



Microscopic Examination of Stools for Ova, Cysts and Parasites

The microscopic examination of stool samples for ova, cysts and parasites is a commonly requested diagnostic test on patients with gastrointestinal symptoms on returning from overseas travel. However, the sensitivity of such testing can be extremely low, unless it is focused on those patients with a high risk of infection.

The main parasitic enteric infections endemic to New Zealand are *Giardia lamblia* and *Cryptosporidium parvum*. Both of these pathogens are tested for by enzyme immunoassay with a high degree of sensitivity and standardisation.

In contrast, ova, cysts and parasites which are not endemic to New Zealand, are diagnosed by faecal concentration and microscopy, sometimes utilising special stains. This includes pathogens such as *Ascaris spp.* (roundworm), *Necator americanus* (hookworm), *Trichuris trichiura* (whipworm), *Strongyloides spp.*, and *Entamoeba histolytica* amongst others. This particular methodology is labour intensive and highly skilled.

We have analysed data from the last ten years looking at faecal concentration and microscopy results, as well as examining the clinical details on the request forms of positive samples. This has shown that only a tiny minority (less than 0.1%) of stool samples analysed for ova, cysts and parasites had positive findings. The patients with positive results had invariably been living in a tropical/endemic country in the relatively recent past, as opposed to having been there for a short-term tourist holiday.

From 4th June 2019, we propose to limit microscopic testing for ova, cysts and parasites (other than *Giardia* and *Cryptosporidium*) to those patients who have particular risk factors or a specific travel history which puts them at high risk of parasitic infection. These include the following:

- **a prolonged stay (>3months) or recent residence in a tropical/endemic country e.g. seasonal workers, aid workers, volunteering**
- **unexplained eosinophilia following overseas travel**
- **paid requests (including for immigration/visa/insurance purposes)**
- **contacts of known cases diagnosed with non-endemic enteric parasites**
- **requests approved by a clinical microbiologist, infectious diseases physician or public health.**

In all cases, brief clinical details must be given, including the country or area of exposure, duration of travel and any immunocompromising conditions.

If submitting samples for Ova, Cyst and Parasite examination, in order to maximise sensitivity, please send **three separate samples**, one sample per day for three consecutive days.

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receive a copy of this clinical update.**