

Antimutagenic effect of *Arthrospira (Spirulina) maxima* evaluated
by the dominant lethal test in mice.

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The aim of this study was to investigate the possible antimutagenic effect of *Spirulina* on male and female mice by the dominant lethal test using cyclophosphamide (CP) as mutagen. The animals of each sex were dosed perorally with *Spirulina* at doses of 0, 200, 400 or 800 mg/kg by 2 weeks prior to initiate the CP treatment. CP was injected i.p. daily for 5 days at 40 mg/kg. In the male-dominant lethal study each male was caged with 2 untreated females per week for 3 weeks. In the female-dominant lethal assay the above dosages and schedule treatments were used and treated females were caged for a week with untreated males. On day 13-15 after initiation of breeding all females were evaluated for incidence of pregnancy, living implants, pre- and post-implants loss. In both study phases pre- and post-implants loss induced by CD were inhibited by *Spirulina* at all doses. Semen examination of a separate group of mice showed that *Spirulina* improved the semen quality damage caused by CP. *Spirulina* alone was regarded as being devoid of any mutagenic demonstrable potential effect. Our results illustrate the protective role of *Spirulina* on the CP-induced genetic damage to germ cells. We concluded that *Spirulina* may be of potential clinical interest in cancer treatment.