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Spirulina

Revised: May 1, 2019.

Drug Levels and Effects

Summary of Use during Lactation

Spirulina (Aphanizomenon sp., Spirulina sp., and others) is a fresh water blue-green algae that contains various nutrients such as protein, B vitamins, vitamin E, chlorophyll, beta-carotene, and iron. Spirulina has no specific lactation-related uses. No data exist on the excretion of any components of spirulina into breastmilk or on the safety and efficacy of spirulina in nursing mothers or infants. Spirulina is generally well tolerated when grown under controlled conditions. Minor adverse effects include diarrhea, bloating, upset stomach, flatulence, edema, headache, muscle pain, facial flushing, and sweating. Products that are grown in uncontrolled conditions can contain heavy metals and other contaminants. Some products can be contaminated with the blue-green algae species Microcystis aeruginosa, which produces the hepatotoxins called microcystins. Breastmilk discoloration, green in one case, has been reported.[1][2]

Dietary supplements do not require extensive pre-marketing approval from the U.S. Food and Drug Administration. Manufacturers are responsible to ensure the safety, but do not need to *prove* the safety and effectiveness of dietary supplements before they are marketed. Dietary supplements may contain multiple ingredients, and differences are often found between labeled and actual ingredients or their amounts. A manufacturer may contract with an independent organization to verify the quality of a product or its ingredients, but that does *not* certify the safety or effectiveness of a product. Because of the above issues, clinical testing results on one product may not be applicable to other products. More detailed information about dietary supplements is available elsewhere on the LactMed Web site.

Drug Levels

Maternal Levels. Relevant published information was not found as of the revision date.

Infant Levels. Relevant published information was not found as of the revision date.

Effects in Breastfed Infants

Relevant published information was not found as of the revision date.

Effects on Lactation and Breastmilk

Three days before delivery, a mother replaced her normal iron supplement with blue-green algae complex (blue-green algae, chlorella, and spirulina; Ambrosia-SupHerb Ltd., Israel) 750 mg once daily. On the second day after delivery she expressed 30 mL of dark green milk. No abnormal milk cytology was found and a microbiologic culture was negative. After stopping the supplement, her milk returned to a normal color over the next 3 days. The change in color was probably caused by the algae supplement.[2]

References

1. Marles RJ, Barrett ML, Barnes J et al. United States pharmacopeia safety evaluation of spirulina. Crit Rev Food Sci Nutr. 2011;51:593-604. PubMed PMID: 21793723.
2. Naor N, Fridman E, Kouadio F et al. Green breast milk following ingestion of blue-green algae: A case report . Breastfeed Med. 2019;14:203-4. PubMed PMID: 30785777.

Substance Identification

Substance Name

Spirulina

Scientific Name

Arthrospira platensis Arthrospira maxima

Drug Class

Breast Feeding

Lactation

Complementary Therapies

Phytotherapy

Plants, Medicinal