Changes in Biliary Secretory Immunoglobulins A in Mice Fed Whey Proteins

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A whey protein diet has been shown to enhance splenic immune response to sheep red blood cells (SBRC) in mice. This study was designed to investigate the influence of the type of dietary protein on the biliary secretory IgA. A/J mice were fed defined formula diets containing either 20% whey protein, or 20% casein. Another group was fed Purina mouse chow. After 3 weeks of dietary treatment the body weight of each mouse was recorded and the gall-bladder was removed and its whole content analyzed by ELISA to determine S-IgA secretion. Body weight curves were similar in all dietary groups; higher biliary levels of S-IgA appeared in the whey protein fed mice than in the casein (p less than 0.025) or purine (p less than 0.025) fed mice. Dietary protein type may have a direct influence on the immune response in the gastrointestinal tract, without affecting body weight.