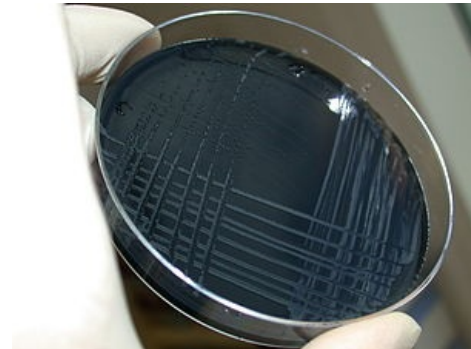


Campylobacter

Campylobacter spp.

Campylobacteraceae

Campylobacter



Colony *Campylobacter* Jejuni

Morphology	G-sticks
Relation to oxygen	microaerophilic
Cultivation	special cultivation soils
Antigens	membrane protein and lipopolysaccharide antigen, flagellar protein
Source	warm-blooded animals (poultry, pig)
Transmission	ingestion of contaminated food and water, contact with an infected animal, sexual intercourse
Occurrence	gastrointestinal tract of warm-blooded animals
Incubation time	1-7 days
Disease	campylobacter enteritis
Diagnostics	rectal swab and cultivation on selective soils, latex agglutination (presence of antigens in stool), serology
Therapy	rehydration, macrolides, tetracyclines, chloramphenicol, aminoglycosides (ATB only for more serious infections)
MeSH ID	D002167

Template:Infobox - bakterie The genus *Campylobacter* are Gram-negative , thermophilic bacteria adapted to the digestive tract of most warm-blooded animals. It belongs to the family Campylobacteraceae, the order Campylobacterales, the class Epsilon Proteobacteria, the strain Proteobacteria, the domain Bacteria.

The genus includes 18 species , 11 of which have been shown to cause the disease. Pathogenic species are transmissible to humans and cause campylobacter enteritis. The best known members of the genus are *C. jejuni*, *C. coli*, *C. lari*, *C. fetus* and *C. pylori* (now known as *Helicobacter pylori*).

Morphology

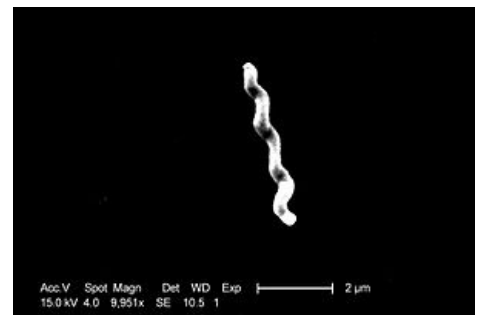
Bacteria of this genus are spiral or curved non-sporulating **rods**. If they get in adverse conditions, they can form coco-shaped forms. They have **polarly located flagella**, which ensure mobility.

Cultivation

Campylobacter needs special conditions for its growth. They grow in a **microaerophilic environment**, ie. in a low oxygen environment (usually 5% oxygen and 10% carbon dioxide is used for capture) . They require **special cultivation soils** and sufficient humidity, the optimal temperature is 42-43 ° C . In stool culture, a mixture of antibiotics is added to block the growth of other bacteria present (Skirrow's medium). **They form creeping colonies** within 2-7 days .

Due to these growth demands, they were not identified as human pathogens until the end of the 20th century.

Occurrence and resistance in the environment



Campylobacter Jejuni

In nature, microbes of the genus *Campylobacter* are very common, they occur **in the intestines of animals** (mainly pigs - *C. coli* , poultry - *C. jejuni* and *C. lari* and cattle - *C. fetus*) and in birds. They are **able to survive longer at refrigerator temperatures** (4 ° C) in water, milk, food and faeces; they remain infectious for about 3 weeks. They can be destroyed, for example, by pasteurization, acidic pH or chlorination. They are extremely sensitive to drying and most of the disinfectants used.

Disease

In animal hosts, campylobacters are usually asymptomatic, but can cause abortions in sheep, for example. In humans, pathogenic species cause campylobacteriosis (most commonly *C. jejuni*).

See Campylobacter Enteritis for more information .

Links

Related articles

- Campylobacter Enteritis

Reference

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2. ↑Jump up to:a b BENEŠ, Jiří, et al. *Infectious medicine*. 1st edition. Galén, 2009. 651 pp. 242-244. ISBN 978-80-7262-644-1 .

