

Giardiasis

Giardiasis is a Class C Disease and must be reported to the state within five business days.

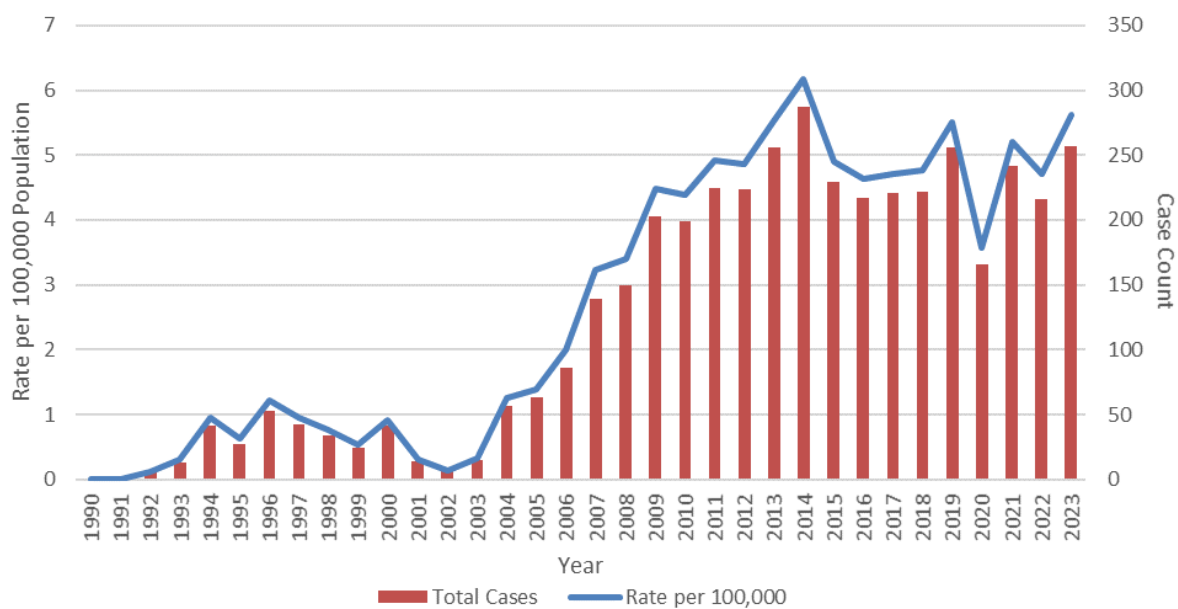
Giardia duodenalis, (*Giardia* for short) is a parasite that infects principally the upper small intestine. Symptoms commonly include diarrhea, gas, smelly and greasy poop, and stomach cramps. Onset of symptoms occur 1 to 2 weeks after exposure and can last up to 6 weeks. *Giardia* is the most commonly diagnosed intestinal parasite in U.S. public health laboratories. People can become infected by drinking contaminated water, through contaminated food or fecal-oral transmission via hands or surfaces. Person to person spread is most common in childcare settings and in group living environments. Diagnosis is typically made by the identification of cysts, (the resistant stage responsible for infection), or trophozoites in stool, duodenal fluid, or intestinal tissue.

Although humans are the principal reservoir of infection, *Giardia* can infect dogs, cats, beavers and other animals. Semi-aquatic animals can serve as zoonotic hosts and can transfer the organism to humans through contaminated water. *Giardia* are considered resistant to chlorine and the small size of the cysts, (8-12 microns), renders some filtration systems useless.

Incidence Rate and Cases of Giardia

Incidence rates of *Giardia* have steadily increased since 1990. This is likely due to improvements in diagnostic testing rather than actual disease burden. The drop in incidence observed in 2020 can largely be attributed to the COVID-19 pandemic, which led to decreased person to person transmission due to social distancing and closures of group settings such as childcare centers. In 2023, 257 cases of giardia were reported in Louisiana (Figure 1).

