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Items 1 - 17 of 17

- 1: [J Microbiol Immunol Infect.](#) 2008 Jun;41(3):222-6.



**Clinical significance of *Blastocystis hominis*: experience from a medical center in northern Taiwan.**

[Kuo HY](#), [Chiang DH](#), [Wang CC](#), [Chen TL](#), [Fung CP](#), [Lin CP](#), [Cho WL](#), [Liu CY](#).

Section of Infectious Diseases, Department of Medicine, Taipei Veterans General Hospital, Taipei, Taiwan.

**BACKGROUND AND PURPOSE:** *Blastocystis hominis* is an intestinal protozoan. The pathogenic role of this organism in human beings is still controversial and has varied among reports from different geographic areas. The purpose of this study was to determine the clinical significance of *B. hominis* in northern Taiwan. **METHODS:** A total of 100 patients who had a positive *B. hominis* stool examination during the period April to December of 2001 were retrospectively identified from Taipei Veterans General Hospital. The demographic and clinical characteristics of these patients were reviewed from the medical records. **RESULTS:** All of the patients were adults. Fifty nine patients had more than one underlying diseases, including malignancies. Twenty one patients presented with fever and 10 patients had gastrointestinal symptoms, including diarrhea and/or abdominal pain. However, all of the patients had other conditions that might have contributed to the clinical presentation, and they improved without specific treatment for *B. hominis*. Furthermore, there were no significant differences in clinical symptoms and white blood cell count between patients with malignancy or diabetes mellitus and those without. Six patients had hypereosinophilia that could not be attributed to other causes. Among 34 patients who had a further stool examination within one year, *B. hominis* was undetectable in 31 patients (91.2%), despite their having no specific antiprotozoal treatment. **CONCLUSIONS:** The association of clinical symptoms and *B. hominis* could not be delineated from our study, even in immunocompromised patients. All of the patients improved without receiving any specific therapy. More studies from different areas are needed in order to delineate the clinical significance *B. hominis*.

PMID: 18629417 [PubMed - indexed for MEDLINE]

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- 2: [J Gastroenterol Hepatol](#). 2005 Sep;20(9):1390-4.



**No correlation between clinical symptoms and *Blastocystis hominis* in immunocompetent individuals.**

[Leder K](#), [Hellard ME](#), [Sinclair MI](#), [Fairley CK](#), [Wolfe R](#).

Department of Epidemiology and Preventive Medicine, Monash University, The Alfred Hospital, Melbourne, Victoria, Australia. karin.leder@med.monash.edu.au

Abstract Background and Aim: Previous reports regarding the clinical significance and pathogenicity of *Blastocystis hominis* have been contradictory. The aim of this study was to examine the association between *Blastocystis* and gastrointestinal symptoms in immunocompetent individuals. Methods: We monitored over 2800 healthy people for a period of 15 months, and took stool specimens during both asymptomatic periods and during periods of gastrointestinal symptoms. Results: After exclusion of individuals who had simultaneous identification of other fecal pathogens, we compared the proportions of asymptomatic versus symptomatic individuals positive for *Blastocystis* and found no significant difference ( $P = 0.5$ ). Symptom status did not correlate with parasite abundance. We found that some individuals were likely to have *Blastocystis* detected during both asymptomatic and symptomatic periods, possibly suggesting carriage of the organism. Conclusion: In conclusion, we found no correlation between clinical symptoms and the presence or absence of *Blastocystis* among this healthy cohort. Copyright 2005 Blackwell Publishing Asia Pty Ltd.

PMID: 16105126 [PubMed - indexed for MEDLINE]

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- 3: [Am J Trop Med Hyg](#). 2003 Aug;69(2):213-6.



**Clinical characteristics and endoscopic findings associated with *Blastocystis hominis* in healthy adults.**

[Chen TL](#), [Chan CC](#), [Chen HP](#), [Fung CP](#), [Lin CP](#), [Chan WL](#), [Liu CY](#).

