observed in the present study is due to inositol depletion or to the avoidance of allergenic foods, the results suggest that some patients with bipolar disorder respond to dietary modifications.


High iodine intake associated with thyroiditis and hypothyroidism

Salt has been iodized in China since 1996, resulting in an increase in iodine intake throughout the country. In a 1999 study, researchers observed an increase in the prevalence of autoimmune thyroiditis, overt hypothyroidism, and subclinical hypothyroidism with increasing iodine intake in cohorts from three regions of China with different levels of iodine intake: "mildly deficient" (median urinary iodine excretion, 84 mcg/L), "more than adequate" (median, 243 mcg/L), and "excessive" (median, 651 mcg/L). Of the 3,761 subjects enrolled in the original study, 3,018 (80.2%) participated in a five-year, follow-up study. During the follow-up period, among subjects with mildly deficient iodine intake, more than adequate intake, and excessive intake, the cumulative incidence of autoimmune thyroiditis was 0.2%, 1.0%, and 1.3%, respectively; that of subclinical hypothyroidism, 0.2%, 2.6%, and 2.9%, respectively; and that of overt hypothyroidism, 0.2%, 0.5%, and 0.3%, respectively. The differences in incidence for mildly deficient vs. more than adequate or excessive intake were statistically significant for autoimmune thyroiditis (p = 0.01 to 0.03) and for subclinical hypothyroidism (p < 0.001). The authors concluded that more than adequate or excessive iodine intake may lead to autoimmune thyroiditis and hypothyroidism.

Comment: Iodine deficiency remains an important problem in some parts of the world, and iodine intake should be increased in people whose intake is inadequate. High-dose iodine therapy also has a role in clinical medicine, particularly in the treatment of fibrocystic breast disease. However, people taking large amounts of iodine should be monitored for the development of thyroid abnormalities.


N-acetylcysteine for polycystic ovary syndrome

One hundred-fifty overweight or obese infertile women (mean age, 29 years; range, 18-39 years) with polycystic ovary syndrome (PCOS) who had failed to ovulate after treatment with...
with clomiphene citrate were randomly assigned to receive, in double-blind fashion, 600 mg of N-acetylcysteine (NAC) twice a day or placebo along with clomiphene citrate (100 mg/day) for five days starting at day three of the cycle. Compared with placebo, NAC significantly increased both the ovulation rate (49.3% vs. 1.3%; p < 0.0001) and the pregnancy rate (21.3% vs. 0%; p = 0.00006). No cases of ovarian hyperstimulation syndrome were reported in the NAC group. Two miscarriages occurred.

Comment: Clomiphene citrate is frequently used to induce ovulation in women with PCOS. Approximately 70% of women treated with this drug experience a return of menstruation and ovulation, and 30% become pregnant within three months of treatment. The results of the present study suggest that the combination of NAC and clomiphene citrate is beneficial for some women with PCOS who have failed to respond to clomiphene citrate alone. While the mechanism of action of NAC is not known, it may work by improving the insulin resistance that is frequently associated with PCOS.


Flavonoids for menorrhagia

Thirty-six women (mean age, 33.3 years; range, 20-45 years) with a history of idiopathic menorrhagia (excessive menstrual bleeding) for a mean duration of 11.7 months received 1,000 mg/day of Daflon (containing 90% diosmin and ten percent hesperidin) beginning five days prior to the expected onset of menstruation and continuing until the end of bleeding for three cycles. In 70% of the patients, the total amount of bleeding decreased by 50%, and the duration of bleeding decreased by one-third. There was a 50% improvement in associated dysmenorrhea in about 75% of cases.

Comment: Daflon is a commercial preparation that contains two flavonoids, diosmin and hesperidin. A number of different flavonoids have been shown to improve capillary integrity, which appears to be impaired in some women with idiopathic menorrhagia. Studies conducted a half-century ago found that supplementation with citrus flavonoids in doses of 20-40 mg/day, is very effective for lowering lipid levels.

Stomach acid interacts with thyroid hormone treatment

Two hundred forty-eight patients with multinodular goiter who were receiving treatment with thyroxine were studied. Fifty-three of the patients also had Helicobacter pylori-related gastritis, and 60 had atrophic gastritis (31 with evidence of H. pylori infection and 29 without such evidence). The daily requirement of thyroxine to maintain a TSH level (0.05-0.20 mU/L) was 22-34% higher in patients with H. pylori-related gastritis, atrophic gastritis, or both conditions than in patients without those conditions. In prospective studies, the development of H. pylori infection in 11 patients treated with thyroxine led to an increase in the TSH level (p = 0.002), an effect that was nearly reversed after eradication of H. pylori. In a similar way, omeprazole treatment, which reduces gastric acid secretion, was associated with an increase in the TSH level in all ten patients treated with thyroxine, an effect that was reversed by an increase in the thyroxine dose by 37%.

Comment: These findings suggest that gastric acid secretion is necessary for effective absorption of thyroxine. Patients who develop conditions that result in reduced acid secretion (such as H. pylori infection or atrophic gastritis) and patients who take antacids or acid-blocking drugs may require an increase in their thyroxine dose to maintain an euthyroid state. Conversely, an increase in gastric acidity (as would result from discontinuation of antacids or acid-blocking drugs, from treatment of a hypochlorhydric patient with hydrochloric acid, and possibly from the eradication of H. pylori) may require a decrease in their thyroxine dose. Patients being treated with thyroxine should be monitored more closely during periods in which their gastric acidity is expected to change.
