



FULL GI PANEL

1 of 2

Date Received : 05/06/2025 Date Tested: 05/06/2025 Sent Method : upload Source : Stool Service No : 99999

Patient: John Doe	Date of Birth: 01-01-51 Sex: Male	Health Practitioner: The Office PCI
3456 Center St.	Home Phone: 999-999-9999	Business Phone: 480-767-2522
San Diego, CA, 92019	Business/Cell Phone: 123-456-789	Facsimile: 480-767-5855

History:

Foreign Travel:
Symptoms:
Past Infection /Treatment:
Other infected in household:

COMPREHENSIVE STOOL ANALYSIS

Intestinal parasites: Normal value = 0 (not marked) Reference range: 0 (negative) - 4 (heavy presence) Specimens fixed and transported in SAF and concentrated using CONSED Reagent System (Alpha Tec, Vancouver, WA)

Protozoa:

<i>Entamoeba coli</i>	cysts	trophozoites
<i>E. histolytica / E. dispar</i>	cysts	trophozoites
<i>Entamoeba hartmanni</i>	cysts	trophozoites
<i>Iodamoeba butschili</i>	cysts	trophozoites
<i>Endolimax nana</i>	cysts	trophozoites
Giardia lamblia	1 cysts	trophozoites
<i>Chilomastix mesnili</i>	cysts	trophozoites
<i>Balantidium coli</i>	cysts	trophozoites
<i>Blastocystis hominis</i>		
<i>Dientamoeba fragilis</i>		
<i>Trichomonas hominis</i>		
<i>Cryptosporidium parvum</i>		
<i>Isospora belli</i>		
<i>Cyclospora cayentanensis</i>		

Trematoda (Flukes):

Schistosoma sp.
Fasciola/Fasciolopsis
Paragonimus westermani
Clonorchis/Heterophyes/Metagonimus

Fungi Spores and Common Yeasts:

1 Candida sp. 1 Candida (dividing)
1 Common Yeast Yeast (dividing)
Geotrichum sp.
Kloeckeri sp.
Hyphae

Comments (samples tested at the Nogales facility):

Cestoda (Tapeworms):

Taenia solium/Taenia saginata
Hymenolepis nana
Hymenolepis diminuta
Dipylidium caninum
Diphyllobothrium latum

Nematoda (Roundworms):

Larval Nematode
Ascaris lumbricoides
Ancylostoma/Necator
Strongyloides stercoralis
Trichostrongylus sp.
Trichuris trichiura
Enterobius vermicularis
Mansonella sp.

Other Observations:

Epithelial (squamous) cells
Epithelial (columnar) cells
2 Bacteria (normal bacilli)
1 Undigested Tissue
Charcot-Leyden crystals
WBC RBC
Fatty acid crystals
Starch granules
Pollen
Mucus

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SWAB CULTURE

Pathogenic Bacteria and Fungi: Normal value = 0 (not marked), 1 = light - 4 = heavy presence. 1= 30-100 CFU's (Colony Forming Units)/mL, 2= 100-200 CFU's/mL, 3= 200-300 CFU's/mL, 4= >300 CFU's/mL. The procedure for evaluation of intensity level is determined using the Serial Dilutions For Viable Plate Count method.

Common Bacterial Agents for urine and gastrointestinal infections

Salmonella sp.

Vibrio cholera

Yersinia sp.

+ 3 Escherichia coli

Citrobacter freundii

Campylobacter sp.

+ 3 Klebsiella sp.

Proteus vulgaris

Clostridium difficile

Shigella sp.

Comments :

Common Bacterial Agents for skin, urine, and mucoid surfaces

Enterobacter sp.

Enterococcus sp.

Serratia marcescens

Comments

Streptococcus sp.

Staphylococcus sp.

S. coagulase positive (S. aureus)

S. coagulase negative (S. epidermidis)

Pseudomonas aeruginosa

Candida sp.

Bacteroides sp.