Section of Infectious Diseases, Department of Medicine, Taipei Veterans General Hospital, National Yang-Ming University, Taipei, Taiwan, Republic of China. tlchen@vghtpe.gov.tw

Ninety-nine individuals with stools positive for *Blastocystis hominis* but negative for other parasites were identified from medical records of healthy adults who had received a physical examination at Taipei Veterans General Hospital from November 2000 to October 2002. The medical records of these 99 positive cases and 193 randomly selected controls, matched for age, sex, and date of examination, were retrospectively reviewed. The pathogenicity of *B. hominis* could not be demonstrated due to a lack of association with the development of gastrointestinal symptoms or pathologic findings on endoscopic examination. Multivariate analyses revealed that chronic hepatitis B infection was a predisposing condition to the acquisition of *B. hominis* (odds ratio = 2.848, 95% confidence interval = 1.299-6.242,  $P = 0.009$ ), and concentration of urate was significantly lower in *B. hominis*-positive individuals (mean  $\pm$  SD = 361.64  $\pm$  87.44 versus 392.57  $\pm$  93.38 micromol/L;  $P = 0.009$ ). Among the 64 individuals who underwent gastric biopsy, *Helicobacter pylori* was found more frequently in the individuals harboring *B. hominis* (19 of 26 versus 15 of 38;  $P = 0.017$ ).

PMID: 13677378 [PubMed - indexed for MEDLINE]

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4: [Clin Infect Dis.](#) 2000 May;30(5):770-8. Epub 2000 May 18.



Comment in:

- [Clin Infect Dis.](#) 2002 Dec 1;35(11):1452-3.

### **Enteropathogens in adult patients with diarrhea and healthy control subjects: a 1-year prospective study in a Swedish clinic for infectious diseases.**

[Svenungsson B](#), [Lagergren A](#), [Ekwall E](#), [Evengård B](#), [Hedlund KO](#), [Kärnell A](#), [Löfdahl S](#), [Svensson L](#), [Weintraub A](#).

Karolinska Institute, Huddinge University Hospital, Sweden. bo.svenungsson@medhs.ki.se

A 1-year prospective study was conducted to identify enteropathogens in adults with diarrhea ( $n=851$ ) and in healthy control subjects ( $n=203$ ) by use of conventional laboratory methods. Virulence factor genes for diarrheagenic *Escherichia coli* were detected by polymerase chain reaction. Enteropathogens were identified in 56% of patients and 16% of control subjects. The isolation rate was 65% for patients with symptoms for  $<1$  week and for travelers;  $>1$  pathogen was found in 11% of patients. The most frequent enteropathogens were *Campylobacter* (13% of patients), *Clostridium difficile* (13%), enterotoxigenic *Escherichia coli* (8%), *Salmonella* (7%), *Shigella* (4%), *Blastocystis hominis* (4%), calicivirus (3%), rotavirus (3%), enteroaggregative *E. coli* (2%), *Aeromonas* (2%), *Giardia intestinalis* (2%), *Cryptosporidium* (2%), and astrovirus (2%). Less frequently isolated ( $<$  or  $=1\%$  of patients) were verotoxigenic *E. coli*, enteropathogenic *E. coli*, enteroinvasive *E. coli*, *Entamoeba histolytica*/*Entamoeba dispar*,

microsporidia, and adenovirus. Fifty percent of the patients were hospitalized, and 43% needed intravenous fluids. The median duration of diarrhea was 14 days. Clinical features were not helpful for predicting the etiology of diarrhea.

Publication Types:

- [Research Support, Non-U.S. Gov't](#)

PMID: 10816147 [PubMed - indexed for MEDLINE]

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5: [Eur J Epidemiol.](#) 1999 Apr;15(4):389-93.



### **Prevalence and clinical relevance of *Blastocystis hominis* in diverse patient cohorts.**

[Cirioni O](#), [Giacometti A](#), [Drenaggi D](#), [Ancarani F](#), [Scalise G](#).

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The pathogenicity of *Blastocystis hominis* is extensively debated in the medical literature. Therefore, we did a prevalence study to investigate the association between the presence of several intestinal parasites and gastrointestinal symptoms in diverse patient cohorts. The study population consisted of 1216 adults, including immunocompromised patients, institutionalized psychiatric or elder subjects, immigrants from developing countries, travellers to developing tropical countries and controls. Several variables for each risk group were considered. Stools specimens, collected in triplicate, were processed by the same technicians. Clinical data about each subject were provided by standardized questionnaires. The presence of gastrointestinal symptoms were related to the presence of any parasite. In addition, on the basis of microbiological results, five subgroups of subjects were evaluated. The results showed a high prevalence of parasites in all the risk groups. Immunocompromised status, recent arrival from developing countries and the presence of behavioural aberrations were significantly related to presence of parasites. *B. hominis* was the parasite most frequently detected in each studied group. *B. hominis* showed a significant correlation with gastrointestinal symptoms only when detected in the group including subjects with a severe immunodepression. Immunodepression seems to be a factor of primary importance of the pathogenic role of *B. hominis*.

