 15%, the control diet did not contain any flaxseed. Results showed that dietary supplementation with flaxseed did not affect the weights of the spleens of broiler chickens. However, it significantly lowered bursa weights ( $p < 0.01$ ), compared to the control diet. In addition, the bursae were thinner in appearance compared with bursae from chickens fed the control diets.

**Keywords :** bursa of fabricius, flaxseed, spleen, thymus

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