Comments :

Sensitivity results range: 1 (most efficacious) - 4 (least efficacious)

Reported pathogens are sensitive to

Amikacin : 1

Cipro : 1

Fosfocil : 1

Chloramphenicol : 2

Gentamicin : 2

Netilmicin : 2

Cefepime : 3

Cefotaxime : 3

Levofloxacin : 3

Tetracycline : 4

Trimeoprim-Sulfamethoxazole : 4

Comments :

Reported pathogens are resistant to

Ampicillin

Cephalothin

Nitrofurantoin

Comments :

SUMMARY OF FINDINGS

GIARDIA LAMBLIA

Giardia lamblia is a microscopic parasitic flagellate that causes the diarrheal illness known as giardiasis. Giardiasis is a global disease. It infects nearly 2% of adults and 6% to 8% of children in developed countries worldwide. Nearly 33% of people in developing countries have had giardiasis. An infected person might shed 1-10 billion cysts daily. However, swallowing as few as 10 cysts might cause illness. Giardia cysts is protected by an outer shell that allows it to survive outside the body for long periods of time and makes it tolerant to chlorine disinfection. Like Cryptosporidium, the parasite can spread via recreational water, stream water, and municipal water from surface water treatment plants (20% of which carry infection) in the US and Canada. Giardia infection rates go up in late summer. Backpackers and wildlife enthusiasts are frequently exposed to Giardia from drinking stream water.

Transmission: It is found on surfaces or in soil, food, or water that has been contaminated with feces from infected humans or animals. Infection occurs by ingestion of mature cysts in contaminated food, water, or hands. Giardia may be passed person-to-person or even animal-to-person. Transmission can also occur through oral-anal sexual contact. The incubation period is 1 to 3 weeks after becoming infected.

Symptoms: Diarrhea, gas or flatulence, greasy stool that can float, stomach or abdominal cramps, upset stomach or nausea, dehydration, and weight loss. Some people are asymptomatic however, without proper treatment, can be carriers for years.

Treatment: Albendazole is recommended for allopathic treatment. The Freedom, Cleanse, Restore protocol is recommended for herbal treatment.

Prevention: Avoid drinking unboiled or unpurified tap water and avoid uncooked foods washed with unboiled or unpurified tap water. Avoid oral-anal sexual contact.

CANDIDA

Many species of Candida are harmless commensals of hosts including humans; however, when mucosal barriers are disrupted, the immune system is compromised, or the caprylic acid cycle is disrupted, they can invade and cause disease. Many species are found in gut flora including *C. albicans* in mammalian hosts, whereas others live in insect hosts.

Clinical significance: Candida is a fungus of worldwide distribution that multiplies proportional to the amount of natural or artificial carbs and sugars in the diet. Diet management is more important in treating Candida infections than the actual treatment itself. The most common species of Candida in the human intestine is *C. albicans*. When a Candida infection becomes systemic; it becomes much harder to treat. Candida also infects skin surfaces including oral and vaginal mucosa causing thrush and vaginitis. When host conditions are altered, Candida can cause disease in virtually any site where it becomes an indicator of immunosuppression. Among HIV infected individuals as well as those receiving prolonged antimicrobial therapy, thrush manifests as a serious and sometimes disseminated infection producing abscess, thrombophlebitis, endocarditis, or infections of the eyes or other organs (in over 90,000 people a year in the U.S). Women are more susceptible to genital fungal infections than men.

Treatment: Nystatin, Diflucan, Nizoral, or Sporonax are recommended for allopathic treatment. Freedom, Cleanse, Restore protocol is recommended for herbal treatment.

Prevention: Avoid high carb/sugar diets, minimize alcohol consumption, and avoid antibiotics when possible.

CANDIDA DIVIDING

Candida dividing: When Candida is found to be dividing in a fecal specimen it indicates pathology. The number of cells is dividing and the infection will grow until properly treated.