External links

- Centers for disease control and prevention. Campylobacter [online (<https://www.cdc.gov/nczved/divisions/dfbmd/diseases/campylobacter/>)]. [cit. 2014-06-02]]
- World health organization. Campylobacter [online (<http://www.who.int/en/news-room/fact-sheets/detail/campylobacter>),]. [cit. 2014-06-03]]

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- BENEŠ, Jiří. *Infectious medicine*. 1st edition edition. Galén, 2009. 651 pp. ISBN 978-80-7262-644-1 .
- JURAJDA, Vladimír. *Poultry and bird diseases: bacterial and fungal infections*. 1st edition. Brno: Veterinární a Farmaceutická univerzita, 2003. 185 pp. ISBN 80-7305-464-7 .
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Bacteria	

G +

coke	aerobic	<table><tr><td><i>Micrococcus</i></td><td><i>Micrococcus luteus</i></td></tr><tr><td><i>Rhodococcus</i></td><td><i>Rhodococcus equi</i></td></tr></table>	<i>Micrococcus</i>	<i>Micrococcus luteus</i>	<i>Rhodococcus</i>	<i>Rhodococcus equi</i>										
	<i>Micrococcus</i>	<i>Micrococcus luteus</i>														
	<i>Rhodococcus</i>	<i>Rhodococcus equi</i>														
	facultatively anaerobic	<table><tr><td><i>Enterococcus</i></td><td><i>Enterococcus durans</i> • <i>Enterococcus faecalis</i> • <i>Enterococcus faecium</i></td></tr><tr><td><i>Streptococcus</i></td><td><i>Streptococcus agalactiae</i> • <i>Streptococcus mutans</i> • <i>Streptococcus pneumoniae</i> • <i>Streptococcus pyogenes</i> • <i>Streptococcus suis</i> • <i>Oral streptococci</i></td></tr><tr><td><i>Staphylococcus</i></td><td><i>Staphylococcus aureus</i> • <i>Staphylococcus epidermidis</i> • <i>Staphylococcus intermedius</i> • <i>Staphylococcus saprophyticus</i></td></tr></table>	<i>Enterococcus</i>	<i>Enterococcus durans</i> • <i>Enterococcus faecalis</i> • <i>Enterococcus faecium</i>	<i>Streptococcus</i>	<i>Streptococcus agalactiae</i> • <i>Streptococcus mutans</i> • <i>Streptococcus pneumoniae</i> • <i>Streptococcus pyogenes</i> • <i>Streptococcus suis</i> • <i>Oral streptococci</i>	<i>Staphylococcus</i>	<i>Staphylococcus aureus</i> • <i>Staphylococcus epidermidis</i> • <i>Staphylococcus intermedius</i> • <i>Staphylococcus saprophyticus</i>								
<i>Enterococcus</i>	<i>Enterococcus durans</i> • <i>Enterococcus faecalis</i> • <i>Enterococcus faecium</i>															
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anaerobic	<table><tr><td><i>Peptococcus</i></td><td><i>Peptococcus niger</i></td></tr><tr><td><i>Peptostreptococcus</i></td><td><i>Peptostreptococcus anaerobius</i> • <i>Peptostreptococcus prevotii</i> • <i>Peptostreptococcus vaginalis</i></td></tr></table>	<i>Peptococcus</i>	<i>Peptococcus niger</i>	<i>Peptostreptococcus</i>	<i>Peptostreptococcus anaerobius</i> • <i>Peptostreptococcus prevotii</i> • <i>Peptostreptococcus vaginalis</i>											
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sticks	aerobic + facultative anaerobic	<table><tr><td><i>Arcanobacter</i></td><td><i>Arcanobacterium haemolyticum</i></td></tr><tr><td><i>Bacillus</i></td><td><i>Bacillus anthracis</i> • <i>Bacillus cereus</i></td></tr><tr><td><i>Corynebacterium</i></td><td><i>Corynebacterium diphtheriae</i> • <i>Corynebacterium jeikeium</i> • <i>Corynebacterium ulcerans</i> • <i>Corynebacterium urealyticum</i></td></tr><tr><td><i>Erysipelothrix</i></td><td><i>Erysipelothrix rhusiopathiae</i></td></tr><tr><td><i>Listeria</i></td><td><i>Listeria monocytogenes</i></td></tr><tr><td><i>Nocardia</i></td><td><i>Nocardia asteroides</i> • <i>Nocardia brasiliensis</i></td></tr><tr><td><i>Rhodococcus</i></td><td><i>Rhodococcus equi</i></td></tr></table>	<i>Arcanobacter</i>	<i>Arcanobacterium haemolyticum</i>	<i>Bacillus</i>	<i>Bacillus anthracis</i> • <i>Bacillus cereus</i>	<i>Corynebacterium</i>	<i>Corynebacterium diphtheriae</i> • <i>Corynebacterium jeikeium</i> • <i>Corynebacterium ulcerans</i> • <i>Corynebacterium urealyticum</i>	<i>Erysipelothrix</i>	<i>Erysipelothrix rhusiopathiae</i>	<i>Listeria</i>	<i>Listeria monocytogenes</i>	<i>Nocardia</i>	<i>Nocardia asteroides</i> • <i>Nocardia brasiliensis</i>	<i>Rhodococcus</i>	<i>Rhodococcus equi</i>
		<i>Arcanobacter</i>	<i>Arcanobacterium haemolyticum</i>													
		<i>Bacillus</i>	<i>Bacillus anthracis</i> • <i>Bacillus cereus</i>													
		<i>Corynebacterium</i>	<i>Corynebacterium diphtheriae</i> • <i>Corynebacterium jeikeium</i> • <i>Corynebacterium ulcerans</i> • <i>Corynebacterium urealyticum</i>													
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	anaerobic	<table><tr><td><i>Actinomyces</i></td><td><i>Actinomyces israeli</i> • <i>Actinomyces naeslundii</i></td></tr><tr><td><i>Bifidobacterium</i></td><td><i>Bifidobacterium dentium</i></td></tr><tr><td><i>Clostridium</i></td><td><i>Clostridium botulinum</i> • <i>Clostridium difficile</i> • <i>Clostridium novyi</i> • <i>Clostridium tetani</i> • <i>Clostridium perfringens</i> • <i>Clostridium septicum</i> • <i>Clostridium ulcerans</i></td></tr><tr><td><i>Lactobacillus</i></td><td><i>Lactobacillus acidophilus</i></td></tr><tr><td><i>Propionibacterium</i></td><td><i>Propionibacterium acnes</i> • <i>Propionibacterium propionicus</i></td></tr></table>	<i>Actinomyces</i>	<i>Actinomyces israeli</i> • <i>Actinomyces naeslundii</i>	<i>Bifidobacterium</i>	<i>Bifidobacterium dentium</i>	<i>Clostridium</i>	<i>Clostridium botulinum</i> • <i>Clostridium difficile</i> • <i>Clostridium novyi</i> • <i>Clostridium tetani</i> • <i>Clostridium perfringens</i> • <i>Clostridium septicum</i> • <i>Clostridium ulcerans</i>	<i>Lactobacillus</i>	<i>Lactobacillus acidophilus</i>	<i>Propionibacterium</i>	<i>Propionibacterium acnes</i> • <i>Propionibacterium propionicus</i>				
		<i>Actinomyces</i>	<i>Actinomyces israeli</i> • <i>Actinomyces naeslundii</i>													
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<i>Lactobacillus</i>		<i>Lactobacillus acidophilus</i>														
<i>Propionibacterium</i>		<i>Propionibacterium acnes</i> • <i>Propionibacterium propionicus</i>														

