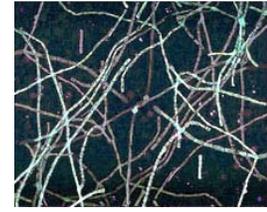


# Microbiological Tests for Periodontal Disease



Over 550 species of bacteria can be found in the mouth. Most are harmless, but some are pathogenic. Unfortunately 3 out of 4 people are infected with 1 or more of these pathogens. They trigger a destructive host immune response that slowly destroys the gums and bone around the teeth that we call periodontal disease. It's the major cause of adult tooth loss ... and it's preventable but, until recently, there was no way to detect the pathogens until the damage was already done. Now we can.

## Bacterial DNA Testing



A DNA test for 11 pathogenic bacteria. A tiny paper toothpick soaks up the bacteria around the teeth and is sent to a lab that extracts the DNA to see if any pathogens are present.

About 3 out of 10 people don't respond well to conventional periodontal therapy because they have tiny variations (polymorphisms) in the genes that produce and control interleukin-1, the master cytokine that controls inflammation. If you're in that group, even barely measurable numbers that most people's immune systems would ignore, will trigger inflammation. A simple cheek swab picks up enough cells for a DNA lab to analyze.

## GenoType Testing



## BANA Enzyme



Three of the worst periodontal pathogens have a unique enzyme. A plaque sample is applied to a test strip and inserted into a little processor. If any of the three are present, the strip turns blue.

## Phase Contrast Microscopy

Many pathogens can be identified by their unique shapes using a particular type of microscope. A plaque sample is placed on a slide and examined immediately while it's still alive. Microscopy also detects abnormally high numbers of infection fighting white blood cells.



## Cultures



Some pathogens can be detected using anaerobic culture plates. Tiny paper toothpicks are used to soak up the bacteria and then sent to labs that specialize in growing oral pathogens.



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