

# Epi Monthly Report

## Ciguatera in Miami-Dade County, January 2006—February 2008

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### OBJECTIVE

The purpose is to define patterns of ciguatera incidence in Miami-Dade County and to identify populations and areas at risk of contracting the disease in order to target future educational interventions.

### BACKGROUND

Ciguatera is a foodborne poisoning in humans caused by eating tropical reef-dwelling species of fish whose flesh is contaminated with a toxin known as ciguatoxin. This toxin is most notably present in the micro-algae *Gambierdiscus toxicus*. The disease is characterized by initial gastrointestinal symptoms, such as vomiting and diarrhea, followed by neurological symptoms such as paradoxical temperature sensations. Educational and environmental interventions aimed at preventing this disease are hampered by under-diagnosis, under-reporting of cases, insufficient knowledge of populations and areas at risk.

### METHODS

All cases of ciguatera reported in Merlin or in the Food, Water and

Vector-borne Surveillance System (FWVSS) from January 2006 to February 2008 were analyzed. A questionnaire was implemented to acquire information from each patient regarding incubation period, symptoms, date of onset, species of fish ingested and area where the fish was captured. Race/ethnicity and zip code of residence of patients were also obtained.

### RESULTS

Seventeen cases of ciguatera were reported in association with 7 outbreaks. While 16 patients consumed barracuda, the other ate tilapia. The median incubation period was 5 hours and 30 minutes (range 30 minutes - 9 hours), with an onset of gastrointestinal symptoms, followed by neurological disorders. The most common gastrointestinal problems were diarrhea (15 patients, 88 %), abdominal pain (13, 76 %), vomiting (12, 70 %), and nausea (4, 24 %). The most common neurological symptoms were paradoxical temperature sensations (13 patients, 76 %), paresthesia (12, 70 %), arthralgia (11, 64%), and numbness (11, 64%).



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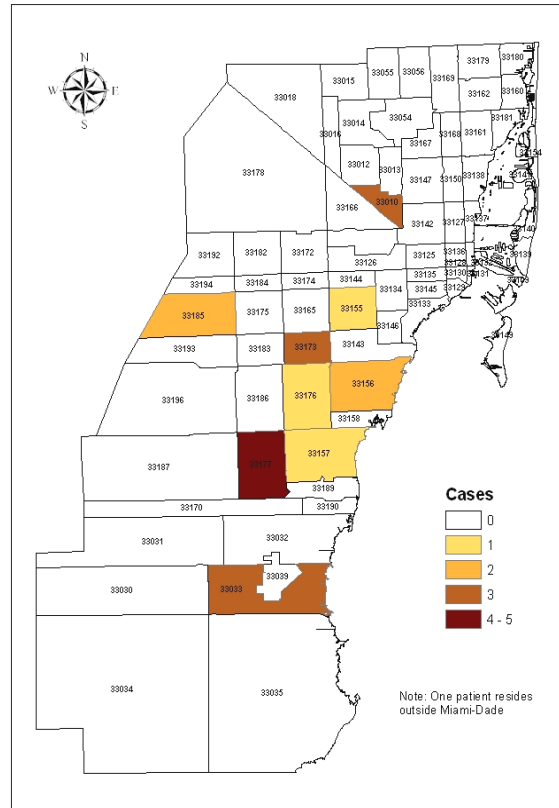
Patients resided in zip codes of Hialeah, Homestead, Cutler and Perrine (see Figure 1), and all were White Hispanics. 11 cases (65%) occurred from May to October, 6 (35%) from November through April. Fish were captured in a wide geographic area, including Marquesas Keys (30 miles west of Key West), Marathon, Islamorada and Tavernier in the Florida Keys, and in the maritime route Miami - Bimini Island (The Bahamas) (see Figure 2). Samples of fish implicated were obtained in 3 of the outbreaks (involving 7 patients) and all tested positive for ciguatera using the liquid chromatography/mass spectrometry method.

## CONCLUSIONS

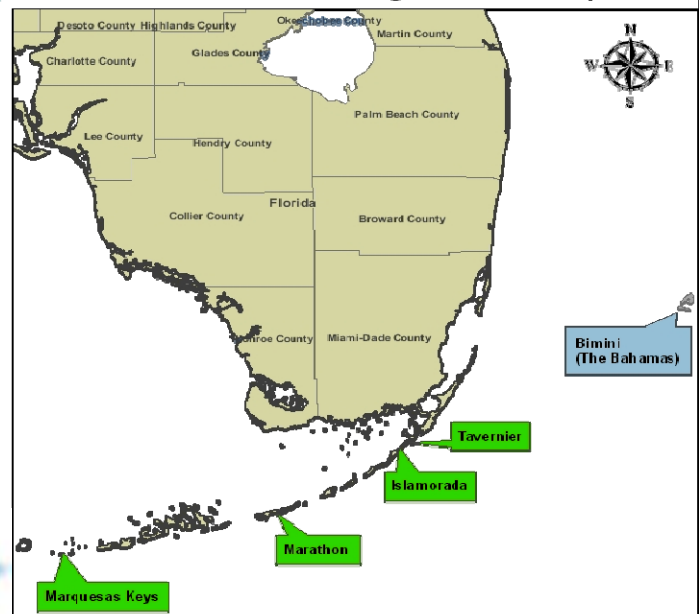
Areas with high concentrations of cases, such as Hialeah and Homestead should be targeted through educational interventions aimed at preventing the ingestion of barracuda or other species of reef dwelling fishes that are captured by individual fishermen, received as a gift, or purchased in the underground market. Fish monitoring should be regularly conducted in coral reefs of the Florida Keys to determine areas and species where ciguatera is prevalent. This data could be used to promulgate a temporary public health advisory warning to recreational water users in the areas where there are species with ciguatera. Since only 2-10% of ciguatera cases are actually diagnosed and reported, even in endemic areas like Miami-Dade (1), awareness should be enhanced among medical professionals about the disease including its symptoms, proper diagnosis, treatment, and reporting requirements.