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coke	aerobic	<i>Acinetobacter</i>		<i>Acinetobacter calcoaceticus</i>	
		<i>Moraxella</i>		<i>Moraxella catarrhalis</i> • <i>Moraxella lacunata</i>	
		<i>Neisseria</i>		<i>Neisseria gonorrhoeae</i> • <i>Neisseria meningitidis</i> • Non-pathogenic species of <i>Neisseria</i>	
anaerobic					
	<i>Veillonella</i>	<i>Veillonella alcalescens</i> • <i>Veillonella parvula</i>			
cocobacilli	aerobic	<i>Rickettsia</i>			<i>Rickettsia prowazekii</i> • <i>Rickettsia rickettsii</i> • <i>Rickettsia typhi</i>
	aerobic	<i>Alcaligentes</i>		<i>Alkaligentes feacalis</i>	
		<i>Bartonella</i>		<i>Bartonella bacilliformis</i> • <i>Bartonella henselae</i> • <i>Bartonella quintana</i>	
		<i>Bordetella</i>		<i>Bordetella bronchiseptica</i> • <i>Bordetella parapertussis</i> • <i>Bordetella pertussis</i>	
		<i>Brucella</i>		<i>Brucella abortus</i> • <i>Brucella canis</i> • <i>Brucella melitensis</i> • <i>Brucella suis</i>	
		<i>Burkholderia</i>		<i>Burkholderia cepacia</i> • <i>Burkholderia mallei</i> • <i>Burkholderia pseudomallei</i>	
		<i>Francisella</i>		<i>Francisella tularensis</i>	
		<i>Legionella</i>		<i>Legionella pneumophila</i>	
		<i>Kingella</i>		<i>Kingella denitrificans</i> • <i>Kingella kingae</i> • <i>Kingella oralis</i>	
		<i>Pseudomonas</i>		<i>Pseudomonas aeruginosa</i> • <i>Pseudomonas fluorescens</i>	
		<i>Stenotrophomonas</i>		<i>Stenotrophomonas maltophilia</i>	