Figure 1: Giardia Incidence Rates and Cases - Louisiana, 1990-2023



These low incidence rates are influenced by the often asymptomatic nature of the disease and under-reporting. The highest incidence rates are seen in Evangeline, Jefferson Davis, Lafayette, Lafourche, and West Baton Rouge (Figure 2). Each of these parishes have a 10 year incidence rate of 10 cases per 100,000 population or higher (Table).

Figure 2: Giardia Rate per 100,000 Population by Parish – Louisiana, 2014 – 2023

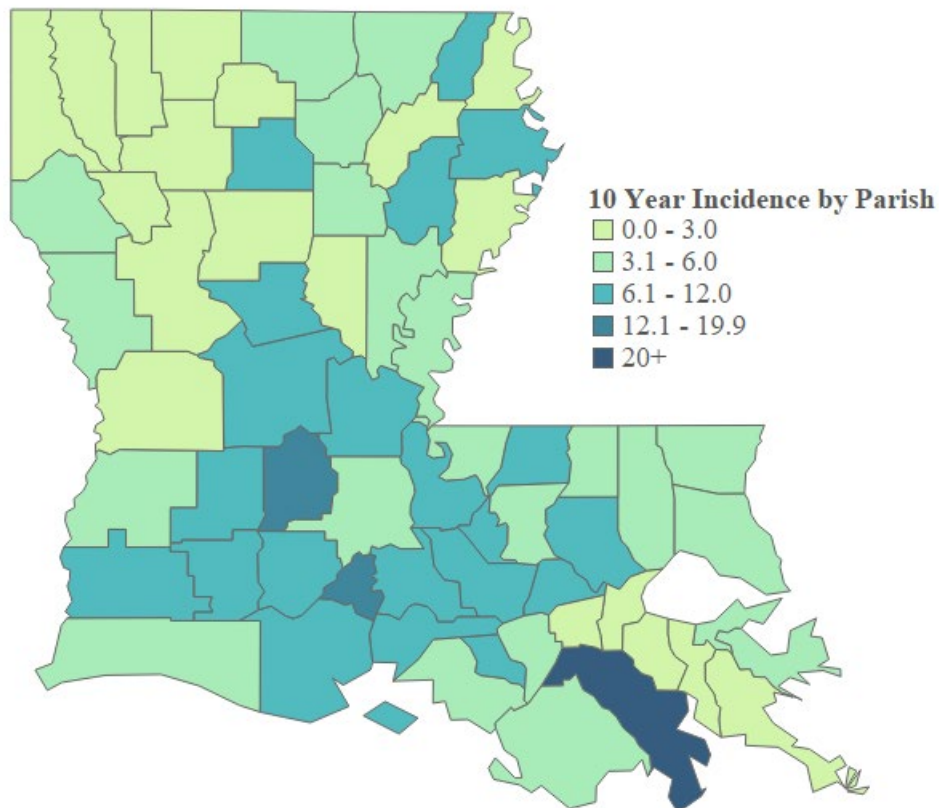
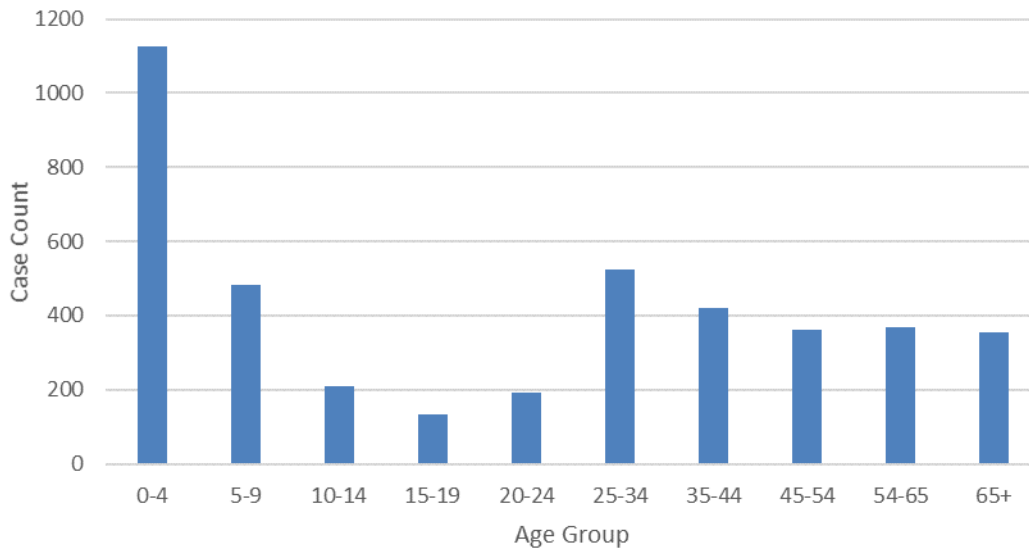


