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Patient: Sample, Sally (1/27/64) **Provider: Jane Doe, MD**

Whole Body Health Test

Sample Collected	Sample Received	Sample Tested	Test Reported
02/22/2025	02/25/2025	02/27/2025	03/01/2025

Sample type: **Super Floss – Full Mouth**

Test performed by: L. Douglas
Test ID: 54927

Results:
The microbes detected in the submitted sample are indicated below by Present or Absent:

Metabolic, Cognitive, Respiratory, and Dermal Health	
Organism	**Result (Present/Absent)**
Fusobacterium nucleatum ss nucleatum	**Present**
Fusobacterium nucleatum ss polymorphum	**Present**
Fusobacterium nucleatum ss vincentii	Absent

Periodontal and Oral Health	
Organism	**Result (Present/Absent)**
Treponema denticola	Absent
Porphyromonas gingivalis	**Present**
Tannerella forsythia	Absent

Gut and Digestive Health	
Organism	**Result (Present/Absent)**
Helicobacter pylori	**Present**
Candida albicans	**Present**

Interpretation of Results Disclaimer: DNA Connexions is not a clinical diagnostic laboratory and cannot provide a diagnosis for disease and/or subsequent treatment. These results are from DNA PCR testing, and indicate the presence of disease-causing agents. A positive result indicates the presence of DNA from the highlighted organisms. A negative result only indicates the absence of detectable targeted organismal DNA in the submitted specimen. The information is supplied as a courtesy to health care providers to aide in an overall assessment. This information alone should not be used to diagnose and/or treat a health problem or disease. All reported results are intended for research purposes only and consultation with a qualified health care provider is required.

Fusobacterium nucleatum ss [(1)]:*

General Description

Gram-negative oral bacterium, indigenous to the human oral cavity, which plays a role in periodontal disease.

Symptoms of Infection

Research has emerged implicating *Fusobacterium nucleatum ss** with preterm births in humans. Fusobacterium nucleatum ss* has been isolated from the amniotic fluid, placenta, and chorioamnionic membranes of women delivering prematurely. Fusobacterium nucleatum ss* is rarely pathogenic in healthy adults.

Possible Treatment Options

Penicillin remains the treatment of choice in most cases, but the emergence of penicillin-resistant strains has complicated treatment. Cephalosporins (such as cefoxitin and cefotetan),
metronidazole, or clindamycin monotherapy is also effective.

**Fusobacterium nucleatum ss* refers ONLY to the three sub-species detected by this panel: *ss nucleatum, ss polymorphum, and ss vincentii*

Treponema denticola[(2)]:

General Description

A Gram-negative, obligate anaerobic, motile and highly proteolytic bacterium. *T. denticola* is associated with the incidence and severity of human periodontal disease.

Symptoms of Infection

T. denticola levels in the mouth are elevated in patients with periodontal diseases and the species is considered one of the main etiological agents of periodontitis. Often Treponema denticola is found in a periodontal infection. There is evidence that members of the *Treponema* genus invade tissue that has already been damaged by other bacterial species.

Possible Treatment Options

There is some evidence for antibiotic resistance, but the bacteria are not highly resistant. *T. denticola* can be treated with penicillin and other common antibiotics. As a spirochete *T. denticola* is good at evading treatment, so any regimen of antibiotics needs to be aggressive.

Porphyromonas gingivalis[(3)]:

General Description

P. gingivalis is a non-motile, Gram-negative, rod-shaped bacterium common in the human mouth. Some research implicates that *P. gingivalis* infections may be a factor in causing rheumatoid arthritis.

Symptoms of Infection

It is found in the oral cavity, upper gastrointestinal tract, respiratory tract, and in the colon. It is implicated in certain forms of periodontal disease. Collagen degradation that is observed in chronic periodontal disease results in part from the collagenase *P. gingivalis* releases during an infection. In the presence of high concentrations of antibiotics, *P. gingivalis* can take shelter inside human gingival fibroblasts. This allows it to survive unfavorable conditions.

Possible Treatment Options

Though it has mechanisms to escape antibiotics, *P. gingivalis* does not display strong antibiotic resistance. An aggressive antibiotic treatment with most antibiotics should prove successful against an infection.

Tannerella forsythia[4]:

General Description

T. forsythia is an anaerobic, gram-negative species of bacteria of the Cytophaga-Bacteroidetes family and is implicated in periodontal disease. *T. forsythia* is commonly located on the supragingival tissue and initiates periodontitis by colonizing the subgingival tissue.

Symptoms of Infection

T. forsythia causes periodontal infections and chronic inflammation of tooth-supporting tissues which can lead to tooth loss.

Possible Treatment Options

T. forsythia is susceptible to ampicillin, amoxicillin, and doxycycline.

Helicobacter pylori[5]:

General Description

H. pylori previously named Campylobacter pyloridis, is a Gram-negative, microaerophilic bacterium found in the stomach. The majority of individuals infected with the bacterium are asymptomatic and it has been postulated that it may play an important role in the natural stomach ecology.

Symptoms of Infection

H. pylori infections may lead to chronic gastritis, gastric ulcers, duodenal ulcers and possibly stomach cancer. Protein metabolism because of the reduction of HCl (parietal cells) and gastric acid secretions - associated with carcinomas and lymphomas can result.

Possible Treatment Options

Once H. pylori is detected in a person with a peptic ulcer, the normal procedure is to eradicate it and allow the ulcer to heal. The standard first-line therapy is a one-week "triple therapy" consisting of proton pump inhibitors such as omeprazole and the antibiotics clarithromycin and amoxicillin.

Candida Albicans[6]:

General Description

C. albicans is commensal and a constituent of the normal flora, and it lives in 80% of the human population without causing harmful effects. Systemic fungal infections (fungemias) including those by *C. albicans* have emerged as important causes of morbidity and mortality in immunocompromised patients. *C. albicans* biofilms may form on the surface of implantable medical devices.

Symptoms of Infection

An infection in the bloodstream can affect the kidneys, heart, lungs, eyes, or other organs causing high fever, chills, anemia, and sometimes a rash or shock. *Candida* can cause the following problems depending upon the organ infected: in the kidneys can cause blood in the urine, in the heart can cause murmurs and valve damage, in the lungs can cause bloody sputum (mucus discharge), in the eyes can cause pain and blurred vision, in the brain can cause seizures and acute changes in mental function or behavior like lactobacillus does – as yeast, keeps microbes in balance – change in pH by Hg and sugar yeast shifts to fungus – Antibiotic shifts yeast to fungus.

Possible Treatment Options

Treatment commonly includes: amphotericin B, caspofungin, or fluconazole for systemic infections; fluconazole or caspofungin for oral or esophageal infections; and topical azole for vaginal infections.

References

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5. Youssefi, M., Tafaghodi, M., Farsiani, H., Ghazvini, K., & Keikha, M. (2021). *Helicobacter pylori* infection and autoimmune diseases; is there an association with systemic lupus erythematosus, rheumatoid arthritis, autoimmune atrophy gastritis and autoimmune pancreatitis? A systematic review and meta-analysis study. *Journal of Microbiology, Immunology and Infection*, *54*(3), 359–369. https://doi.org/10.1016/j.jmii.2020.08.011

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