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Please copy and distribute to ALL physicians at your location.

**HEALTH ALERT**

**Increase in Giardia Cases Locally**

**Current Situation:**

There is an outbreak of giardiasis that may be related to eating at an as yet unidentified restaurant or restaurants in the Thousand Oaks area. Giardiasis is a diarrheal illness caused by the parasite *Giardia lamblia*. *Giardia* can be transmitted by food or be waterborne or pass from person-to-person by the fecal-oral route. While a specific restaurant has not been implicated, some of these cases have eaten together at several different restaurants in the area. A common source to this outbreak is being considered because more cases than usual are being seen in a short period of time in a localized area. Up to eight cases are currently being scrutinized. Ultimately, some common source other than a restaurant may prove to be at fault. Because there may be a common source to these cases of *Giardia* we are notifying providers to be on the lookout for patients that have more than the usual short-lived symptoms of an acute gastroenteritis (AGE).

The *Giardia* parasite lives in the intestines of infected people and animals and can form an infective “cyst” that is passed in the feces into the environment or to another person. The cyst is extremely resistant to environmental stressors including cold temperatures, and chemicals including chlorine.

**Recommendations:**

Order a *Giardia* stool test for those with the following characteristics:

- Have eaten in a Thousand Oaks area restaurant and are experiencing an AGE with a prolonged or unusual course OR
- Have diarrhea and/or at least two of the symptoms below:

**Symptoms**

Signs and symptoms of giardiasis can include any one or a combination of the following:

- Greasy stools
- Abdominal cramps
- Nausea
- Bloating
- Gas
- Fatigue
- Weight loss
- Dehydration
- Anorexia

## Duration

Generally, 2 to 6 weeks unless the illness becomes chronic, in which case it can last from months to years and may become difficult to treat

## Illness & Complications

- Giardiasis is self-limiting in most people. However, some (less than 4%) remain symptomatic for more than 2 weeks, possibly leading to a malabsorption syndrome and severe weight loss
- Severe dehydration due to loss of fluids is a major concern, especially in young children
- Malabsorption of vitamins, protein, and iron all are possible with chronic infections, and it has been suggested that, in children, this can result in stunted growth and development
- Chronicity of infection is correlated with an absence of secretory IgA in the intestinal lumen
- About 40% of those who are diagnosed with giardiasis develop disaccharide intolerance during infection which may last up to six months after resolution of infection
- Lactose intolerance is most frequently observed due to intestinal epithelial cell brush border damage by the *Giardia* trophozoites

## Diagnosis

*Giardia lamblia* is frequently diagnosed by visualizing the organism, either the trophozoite (actively reproducing form), or the cyst (the resting stage that is resistant to adverse environmental conditions) in stained preparations or unstained wet mounts of liquid stool, with the aid of a microscope. *Giardia* cysts are 10 to 20 µm in length and are easily distinguished from much smaller *Cryptosporidium* oocysts. Commercial direct fluorescence antibody kits are available to stain the organism with reported sensitivities and specificities reaching 100%. Organisms may be concentrated by sedimentation or flotation; however, these procedures reduce the number of recognizable organisms in the sample. Therefore, a single stool specimen is usually insufficient for diagnosis. Enzyme linked immunosorbent assays (ELISAs) that detect secretory products of the organism as well as cyst wall proteins, are also available. In addition, nonenzymatic immunoassays exist. When compared with microscopy, such tests have sensitivities and specificities ranging from 85% to 100%.

## Treatment

Metronidazole (Flagyl) is normally quite effective in terminating infections and is the first-line choice (once daily dose of 2 grams of metronidazole – children 15 mg/kg – for 3 days). Tinidazole (brand names: Tindamax and Fasigyn) is another effective drug against giardiasis, as it inhibits DNA synthesis. In some patients, it is better tolerated than is Flagyl because treatment (2 grams or in children 50-75 mg po) is given in a single dose. Chronic cases of giardiasis are frequently refractory to drug treatment. In some immune-deficient individuals, giardiasis may contribute to a shortening of the life span. Prophylactic treatment usually is not considered.

This bulletin is intended to improve the public health in our county by keeping physicians and nurses informed of noteworthy diagnoses, disease trends and other events of medical interest. Another goal of a public health department is to educate. We hope that you will use this information to increase your awareness. Please allow us to continue in our role of speaking to the press so that we may maximize the educational message to the benefit of all citizens of Ventura County.

## Communicable Disease Office

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