

## Effect of a high dairy diet on serum antibody titers to heat shock protein 70 in overweight and obese children

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[View references \(7\)](#)

### Abstract

**Objective:** An immune response to heat shock proteins appears to be involved in atherogenesis. To date, there has been no report on the impact of dairy or calcium consumption on serum antibody titers to heat shock protein 70 (anti-HSP70). We have investigated whether an increase in dairy food consumption is capable of affecting serum antibody titers to heat shock protein 70 (anti-HSP70) level in children. **Methods:** Overweight and obese children (n=99, age: 12-14 y, body mass index: 27-30 kg/m<sup>2</sup>) were randomized to receive a calorie restricted diet providing a 500 kcal/d deficit from total energy expenditure and two (n=38), three (n=26) or four (n=35) servings of dairy products/day. Serum anti-HSP70 level in addition to the serum hs-CRP and lipid profile were measured at baseline and after 12 weeks.

**Findings:** Serum anti-HSP70 concentrations did not change significantly in any of the mentioned groups. Serum hs-CRP and lipid profile did not change significantly either, apart from a significant increase in HDL-cholesterol in the low-dairy group. **Conclusion:** An increased intake of dairy products does not lead to a significant change in serum anti-HSP70 level in overweight and obese children.

### Reaxys Database Information

### Author keywords

Anti-HSP70; Body Mass Index; Calcium; Dairy; Obesity; Overweight

### Indexed Keywords

**EMTREE drug terms:** heat shock protein 70; high density lipoprotein cholesterol; protein antibody

**EMTREE medical terms:** adolescent; adult; antibody blood level; antibody titer; article; calcium intake; caloric restriction; child; clinical trial; controlled clinical trial; controlled study; dairy product; dietary intake; energy expenditure; human; lipid analysis; major clinical study; nutritional assessment; obesity; protein analysis; protein blood level; protein expression; randomized controlled trial; school child

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