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KEYWORDS

• *Campylobacter* • *Campylobacter jejuni* • Gastroenteritis • Campylobacteriosis

KEY POINTS

- *Campylobacter* continues to be a major public health problem.
- Infection with *Campylobacter* causes a spectrum of diseases, including acute enteritis, extraintestinal infections, and postinfectious complications.
- The gastrointestinal tracts of domestic and wild birds and animals are the main reservoirs for *Campylobacter*.
- The most common species of *Campylobacter* associated with human illness are *Campylobacter jejuni* and *Campylobacter coli*, but other *Campylobacter* species also can cause human infections.
- Diagnostic testing for *Campylobacter* can be performed by a variety of methods, including culture, stool antigen assays, and molecular assays; these tests differ in their sensitivities and specificities, and the nonculture methods detect but do not differentiate between *C jejuni* and *C coli* and other *Campylobacter* species.

INTRODUCTION

Campylobacter is one of the most common causes of bacterial diarrheal illness in the United States and worldwide. Although there are many species within the genus *Campylobacter*, *Campylobacter jejuni* is the most commonly isolated from fecal specimens, with almost 90% of reported cases of *Campylobacter* infections caused by *C jejuni*. This review briefly discusses the taxonomy, clinical manifestations, epidemiology of *Campylobacter*, and then focuses on the laboratory detection of *Campylobacter* in more depth.

CAMPYLOBACTER TAXONOMY

The *Campylobacter* genus consists of a large and diverse group of bacteria currently comprising 26 species (<http://www.bacterio.cict.fr/c/campylobacter.html>). **Table 1** highlights the known sources and human disease associations with each species.

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Table 1
Currently described *Campylobacter* species

<i>Campylobacter</i> Species	Known Sources	Human Disease Associated
<i>C jejuni</i> subsp <i>jejuni</i>	Poultry, cattle, sheep, wild birds, pigs	Gastroenteritis, meningitis, septicemia, Guillain-Barre syndrome
<i>C jejuni</i> subsp <i>doylei</i>	Humans	Gastroenteritis, septicemia
<i>C coli</i>	Pigs, poultry, sheep, wild birds, cattle	Gastroenteritis, septicemia, meningitis
<i>C lari</i> subsp <i>lari</i>	Wild birds, poultry, dogs, cats	Gastroenteritis, septicemia
<i>C lari</i> subsp <i>concheus</i>	Shellfish	Gastroenteritis
<i>C fetus</i> subsp <i>fetus</i>	Cattle, sheep, reptiles	Gastroenteritis, septicemia
<i>C fetus</i> subsp <i>venerealis</i>	Cattle, sheep	Septicemia
<i>C fetus</i> subsp <i>testudium</i>	Reptiles	Gastroenteritis, cellulitis
<i>C upsaliensis</i>	Dogs, cats	Gastroenteritis, septicemia
<i>C helveticus</i>	Cats, dogs	Gastroenteritis
<i>C insulaenigrae</i>	Marine mammals	Gastroenteritis
<i>C peloridis</i>	Shellfish	Gastroenteritis
<i>C hyointestinalis</i> subsp <i>hyointestinalis</i>	Pigs, cattle	Gastroenteritis
<i>C hyointestinalis</i> subsp <i>lawsonii</i>	Pigs	None at present
<i>C lanienae</i>	Cattle, pigs	Gastroenteritis
<i>C sputorum</i> bv <i>sputorum</i>	Cattle, pigs	Abscesses, gastroenteritis
<i>C sputorum</i> bv <i>faecalis</i>	Sheep, bulls	None at present
<i>C sputorum</i> bv <i>paraureolyticus</i>	Cattle	Gastroenteritis
<i>C concisus</i>	Humans, domestic pets	Gastroenteritis, periodontal disease, abscesses
<i>C curvus</i>	Humans	Periodontal disease, gastroenteritis
<i>C rectus</i>	Humans	Periodontal disease, abscesses
<i>C showae</i>	Humans	Periodontal disease, abscesses
<i>C ureolyticus</i>	Humans	Gastroenteritis, septicemia, soft tissue abscesses
<i>C gracilis</i>	Humans	Periodontal disease, abscesses
<i>C hominis</i>	Humans	None at present
<i>C mucosalis</i>	Pigs	None at present
<i>C avium</i>	Poultry	None at present
<i>C canadensis</i>	Whooping cranes	None at present
<i>C cuniculorum</i>	Rabbits	None at present
<i>C subantarcticus</i>	Gray-headed albatrosses, black-browed albatrosses, gentoo penguins	None at present
<i>C volucris</i>	Black-headed gulls	None at present
<i>C corcagiensis</i>	Lion-tailed macaques	None at present
<i>C iguaniorum</i>	Reptiles	None at present

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