COMMON YEASTS

Non-dividing yeasts are usually considered non-pathogenic. Some species of yeast are opportunistic pathogens that can cause infection in people with compromised immune systems including HIV and AIDS patients.

Clinical significance: Cryptococcus sp. is a significant pathogen of immunocompromised people causing the disease termed cryptococcosis. This disease occurs in about 79% of AIDS patients in the USA, and a slightly smaller percentage (36%) in Western Europe. The cells of the yeast are surrounded by a rigid polysaccharide capsule, which helps to prevent them from being recognized and engulfed by white blood cells in the human body. Commensal yeasts are also found on the mucus membranes of humans and other warm-blooded animals. While they are usually considered non-pathogenic, sometimes these same strains can become pathogenic. The yeast cells sprout a hyphal outgrowth, which locally penetrates the mucosal membrane, causing irritation and shedding of tissues.

Treatment: Fluconazole is recommended for allopathic treatment. Freedom, Cleanse, Restore protocol is recommended for herbal treatment. Tanalbit, a zinc tannate compound, is also recommended as an herbal alternative.

Prevention: Depending on the species, yeast infections can colonize the respiratory system or intestinal tract becoming systemic. Avoidance of inhaling or ingesting objects/substances contaminated with yeast spores is the best prevention.

BACTERIA NORMAL BACILLI

Bacilli (normal bacteria) is a general term used to describe the morphology of any rod-shaped bacterium. While not all rod shaped bacteria are good, we are reporting on the beneficial rod-shaped bacteria that are in the gut. It is the key in maintaining a healthy immune system.

Clinical significance: At proper levels it helps create energy from the fermentation of undigested carbohydrates and absorption of fatty acids. It also helps prevent the growth of harmful bacteria and fungi such as Candida, regulates the development of the gut, and synthesizes vitamins, especially vitamin K and B. The best reading for this is a level of 3. That indicates a good supply of your pro-flora. A level of 2 is adequate. A level of 1 indicates a low reading, and a level of 4 indicates an overgrowth. Bacterial overgrowth is an indicator of a number of pathologies including IBS, CFS, allergies, arthritis, diabetes, fibromyalgia, and autoimmune diseases. Metabolic substances produced by bacterial overgrowth will compromise absorption causing nutrient deficiencies and food allergies. Overgrowth is usually age related. Older people produce less acid in the stomach and therefore are subject to bacterial overgrowth.

Treatment: If a patient scores a 1 or 2, they should either supplement with a probiotic and/or adjust diet to cut out sugars, starches, and vegetable oils and consume real vegetables, proteins, fats, and fermented foods and drinks. Avoid antibiotics whenever possible as they will deplete all bacteria and enhance the growth of Candida and related fungi that will compete with healthy intestinal flora for food and space. If the patient scores a 4 (overgrowth), institute a low carb diet and use enteric-coated peppermint oil to control unfriendly bacteria that impair friendly bacteria.

UNDIGESTED TISSUE

A wide variety of **undigested tissues** are seen in stained fecal preparations. Many of these can be readily confused with parasitic or related organisms. The most common forms of undigested tissue found are tomato skins which can be confused with tapeworms, undigested plant material, meat fibers, undigested potato cells, citrus fruit parts (which appear like worms), bean sprouts (which can be confused for nematodes) and morel mushroom spores resembling nematode eggs. For pictures please see

Clinical significance: When found in the stool it indicates that the client is not digesting their food properly or not chewing adequately. Digestive enzymes are recommended.

Note: The Summary of Findings is for practitioner informational purposes only. References to treatment suggestions refer only to common practices and are not to be construed as PCI recommendations for specific individuals. It is incumbent upon practitioners to decide on the treatment that is best for their patient.

SUMMARY OF FINDINGS

ESCHERICHIA COLI

Escherichia coli is a Gram-negative, rod-shaped bacterium that is commonly found in the lower intestine of warm-blooded animals. Most E. coli strains are harmless, producing vitamin K2, and by preventing the establishment of pathogenic bacteria within the intestine. They are used as bio-indicators to test environmental samples for fecal contamination. Different strains of E. coli are often host-specific, making it possible to determine the source of fecal contamination in environmental settings.