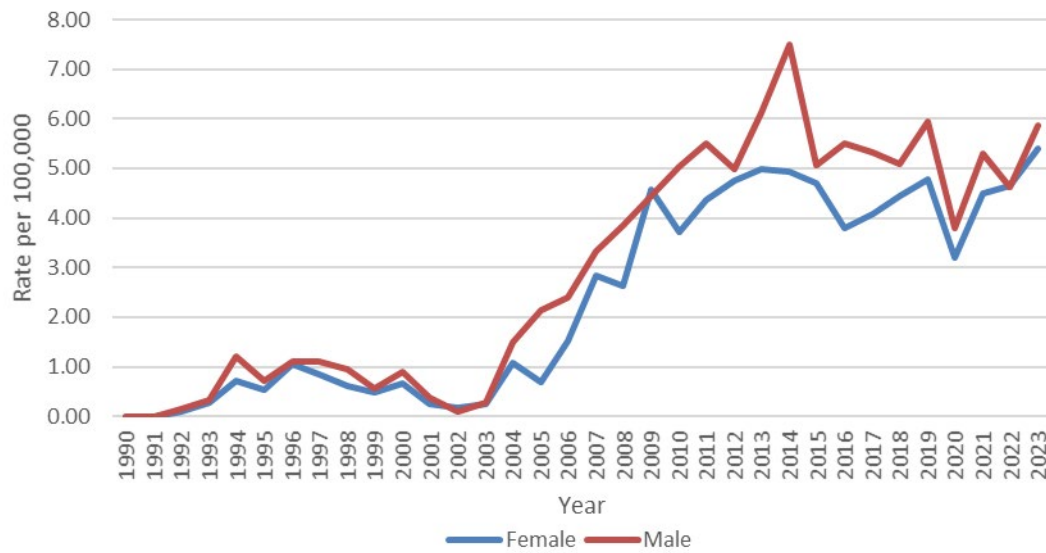
Table: Giardia Disease Rate per 100,000 Population by Parish – Louisiana, 2014-2023
Compared to Total Number of Cases- Louisiana, 1990-2023

Parish	1990-2023 Cases	2014-2023 10 Year Incidence	Parish	1990-2023 Cases	2014-2023 10 Year Incidence
ACADIA	101	10.94	MADISON	7	6.55
ALLEN	26	7.80	MOREHOUSE	19	4.73
ASCENSION	239	8.48	NATCHITOCHE	9	1.05
ASSUMPTION	15	3.21	ORLEANS	256	3.84
AVOUELLES	45	10.49	OUACHITA	107	4.14
BEAUREGARD	29	4.62	PLAQUEMINES	9	3.02
BIENVILLE	3	1.51	POINTE COUPEE	39	9.83
BOSSIER	54	2.90	RAPIDES	130	6.47
CADDO	130	2.28	RED RIVER	4	2.45
CALCASIEU	227	8.31	RICHLAND	12	2.48
CALDWELL	11	4.08	SABINE	16	4.74
CAMERON	3	4.86	ST. BERNARD	22	3.31
CATAHOULA	8	5.34	ST. CHARLES	24	2.87
CLAIBORNE	2	0.00	ST. HELENA	8	4.74
CONCORDIA	12	3.64	ST. JAMES	10	2.42
DESOTO	14	3.32	ST. LANDRY	79	6.04
EAST BATON ROUGE	553	5.23	ST. MARTIN	55	6.82
EAST CARROLL	1	1.40	ST. MARY	25	3.40
EAST FELICIANA	23	7.74	ST. TAMMANY	289	3.69
EVANGELINE	56	12.73	ST. JOHN	32	2.12
FRANKLIN	19	6.51	TANGIPAHOA	144	4.66
GRANT	26	8.99	TENSAS	1	2.30
IBERIA	82	6.78	TERREBONNE	71	3.45
IBERVILLE	35	6.64	UNION	11	3.67
JACKSON	11	7.10	VERMILION	80	8.68
JEFFERSON	224	3.05	VERNON	34	3.05
JEFFERSON DAVIS	49	11.68	WASHINGTON	64	5.88
LA SALLE	21	0.58	WEBSTER	16	2.63
LAFAYETTE	241	17.24	WEST BATON ROUGE	48	10.86
LAFOURCHE	69	21.52	WEST CARROLL	9	6.67
LINCOLN	23	2.73	WEST FELICIANA	20	3.25
LIVINGSTON	224	6.78	WINN	4	1.43