Publication Types:

- [Research Support, Non-U.S. Gov't](#)

PMID: 10414382 [PubMed - indexed for MEDLINE]

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- 6: [Am J Trop Med Hyg.](#) 1997 Apr;56(4):370-4.



### **Epidemiologic survey of *Blastocystis hominis* infection in Japan.**

[Horiki N](#), [Maruyama M](#), [Fujita Y](#), [Yonekura T](#), [Minato S](#), [Kaneda Y](#).

Department of Internal Medicine, St. Luke's International Hospital, Chuoku, Tokyo, Japan.

The incidence of *Blastocystis hominis* in a healthy population was determined by fecal examination of 6,422 Japanese and 54 resident non-Japanese who visited the St. Luke's International Hospital Health Screening Center for a routine medical check-up during a one-year period. Of the enrolled subjects, 30 Japanese (0.5%) and four non-Japanese (7.4%) had *B. hominis* in their stools. These individuals were asymptomatic except for one who reported flatus and one who reported mild abdominal discomfort. Statistical analysis indicated that the prevalence in the Japanese was lower than in the non-Japanese, and lower than the prevalence reported for other countries. Colonoscopic observations on seven *B. hominis*-positive individuals did not reveal pathogenic intestinal lesions. Several months after the first examination, 23 of the *B. hominis*-positive individuals, including three non-Japanese, were re-examined. Although they had not been treated with anti-*B. hominis* drugs, 10 individuals were now *B. hominis*-negative (by stool examination) and eight were passing fewer organisms. The remaining five individuals were still discharging large numbers of *B. hominis*. These *B. hominis*-positive individuals had no reported symptoms despite passing numerous organisms. Therefore, it seems that infection with *B. hominis* rarely gives rise to clinical symptoms. In no instance was invasion of host tissues by the organisms detected.

Publication Types:

- [Research Support, Non-U.S. Gov't](#)

PMID: 9158042 [PubMed - indexed for MEDLINE]

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- 7: [Presse Med.](#) 1995 Nov 25;24(36):1684-8.

### **[*Blastocystis hominis*: a common commensal in the colon. Study of prevalence in different populations of Paris]**

[Article in French]

[Junod C](#).

Laboratoire de Parasitologie-Coprologie, Paris.

**OBJECTIVES:** To compare the prevalence of *Blastocystis hominis* in different population categories in Paris, including immunodepressed subjects. **METHODS:** Stool examinations were performed for 7,677 patients to determine the prevalence of *Blastocystis hominis*. **RESULTS:** Prevalence varied according to the population group: subjects free of any digestive tract disorders 17.4%; adults with digestive tract disorders 19.8% (this level was independent of digestive tract motility and of ethnic origin); children 13.8% ( $p < 0.01$ ). In HIV-positive patients, the prevalence in immunocompetent patients was 19.6% compared with 15 to 16% in patients with AIDS (difference non significant). *Blastocystis hominis* was shown to be non-contagious in children and was not found to be sexually transmitted in homosexual men. **CONCLUSION:** Generally, *Blastocystis hominis* infection resolves spontaneously before any manifestation of the protozoa. This common parasite is a commensal germ of the intestinal tract, even in subjects free of gastro-intestinal manifestations, and does not usually require prescription of an antibiotic. In exceptional cases with rapid proliferation, treatment can be proposed with nitroimidazol, particularly for certain strains with an abnormal variability.

Publication Types:

- [Comparative Study](#)
- [English Abstract](#)

PMID: 8545396 [PubMed - indexed for MEDLINE]

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■ **8:** [Clin Infect Dis.](#) 1995 Jul;21(1):97-101.