Transmission: This is a fecal-oral infection, directly or indirectly.

Symptoms and pathology: Over 700 antigenic serotypes of E. coli are recognized based on O, H, and K antigens. Most human beings have more than 1 strain of E. coli at the same time. Most strains of E. coli live in the intestine of humans and other mammals without causing any pathology. Pathogenic strains of E. coli, however, are responsible for 3 types of infections in humans: urinary tract infections, neonatal meningitis, and intestinal diseases. The latter includes (1) ETEC (Enterotoxigenic E. coli) causing diarrhea in infants and travelers, (2) EIEC (Enteroinvasive E. coli) causing dysentery-like diarrhea with fever, (3) EPEC (Enteropathogenic E. coli) causing watery, sometimes bloody, diarrhea especially in children, and (4) EHEC (Enterohemorrhagic E. coli) causing hemorrhagic diarrhea and/or food poisoning which may develop into hemolytic uremic syndrome (HUS) and includes the invasive O157:H7 strain making up 80% of the EHEC serotypes producing the verotoxin or Shiga toxin. Strain identification requires molecular techniques not readily available in most diagnostic laboratories. **For more information, see Amin, 2011. J. Bacteriol. & Parasitol. 2: 109-112.**

Treatment: Antibiotics have not proven useful for the acute diarrheal illness. In fact, antibiotics may increase the chances of developing HUS (up to 17-fold). This effect is thought to occur because the antibiotic damages the bacteria, causing them to release even more toxin. Most investigators suggest antibiotic use only if a patient is septic. For antibiotic recommendations see sensitivity results. For an herbal alternative use Freedom, Cleanse, Restore protocol.

Prevention: Avoid any sources of direct or indirect fecal contamination.

KLEBSIELLA

Klebsiella is a genus of ubiquitous non-motile, Gram-negative, oxidase-negative, rod-shaped bacteria with a prominent polysaccharide-based capsule causing pneumonia (**Klebsiella pneumonia**), bloodstream infections, wound or surgical site infections, and meningitis. In healthcare settings, Klebsiella infections often occur among sick patients who are receiving treatment for other conditions. Patients who use devices like ventilators or intravenous catheters, and those who are on long courses of certain antibiotics are most at risk for Klebsiella infections. Healthy people usually do not get Klebsiella infections.

Transmission: Klebsiella must enter the respiratory tract to cause pneumonia, or the blood to cause a bloodstream infection. In healthcare settings, Klebsiella bacteria can be spread from person-to-person or, less commonly, by contamination of the environment. The bacteria do not spread through the air.

Symptoms and pathology: Klebsiella organisms are frequent human pathogens that can cause pneumonia, urinary tract infections, septicemia, and soft tissue infections. Klebsiella species is implicated in the pathogenesis of ankylosing spondylitis and other spondyloarthropathies. Pathogenic varieties of Klebsiella are grouped in 2 antigenic groups: the O antigen with 9 varieties and the K antigen with over 80 varieties. Klebsiella is increasingly reported as a nosocomial infection second only to E. coli in urinary tract infections in women. Klebsiella pneumoniae is an opportunistic infection in older patients with weakened immune system which also causes nosocomial pneumonia, intra-abdominal infections and intestinal pathology. It is a resident of the intestinal track in about 40% of man and animals. Increasingly, Klebsiella bacteria have developed antimicrobial resistance especially to carbapenems. Klebsiella bacteria are normally found in the human intestines (where they do not cause disease). They are also found in human stool (feces). **For more information, see Amin, 2011. J. Bacteriol. & Parasitol. 2: 109-112.**

Treatment: For antibiotic recommendations see sensitivity results. For an herbal alternative use Freedom, Cleanse, Restore protocol.