



COMPLETE DIGESTIVE STOOL ANALYSIS - Level 5

MACROSCOPIC DESCRIPTION

	Result	Range	Markers
Stool Colour	Brown	Brown	Colour - Brown is the colour of normal stool. Other colours may indicate abnormal GIT conditions.
Stool Form	Unformed	Formed	Form -A formed stool is considered normal. Variations to this may indicate abnormal GIT conditions.
Mucous	ND	<+	Mucous - Mucous production may indicate the presence of an infection, inflammation or malignancy.
Blood (Macro)	ND	<+	Blood (Macro) - The presence of blood in the stool may indicate possible GIT ulcer, and must always be investigated immediately.



Macroscopy Comment

BROWN coloured stool is considered normal in appearance.

UNFORMED/LIQUID stools may indicate the presence of infection and/or inflammation. Consider dysbiosis, food sensitivity, high dose vitamin C and magnesium, infection, intestinal permeability, laxative use, malabsorption, maldigestion, stress. Other causes: bacterial, fungal, viral and other parasitic infections.

Treatment:

- Investigate and treat possible underlying cause.
- Assess other CDSA markers such as pH, pancreatic elastase 1 & microbiology markers."

MICROSCOPIC DESCRIPTION

	Result	Range	Markers
RBCs (Micro)	ND	<+	RBC(Micro) - The presence of RBCs in the stool may indicate the presence of an infection, inflammation or haemorrhage.
WBCs (Micro)	0	< 10	WBC(Micro) - The presence of WBCs in the stool may indicate the presence of an infection, inflammation or haemorrhage.
Food Remnants	+	<++	Food Remnants - The presence of food remnants may indicate maldigestion.
Fat Globules	ND	<+	Fat Globules -The presence of fat globules may indicate fat maldigestion.
Starch	ND	<+	Starch - The presence of starch grains may indicate carbohydrate maldigestion.

DIGESTIVE MARKERS

	Result	Range	Markers
Meat Fibres	ND	<+	Meat Fibres - The presence of meat fibres may indicate maldigestion from gastric hypoacidity or diminished pancreatic output.
Vegetable Fibres	+	<++	Vegetable Fibres - The presence of vegetable fibres may indicate maldigestion from gastric hypoacidity or diminished pancreatic output.

METABOLIC MARKERS

pH

6.3

6.3 - 7.7

Markers

pH - Imbalances in gut pH, will influence SCFA production and effect.

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JOE DOE

Date of Birth: 08-Jan-1985
Sex: M
Collected: 31/Oct/2019
Received: 31/Oct/2019
INTERNATIONAL PATIENT
1000
Lab id: **3640442** UR#:

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BENEFICIAL BACTERIA

	Result	Range
Bifidobacteria	++	2 - 4+
Lactobacilli	+	2 - 4+
Eschericia coli	++	2 - 4+
Enterococci	+	1 - 2+

COMMENTS:

Significant numbers of Lactobacilli, Bifidobacteria and E coli are normally present in the healthy gut: Lactobacilli and Bifidobacteria, in particular, are essential for gut health because they contribute to 1) the inhibition of gut pathogens and carcinogens. 2) the control of intestinal pH, 3) the reduction of cholesterol, 4) the synthesis of vitamins and disaccharidase enzymes.

OTHER BACTERIA

	Result	Range
Klebsiella	+	<+++
Pseudomonas	ND	<+++
Campylobacter	ND	<+
Citrobacter	ND	<+++
Yersinia	ND	<+
Other Bacteria.	+++	<+++

COMMENTS:

YEASTS

	Result	Range
Candida albicans	ND	<+
Other Yeasts	ND	<+

COMMENTS:

PARASITES

	Result	Range
Cryptosporidium	ND	<+
Giardia lamblia	+	<+
Entamoeba Histolytica	ND	<+
Blastocystis Hominis	+	<+
Other Parasites	ND	<+

COMMENTS:



MICROORGANISM SUMMARY

BENEFICIAL BACTERIA LEVELS LOW:

Consider possible causes and symptoms include antibiotics use, chlorinated water consumption, food allergy or sensitivity, IBS, IBD, inadequate dietary fiber or water, low intestinal sIgA, maldigestion, NSAIDs use, nutrient insufficiencies, parasite infection and slow transit time.

Ideally, Bifidobacteria should be recovered at levels of 4+, whilst Lactobacillus and E. coli should be 2+ or greater.

To Improve the levels of beneficial bacteria follow the four R's:

REMOVE

- Allergenic foods, Alcohol, NSAIDs, Pathogens, Sugar, refined carbohydrates, saturated fat, red meat, fermented foods

REPLACE

- Supplement hydrochloride, digestive enzymes or other digestive aids (see pancreatic elastase 1 results)

REINOCULATE

- Prebiotic and probiotic supplementation (see bacterial culture results)

REPAIR

- Use nutraceutical agents that will help heal the gastrointestinal lining. eg. L-glutamine, aloe vera, zinc, slippery elm.