Comment in:

- [Clin Infect Dis.](#) 1995 Jul;21(1):102-3.
- [Clin Infect Dis.](#) 1995 Jul;21(1):104-5.

### **Is *Blastocystis hominis* a cause of diarrhea in travelers? A prospective controlled study in Nepal.**

[Shlim DR](#), [Hoge CW](#), [Rajah R](#), [Rabold JG](#), [Echeverria P](#).

Canadian International Water and Energy Consultants Clinic, Kathmandu, Nepal.

Although the pathogenicity of *Blastocystis hominis* has been extensively debated in the medical literature, controlled studies of the association between *B. hominis* and diarrhea are lacking. We conducted a case-control study among expatriates and tourists in Kathmandu, Nepal, in which we compared the prevalence of the organism among patients with diarrhea to that among a control group without diarrhea. *B. hominis* was detected in 56 (30%) of 189 patients with

diarrhea, compared with 40 (36%) of 112 asymptomatic controls. Patients with diarrhea were significantly more likely to have  $\geq 10$  *B. hominis* organisms per high-power (400x) field than were controls. However, among the 25 patients with this concentration of organisms, other enteric pathogens were detected in 17 (68%). Only 8 (4%) of 189 patients with diarrhea had  $\geq 10$  *B. hominis* organisms per high-power field detected in the absence of other pathogens, compared with 5 (5%) of 112 asymptomatic controls. Thus, *B. hominis* in higher concentrations was not associated with diarrhea. There were no specific symptoms associated with *B. hominis* infection, and the presence of higher concentrations of the organism in stool was not associated with more-severe symptoms. Despite the high prevalence of the organism among travelers and expatriates in Nepal, the results of this study suggest that *B. hominis* does not cause diarrhea in this population.

PMID: 7578767 [PubMed - indexed for MEDLINE]

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9: [J Infect Dis.](#) 1993 Jul;168(1):242-4.

### **Blastocystis hominis: prevalence in asymptomatic versus symptomatic hosts.**

[Udkow MP](#), [Markell EK](#).

Department of Medicine, Kaiser Permanente Medical Center, Oakland, California 94611-5693.

*Blastocystis hominis*, other protozoans, and fecal leukocytes were tabulated on trichrome-stained fecal smears from 182 asymptomatic and 125 symptomatic control patients. No statistically significant difference in prevalence of *B. hominis* was found between the asymptomatic study group and the symptomatic control group; the clinical profile of subjects with *B. hominis* and those not infected was similar, and no correlation was found between the presence of *B. hominis* and that of fecal leukocytes. High concentrations of *B. hominis* were more frequent and more nonpathogenic protozoa were found in symptomatic patients than in those who were asymptomatic.

Publication Types:

- [Research Support, Non-U.S. Gov't](#)

PMID: 8515120 [PubMed - indexed for MEDLINE]

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10: [J Clin Gastroenterol.](#) 1993 Mar;16(2):109-12.

### **Blastocystis hominis in inflammatory bowel disease.**

[Nagler J](#), [Brown M](#), [Soave R](#).

Department of Medicine, Cornell University Medical College, New York.

We retrospectively examined the hospital course of 12 patients with exacerbated inflammatory bowel disease (IBD), who also had stool specimens positive for *Blastocystis hominis* to determine the effect of *B. hominis* on their disease. Bloody bowel movements were common with ulcerative colitis patients and watery diarrhea with Crohn's disease; other findings included abdominal pain, fever, nausea, and vomiting. All patients responded favorably to medical therapy. Three responded to treatment with corticosteroids alone, and one patient improved with bowel rest without medications. Five patients failed to improve on metronidazole; four of them responded to a subsequent course of corticosteroids, whereas the fifth patient became asymptomatic after erythromycin treatment for concomitant *Campylobacter jejuni*. Finally, three patients responded to treatment with metronidazole alone, which is known to eradicate *B. hominis* but may also have a beneficial effect on IBD. In no case did corticosteroid treatment worsen the condition. Our findings indicate that *B. hominis* is not a significant pathogen in IBD and treatment must be directed toward the underlying illness.

PMID: 8463612 [PubMed - indexed for MEDLINE]

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■ **11:** [J Infect Dis](#). 1990 Oct;162(4):987-90.

