

The process of diagnosing the specific cause of any disease is like doing a jig-saw. Pieces of information are assembled in a logical way to reach a sensible conclusion. In the ideal situation all the information is present but in medicine it is common to work with limited information, either because certain tests are not available or because they are deemed too expensive. In these cases a logical pattern of treatment, assessment and retreatment may be attempted until the problem is resolved. It may not be scientifically correct but it avoids laboratory fees and may work out cheaper (though not always).

Most cases of acute (suddenly appearing) diarrhoea respond well to simple treatment, often without recourse to drug therapy. Provided diet is manipulated properly the normal defense mechanisms act quickly to eliminate common problems and a specific diagnosis is frequently not required - the jig-saw need not be assembled.

There can be much frustration with the case that fails to improve despite treatments but where diarrhoea persists it is more useful to thoroughly investigate the different possible causes and thereby reach a specific diagnosis. This usually allows specific treatment to be given. The first tests performed are simple stool analyses and microbial culture to detect common pathogens. These give a certain amount of useful information regarding the types of bacteria and parasites that are present in the intestine. Unfortunately stool analyses, particularly on single samples, are by no means complete assessments for various reasons

The most important of these reasons are;

- Certain organisms are shed intermittently. A test may be negative one day and positive the next.
- Certain organisms are not detected by standard analyses. e.g. viruses need specialised laboratory facilities for detection. So do anaerobic bacteria (those requiring low oxygen levels to grow). Unless we request these specialised tests, and pay for them, the labs will only do what is routine.
- Previous treatment may make certain infections fail to show up. Indiscriminate use of antibiotics is therefore not recommended and testing is best done before antimicrobial therapy is started.

It is important to see stool tests (as with all medical tests) as simply a tool to help get a few more pieces of the jig-saw together. Stool tests are not all-encompassing diagnostic tools.

Despite these shortcomings stool analyses, particularly of serial samples, remains a vital part of the diagnostic process. While negative results may be inconclusive, positives are a basis for specific therapy which can then be targeted directly at the revealed pathogen.