Adequate levels of Bifidobacteria detected.

Blastocystis hominis PRESENT:

The role of B. hominis in terms of colonization and disease is still considered controversial. When this organism is present in the absence of any other parasites, enteric organisms or viruses, it may be considered the etiological agent of disease.

Symptoms can include: diarrhea, cramps, nausea, fever, vomiting and abdominal pain.

B. hominis has been associated with irritable bowel syndrome, infective arthritis and intestinal obstruction.

Treatment: Metronidazole (Flagyl) is considered the most effective drug (750 mg tid x 10 days). Iodoquinol (Yodoxin) is also an effective medication (650 mg tid x 20 days). Recommended therapy can also eliminate G. lamblia, E. histolytica and D. fragilis, all of which may be concomitant undetected pathogens and part of patient symptomatology.

Giardia lamblia cysts PRESENT:

Recommended treatment: Tinidazole single dose (2g)
Metronidazole



ANTIBIOTIC SENSITIVITIES and NATURALINHIBITORS

Klebsiella oxytoca	
Antibiotics	Susceptible
Penicillin.	YES
Ampicillin	NO
Erythromycin	NO
Tetracycline	YES
Sulphonamides	YES
Trimethoprim	YES
Ciprofloxacin	YES
Gentamycin.	NO
Ticarcillin	NO
Tobramycin	NO
Augmentin	NO
Cephalexin	YES

Inhibitors	Inhibition%
Berberine	40%
Oregano	60%
Plant Tannins	60%
Uva-Ursi	80%

LEGEND





PARASITOLOGY

Wet Prep/Concentrate

Giardia lamblia cysts: +

Blastocystis hominis: +

Cryptosporidium, EIA

POSITIVE

Giardia EIA

Negative

Entamoeba Histolytica EIA

Negative

Parasitology Comment

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Metronidazole



PATHOGEN SUMMARY



OTHER BACTERIA PRESENT:

Organism	Growth	Growth Level	Classification
alpha-haemolytic Streptococcus	2+	0 - 3+	Non-Pathogen
gamma-haemolytic Streptococcus	3+	0 - 3+	Non-Pathogen
Klebsiella oxytoca	1+	0 - 3+	Non-Pathogen

OTHER PARASITES PRESENT:

Organism	Growth	Growth Level	Classification
Blastocystis hominis	1+ * H	< 1+	PATHOGEN
Giardia lamblia	1+ * H	< 1+	PATHOGEN

KLEBSIELLA:

Sources:

Isolated from foods and environmental sources.

Klebsiella appears to thrive in individuals on a high starch diet.

Avoiding carbohydrates such as rice, potatoes, flour products and sugary foods reduces the amount of Klebsiella in the gut

Pathogenicity:

Part of the normal GI flora in small numbers, but can be an opportunistic pathogen.

Klebsiella is capable of translocating from the gut when in high numbers.

Certain strains of K. oxytoca have demonstrated cytotoxin production.

Symptoms:

K. pneumoniae and K. oxytoca have been associated with diarrhea in humans.

Cytotoxin-producing strains are associated with acute hemorrhagic enterocolitis.

Increased colonization of Klebsiella in the stool has been found in HLA-B27 + AS patients.

Treatment:

Currently, standard texts provide no specific antimicrobial guidelines for GI overgrowth of Klebsiella. Third generation cephalosporins and fluoroquinolones are the recommended antimicrobial agents for extra-intestinal sites.

BLASTOCYSTIS HOMINIS:

B. hominis has recently been reclassified as a protozoan, of which there are thought to be four separate serologic groups.

Sources:

This organism is transmitted via the fecal-oral route or from contaminated food or water. Prevention can be enhanced by improving personal hygiene and sanitary conditions.

Pathogenicity:

When this organism is present in the absence of any other parasites, enteric organisms or viruses, it may be considered the etiological agent of disease.

Symptoms:

Symptoms can include: diarrhea, cramps, nausea, fever, vomiting and abdominal pain. B. hominis has been associated with irritable bowel syndrome, infective arthritis and intestinal obstruction.

Treatment:

Currently, Metronidazole (Flagyl) is considered the most effective drug (750 mg tid x 10 days).

Iodoquinol (Yodoxin) is also an effective medication (650 mg tid x 20 days).

Recommended therapy can also eliminate G. lamblia, E. histolytica and D. fragilis, all of which may be



concomitant undetected pathogens and part of patient symptomology.