Nationally a bimodal age distribution in giardiasis rates is observed; with the highest rates occurring among newborns to children five years of age. In Louisiana, the highest incidence rates of giardiasis occur in children one to four years of age (Figure 3).

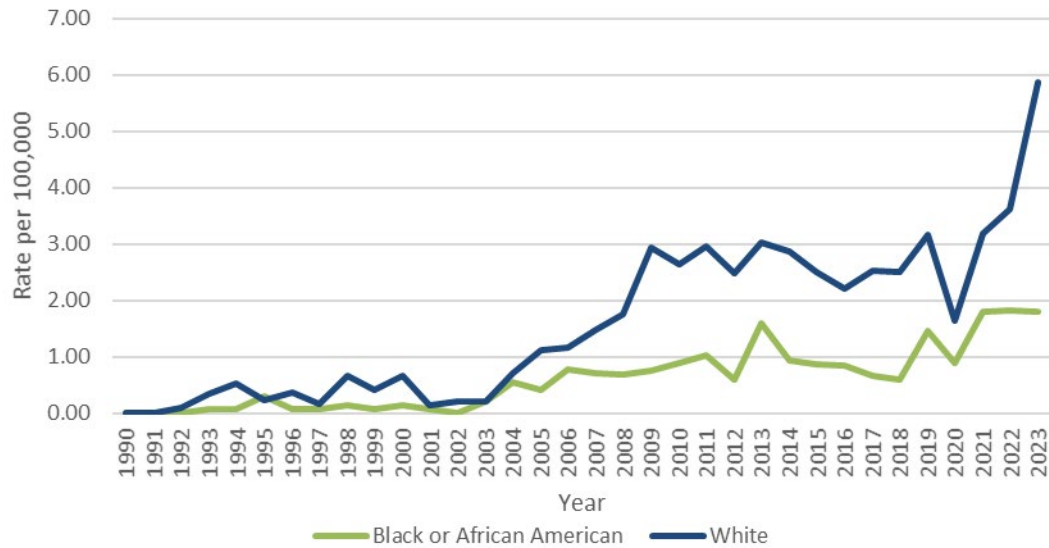
Figure 3: Giardia 10 Year Incidence Rates by Age Group - Louisiana, 2014-2023

Females and males have exhibited similar rate trends throughout the period (Figure4).

Figure 4: Giardia Incidence Rates by Gender - Louisiana, 1990-2023

Nationally, incidence rates are higher among White individuals compared to African-Americans or Black individuals; Louisiana shows the same racial distribution (Figure 5).

Figure 5: Giardia Incidence Rates by Race - Louisiana, 1990-2023



In the U.S., a seasonal peak in case reports coincides with the summer recreational water season and may reflect the heavy use by young children of communal swimming venues (e.g., lakes, rivers, swimming pools and water parks) (Figure 6).

Figure 6: Giardia Cases by Month - Louisiana, 1990-2023

