



## INTRODUCTION

Hepatitis B virus (HBV) immunization has helped decrease worldwide disease burden. HBsAb concentration <10mIU/mL is considered non-reactive. Celiac disease (CD) patients have been shown to have higher rates of non-reactive HBsAb concentrations despite adequate immunization. The cause for this remains unknown.

## OBJECTIVES

To evaluate the effect of gluten-free diet (GFD) on hepatitis B surface antibody (HBsAb) concentrations among previously immunized pediatric celiac disease (CD) subjects.

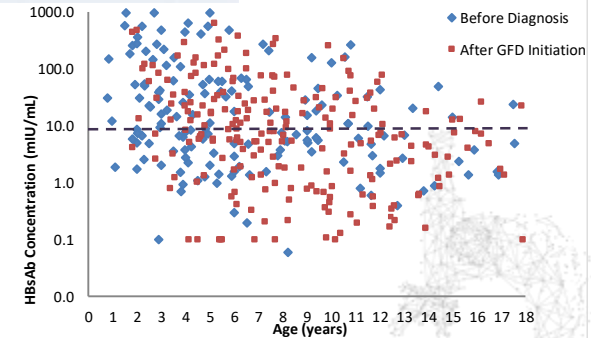
## METHOD

We retrospectively evaluated pediatric CD subjects in serological remission who were previously immunized for hepatitis B virus as infants. The temporal relationship between HBsAb concentration, the amount of time on a GFD, and age were evaluated.

## RESULTS

We analysed 373 CD subjects in serological remission - 156 before and 217 after GFD initiation. Median age was 5.3y (IQR 3.1–9.2y) and 7.6y (IQR, 5.4–10.9y), respectively ( $p<0.001$ ). The median time of HBsAb measurement was 2m (IQR, 0–5.7m) before and 12.8m (IQR, 5.3–30.3m) after initiation of GFD. The HBsAb concentration was low in 79 (50.6%) and 121 (55.7%) subjects before and after GFD initiation, respectively ( $p=0.350$ ). Age was inversely associated with low HBsAb concentrations. Neither being on a GFD nor sex was associated with low HBsAb concentrations.

Characteristic	Before GFD initiation	Adherent to GFD	p value
Number	156	217	
Gender (F)	93 (59.6%)	135 (62.2%)	0.67
Age (y $\pm$ SD)	6.5 $\pm$ 4.1	8.4 $\pm$ 3.9	<0.001
Median time from GFD (m)	-0.4 (IQR -2.3 - 0)	16.2 (IQR 7-33)	
Non-reactive HBsAb (<10mIU/mL)	79 (50.6%)	121 (55.7%)	0.35
HBsAb level (mIU/mL $\pm$ SD)	82.6 $\pm$ 182.4	38.2 $\pm$ 85.7	0.002



## CONCLUSIONS

Adherence to a GFD does not affect HBsAb concentration in children with CD.  
Age is inversely associated with HBsAb concentration.