### **Blastocystis hominis: epidemiology and natural history.**

[Senay H](#), [MacPherson D](#).

Regional Parasitology Laboratory, St. Joseph's Hospital, McMaster University, Hamilton, Canada.

To study the demographic profile of *Blastocystis hominis* carriers from Hamilton, Canada, the Regional Parasitology Laboratory records for 1988 were reviewed, and a prospective study on carriers was conducted to clarify the natural history of the infection and ascertain the role of *B. hominis* as an intestinal pathogen. Retrospective analysis revealed that 8% of stool samples harbored *B. hominis*. The median age of the carriers was 37 years; 55% were female. Prospective analysis of 139 patients showed that most (76%) of 86 in whom *B. hominis* was the sole organism found (and for whom data were complete) continued to harbor the parasite in stool samples submitted a median of 57 days after the first sample. There was no correlation between the presence of *B. hominis* and symptoms. Thus, *B. hominis*, though commonly seen in stool samples submitted to this laboratory, is thought to be a commensal organism.

PMID: 2401797 [PubMed - indexed for MEDLINE]



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12: [J Clin Gastroenterol](#). 1990 Oct;12(5):525-32.

**Frequency of recovery of *Blastocystis hominis* in clinical practice.**

[Zuckerman MJ](#), [Ho H](#), [Hooper L](#), [Anderson B](#), [Polly SM](#).

Department of Medicine, Texas Tech University Health Sciences Center, El Paso 79905.

We examined the frequency of isolation of *Blastocystis hominis* from stools of patients seen in an indigent-care teaching hospital. Over a 2-year period, 2,744 stool specimens were examined prospectively. *B. hominis* was found in 262 stools (9.5% of all stool specimens and 53.5% of the positive specimens). Clinical data were obtained from 80 patients with stools positive for *B. hominis*. *B. hominis* was the only parasite isolated in 39 of 47 (83%) of the adults, compared with 17 of 33 (52%) of the children ( $p = 0.006$ ). All but 2 of 52 patients without concomitant parasitic infection or bacterial pathogens in stool had gastrointestinal symptoms (41 abdominal pain, 26 diarrhea, and 5 vomiting), but no association was seen with fever, peripheral leukocytosis, stool occult blood, fecal leukocytes, or endoscopic or radiologic evidence of colitis. Therefore, *B. hominis* was frequently recovered from stools examined in a hospital clinical parasitology laboratory. The clinical presentations of patients in our series did not suggest that *B. hominis* was invasive. Most patients with *B. hominis* probably do not require treatment since they will either have spontaneous resolution of symptoms or will be found to have an alternative explanation for their problem.

Publication Types:

- [Research Support, Non-U.S. Gov't](#)

PMID: 2229995 [PubMed - indexed for MEDLINE]

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13: [Schweiz Med Wochenschr](#). 1990 Sep 1;120(35):1253-6.

**[Etiology of diarrheal diseases in immunocompetent and HIV-positive patients]**

[Article in German]

[Steinmann E](#), [di Gallo A](#), [Rüttimann S](#), [Loosli J](#), [Dubach UC](#).

Medizinische Universitäts-Poliklinik, Departement für Innere Medizin, Kantonsspital Basel.

In 1986 and 1987 the stool samples of 206 patients of the Medical Outpatient Clinic Basel were examined prospectively for bacteria, protozoa and worms. Clinical data of the patients were

recorded by questionnaire. The patient group comprised 63 immunocompetent patients as well as 23 HIV-infected patients, all with symptoms of acute enteritis. The control group consisted of 120 healthy persons. Pathogenic organisms were found in the stools of 17.5% of the immunocompetent patients with enteritis. The most common germs were *Campylobacter jejuni*, *Giardia lamblia* and *Salmonella enteritidis*. *Isospora belli*, found in 2 cases (8.7%), was the only pathogen found in HIV-infected patients. The most frequent pathogen found in 7.5% of the control group was *Giardia lamblia*. The facultative pathogenic protozoon *Blastocystis hominis* was found in 16.7-19.0% of the 3 groups. There was no correlation between clinical symptoms and the results of stool examinations. Stool examinations in the immunocompetent patients corresponded to the known distribution of pathogenic germs in Switzerland. The homogeneous distribution of *Blastocystis hominis* in the 3 groups examined proves the high rate of infection. There is no evidence of a significant correlation between clinical symptoms of enteritis and infection with *Blastocystis hominis* in immunocompetent patients.