**Figure 1. Ciguatera cases in Miami-Dade January 2006 - May 2008**



**Figure 2. Locations where fish with ciguatera were captured**



June is..

**Home Safety Month**

**Myasthenia Gravis Awareness Month**

**National Aphasia Awareness Month**

**National Scleroderma Awareness Month**

**National Scoliosis Awareness Month**

**Vision Research Month**

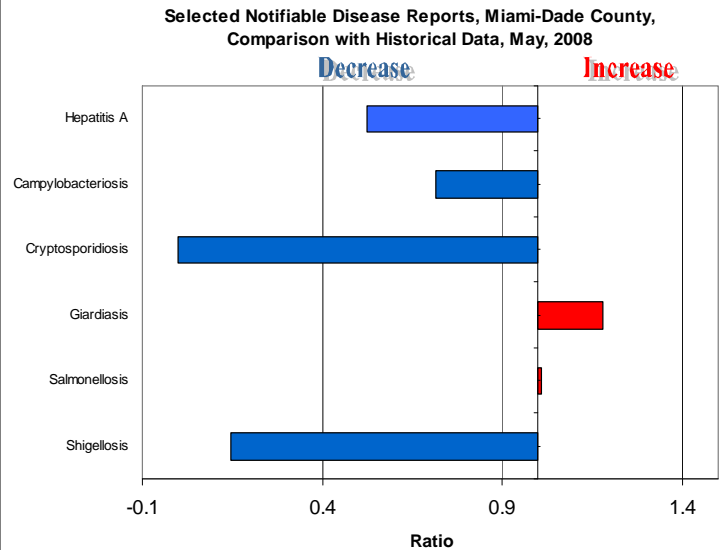
**1 National Cancer Survivors Day**

**9 - 15 National Men's Health Week**

**8 - 14 Sun Safety Week**

**20 National ASK Day**

*Selected Notifiable Disease Reports, May 2008*



**National Men's Health Week**  
Men's Health Week - June 9 - 15, 2008



The purpose of Men's Health Week is to heighten the awareness of preventable health problems and encourage early detection and treatment of disease among men and boys. This week gives health care providers, public policy makers, the media, and individuals an opportunity to encourage men and boys to seek regular medical advice and early treatment for disease and injury. Visit <http://www.menshealthmonth.org> and be acquainted with Health Men Facts. It's a knowledge to gain about yourself, your families and friends.

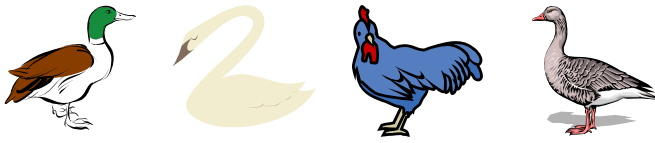
Happy Father's Day!!

**TO REPORT ANY DISEASE AND FOR INFORMATION CALL:  
Office of Epidemiology and Disease Control**

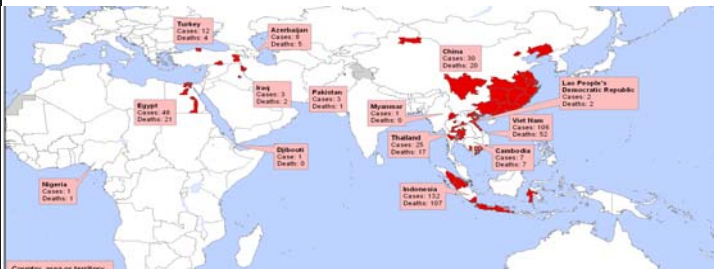
Childhood Lead Poisoning Prevention Program	305-470-6877
Hepatitis	305-470-5536
Other diseases and outbreaks	305-470-5660
HIV/AIDS Program	305-470-6999
STD Program	305-325-3242
Tuberculosis Program	305-324-2470
Special Immunization Program	786-845-0550

## AVIAN FLU WATCH

Unless indicated, information is current as of  
May 30, 2008



- Since 2003, there have been 385 human cases of avian influenza (H5N1) confirmed by the World Health Organization (WHO). Of these, 243 cases have died. This means there is a 63% (243/385) fatality rate.
- **15 Countries with confirmed human cases** include Bangladesh, Cambodia, China, Djibouti, Indonesia, Thailand, Vietnam, Iraq, Azerbaijan, Egypt, Turkey, Nigeria, Pakistan, Myanmar, and Lao People's Democratic Republic .