sticks	facultatively anaerobic	<i>Actinobacillus</i>	<i>Actinobacillus equuli</i> • <i>Actinobacillus lignieresii</i>
		<i>Aeromonas</i>	<i>Aeromonas caviae</i> • <i>Aeromonas hydrophila</i> • <i>Aeromonas sobria</i>
		<i>Afipia</i>	<i>Afipia felis</i>
		<i>Citrobacter</i>	<i>Citrobacter freundii</i> • <i>Citrobacter koseri</i>
		<i>Eikenella</i>	<i>Eikenella corrodens</i>
		<i>Enterobacter</i>	<i>Enterobacter aerogenes</i> • <i>Enterobacter cloacae</i>
		<i>Escherichia</i>	<i>Escherichia coli</i>
		<i>Haemophilus</i>	<i>Haemophilus ducreyi</i> • <i>Haemophilus haemolyticus</i> • <i>Haemophilus influenzae</i> • <i>Haemophilus parainfluenzae</i>
		<i>Klebsiella</i>	<i>Klebsiella granulomatis</i> • <i>Klebsiella oxytoca</i> • <i>Klebsiella pneumoniae</i>
		<i>Pasteurella</i>	<i>Pasteurella haemolytica</i> • <i>Pasteurella multocida</i> • <i>Pasteurella ureae</i>
<i>Plesiomonas</i>	<i>Plesiomonas shigelloides</i>		
<i>Proteus</i>	<i>Proteus mirabilis</i> • <i>Proteus vulgaris</i>		
<i>Salmonella</i>	<i>Salmonella</i> Enteritidis • <i>Salmonella</i> Typhi • <i>Salmonella</i> Paratyphi		
<i>Serratia</i>	<i>Serratia marcescens</i>		
<i>Shigella</i>	<i>Shigella boydii</i> • <i>Shigella dysenteriae</i> • <i>Shigella flexneri</i> • <i>Shigella sonnei</i>		
<i>Vibrio</i>	<i>Vibrio cholerae</i> • <i>Vibrio parahemolyticus</i>		
<i>Yersinia</i>	<i>Yersinia enterocolitica</i> • <i>Yersinia pestis</i> • <i>Yersinia pseudotuberculosis</i>		
microaerophilic	<i>Campylobacter</i>	<i>Campylobacter coli</i> • <i>Campylobacter fetus</i> • <i>Campylobacter jejuni</i>	
	<i>Helicobacter</i>	<i>Helicobacter pylori</i>	
anaerobic	<i>Bacteroides</i>	<i>Bacteroides fragilis</i> • <i>Bacteroides vulgatus</i>	
	<i>Fusobacterium</i>	<i>Fusobacterium necrophorum</i> • <i>Fusobacterium nucleatum</i> • <i>Fusobacterium stabile</i>	
	<i>Leptotricha</i>	<i>Leptotricha buccalis</i>	
	<i>Mobiluncus</i>	<i>Mobiluncus curtisii</i> • <i>Mobiluncus mulieris</i>	
<i>Prevotella</i>	<i>Prevotella melaninogenica</i>		
<i>Porphyromonas</i>	<i>Porphyromonas gingivalis</i>		

acid resistant	sticks	aerobic	<i>Mycobacterium</i>	<i>Atypical mycobacteria</i> • <i>Mycobacterium tuberculosis</i> • <i>Mycobacterium leprae</i>
non-stainable G +/-	spiral	strictly aerobic	<i>Leptospira</i>	<i>Leptospira biflexa</i> • <i>Leptospira interrogans</i> • <i>Leptospira parva</i>
		microaerophilic	<i>Borrelia</i>	<i>Borrelia burgdorferi</i> • <i>Borrelia hermsi</i> • <i>Borrelia recurrentis</i> • <i>Borrelia vincenti</i>
		strictly anaerobic	<i>Treponema</i>	<i>Non-pathogenic treponems</i> • <i>Treponema carateum</i> • <i>Treponema pallidum</i> • <i>Treponema phagedenis</i> • <i>Treponema pertenue</i>
Portal: Microbiology				