Publication Types:

- [English Abstract](#)

PMID: 2218447 [PubMed - indexed for MEDLINE]

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■ 14: [Am J Gastroenterol](#). 1989 Dec;84(12):1543-7.

### **Questionable clinical significance of *Blastocystis hominis* infection.**

[Sun T](#), [Katz S](#), [Tanenbaum B](#), [Schenone C](#).

Department of Laboratories, North Shore University Hospital, Manhasset, New York.

In the period from January 1986 to July 1988, *Blastocystis hominis* was found in moderate and numerous quantities in 103 (1.6%) of 6,262 stool specimens examined in our laboratory. There was no significant association of the detection of *B. hominis* with travel history or symptoms. Indeed, 20 patients (36%) with moderate to heavy infections had no gastrointestinal symptoms, and three symptomatic patients did not show clinical improvement after elimination of the parasite. Reexamination of stool samples revealed that eight untreated patients had spontaneous disappearance of *B. hominis*. We conclude that *B. hominis* probably is not responsible for clinical symptoms when detected, and additional investigations should be pursued for other etiologies of the patient's symptoms.

Publication Types:

- [Case Reports](#)

PMID: 2596457 [PubMed - indexed for MEDLINE]

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15: [Rev Infect Dis.](#) 1988 Sep-Oct;10(5):930-8.

Comment in:

- [Rev Infect Dis. 1989 Jul-Aug;11\(4\):661-3.](#)

### **Blastocystis hominis: an organism in search of a disease.**

[Miller RA](#), [Minschew BH](#).

Department of Medicine, University of Washington, Seattle.

Blastocystis hominis is a protozoan organism frequently found in the human intestinal tract. Eleven consecutive patients with symptoms of enteritis and having B. hominis as the sole enteropathogen were studied in an attempt to define the association of blastocystosis with clinical disease. B. hominis could not be implicated as the etiologic agent of enteritis in any of these patients. All eleven had alternative (and usually noninfectious) explanations for their intestinal symptoms. There was no correlation between resolution of symptoms and either antiprotozoal therapy or disappearance of B. hominis from the stools. All prior reports associating B. hominis with human disease have been reviewed and provide no convincing proof of a causal relation. B. hominis is rarely, if ever, a human pathogen, and treatment directed at the eradication of B. hominis is not indicated.

Publication Types:

- [Case Reports](#)
- [Review](#)

PMID: 3055191 [PubMed - indexed for MEDLINE]

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16: [Lancet.](#) 1987 Oct 31;2(8566):1021.

### **Lack of serum immune response to Blastocystis hominis.**

[Chen JL](#), [Vaudry WL](#), [Kowalewska K](#), [Wenman WM](#).

Publication Types:

- [Letter](#)

PMID: 2889924 [PubMed - indexed for MEDLINE]

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- 17: [Am J Trop Med Hyg.](#) 1986 Sep;35(5):1023-6.



### **Blastocystis hominis: pathogen or fellow traveler?**

[Markell EK](#), [Udkow MP](#).

Blastocystis hominis, an intestinal organism of uncertain taxonomic position, has long been considered nonpathogenic. Some recent studies suggest, however, that it may be associated with diarrhea and may respond to treatment with iodoquinol or metronidazole. To investigate this possibility, we identified 148 persons whose stools contained this organism. Of this number, 32 had at least 6 stool examinations performed. Twenty-seven of the 32 persons were later found to have greater than or equal to 1 recognized pathogens--Entamoeba histolytica, Giardia lamblia or Dientamoeba fragilis--and, after receiving appropriate therapy, became asymptomatic. The B hominis infection, however, was unaffected by therapy. Five persons with only B. hominis infection were treated with iodoquinol without effect; these persons fulfilled the medical criteria for irritable bowel syndrome. We believe that when an apparently symptomatic B. hominis infection responds to therapy, the improvement probably represents elimination of some other undetected organism causing the infection.

Publication Types:

- [Research Support, Non-U.S. Gov't](#)

PMID: 3766850 [PubMed - indexed for MEDLINE]

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