- **No human cases of avian influenza (H5N1) have been reported in the United States.**
  - **H5N1 has been confirmed in birds in several other countries since 2003.** H5N1 has been documented in birds in more than 30 countries in Europe & Eurasia, South Asia, Africa, East Asia and the Pacific, and the Near East. For a list of these countries, visit the World Organization for Animal Health Web Site at :  
[http://www.oie.int/downld/AVIAN%20INFLUENZA/A\\_AI-Asia.htm](http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm).
  - **No restrictions on travel to affected countries have been imposed.** Travelers should avoid contact with live poultry and monitor their health for ten days after returning from an affected country.
- SOURCES: WHO, OIE, CDC

## PARTICIPATE IN INFLUENZA SENTINEL PROVIDER SURVEILLANCE

The Miami-Dade County Health Department **NEEDS** Influenza Sentinel Providers!!

Sentinel providers are key to the success of the Florida Department of Health's Influenza Surveillance System. Data reported by sentinel providers gives a picture of the influenza virus and ILI activity in the U.S. and Florida which can be used to guide prevention and control activities, vaccine strain selection, and patient care.

- Providers of any specialty, in any type of practice, are eligible to be sentinel providers.
- Most providers report that it takes **less than 30 minutes a week** to compile and report data on the total number of patients seen and the number of patients seen with influenza-like illness.
- Sentinel providers can submit specimens from a subset of patients to the state laboratory for virus isolation **free of charge**.

For more information, please contact **Erin O'Connell** at 305-470-5660.

### About the Epi Monthly Report

The Epi Monthly Report is a publication of the Miami-Dade County Health Department, Office of Epidemiology and Disease Control, The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, contact Lizbeth Londoño at 305-470-6918.

**Monthly Report**  
**Selected Reportable Diseases/Conditions in Miami-Dade County,**  
**May 2008**

Diseases/Conditions	2008 this Month	2008 Year to Date	2007 Year to Date	2006 Year to Date	2005 Year to Date	2004 Year to Date
AIDS <sup>*Provisional</sup>	112	546	359	520	621	565
Campylobacteriosis	10	54	46	57	47	47
Ciguatera Poisoning	5	10	0	0	0	0
Cryptosporidiosis	0	7	13	6	12	4
Cyclosporiasis	0	4	0	0	0	0
Dengue Fever	0	1	1	1	0	3
<i>E. coli</i> , O157:H7	0	2	1	0	0	1
<i>E. coli</i> , Non-O157	0	0	0	0	0	0
Encephalitis (except WNV)	0	1	0	0	0	1
Encephalitis, West Nile Virus	0	0	0	0	0	0
Giardiasis, Acute	24	91	92	83	65	110
Hepatitis A	3	15	12	16	26	13
Hepatitis B	4	7	7	11	23	16
HIV <sup>*Provisional</sup>	143	692	576	445	633	701
Influenza A (H5)	0	0	0	0	0	0
Influenza Isolates	0	0	0	0	0	0
Influenza Novel Strain	0	0	0	0	0	0
Influenza, Pediatric Death	0	0	0	0	0	0
Lead Poisoning	8	56	69	65	63	104
Legionnaire's Disease	2	5	1	1	2	3
Leptospirosis	0	0	0	0	0	0
Lyme disease	1	1	0	0	0	1
Malaria	0	1	0	4	0	8
Measles	0	0	0	0	0	1
Meningitis (except aseptic)	0	3	5	9	3	2
Meningococcal Disease	1	4	3	7	3	8
Mumps	0	1	1	0	0	0
Pertussis	2	9	11	4	2	2
Rubella	1	1	0	0	0	0
Rubella, Congenital	0	0	0	0	0	0
Salmonellosis	46	144	121	179	150	118
Shigellosis	3	18	46	37	113	77
<i>Streptococcus pneumoniae</i> , Drug Resistant	14	55	41	48	6	31
Tetanus	0	0	0	0	0	0
Toxoplasmosis	0	0	1	0	0	1
Tuberculosis <sup>*Provisional</sup>	13	69	60	93	68	91
Typhoid Fever	0	0	0	2	2	1
<i>Vibrio cholera</i> Type O1	0	0	0	0	0	0
<i>Vibrio cholera</i> Non-O1	0	0	0	0	0	0
<i>Vibrio</i> , Other	0	0	0	0	0	0
West Nile Fever	0	0	0	0	0	0

\* Data on AIDS are provisional at the county level and are subject to edit checks by state and federal agencies.

\*\* Data on tuberculosis are provisional at the county level.