



June 2008

## Parvovirus B19 - Interpreting Serology Results

To Health Care Providers

### Parvovirus B19

Most cases of Parvovirus B19 infection are asymptomatic. In children, Parvovirus B19 is now recognized as the cause of erythema infectiosum, also known as fifth disease. This is a common, generally benign childhood exanthema characterized by a “slapped cheek” rash. In adults, Parvovirus B19 infection may affect the joints. Other manifestations of Parvovirus B19 infection may include transient aplastic crisis, myocarditis/pericarditis, hydrops fetalis and other less common syndromes.

Although Parvovirus B19 can occur throughout the year it is most common during the winter and spring months and is typically spread by droplet infection or from person-to-person through direct contact with respiratory secretions.

### Test Request

If testing for Parvovirus B19 is requested, with no other indicators, the Ontario Public Health Laboratories will perform both IgG and IgM serology.

If the ‘Reason for Test’ indicates that the request is for detecting immunity or for clinical diagnosis of a suspected case of acute Parvovirus B19 infection then the appropriate test will be performed. This change will take effect on June 25, 2008.

The patient’s date of birth is required in order to perform this test.

### Specimen Requirements

Serum is the preferred sample for Parvovirus B19 serology. Haemolysed, icteric, lipemic or microbially contaminated sera are not recommended for testing. Current serological tests have not been validated for cord blood samples.

- 1 mL of serum is required
- Transport the specimen to the laboratory as soon as possible after collection. If this is not possible, the specimen should be refrigerated until the time of delivery.

## Parvovirus B19 - Interpreting Serology Results (Continued)

### Reported Results

Results should be interpreted in the context of the clinical history of the patient. For patients less than twelve months of age, the IgG antibody detected may represent maternal transfer of antibodies.

IgG ELISA	IgM ELISA	Reported Results
Reactive	Non-reactive or Not Tested*	Parvovirus B19 IgG antibodies detected. <i>This is indicative of possible past Parvovirus B19 infection.</i>
Non-reactive	Non-reactive	No serological evidence of recent or past Parvovirus B19 infection.
Non-reactive	Not Tested*	No Parvovirus B19 IgG antibodies detected.
Non-reactive or Not Tested*	Indeterminate	Possible recent or acute Parvovirus B19 infection OR non-specific IgM reactivity.
Not Tested*	Non-reactive	No serological evidence of recent or acute Parvovirus B19 infection.
Indeterminate	Non-reactive or Not Tested*	Parvovirus B19 IgG antibody status inconclusive.
Indeterminate	Indeterminate	Parvovirus B19 IgG and IgM antibody status inconclusive.
Non-reactive or Not Tested* or Reactive or Indeterminate	Reactive	Possible recent or acute Parvovirus B19 infection.
Reactive	Indeterminate	Possible recent Parvovirus B19 infection OR past infection with non-specific IgM reactivity.

\* 'Not Tested' = not requested or not required based on clinical information given

### For Further Information:

- Refer to the Specimen Collection Guide at [www.health.gov.on.ca/english/providers/pub/labs/specimen.html](http://www.health.gov.on.ca/english/providers/pub/labs/specimen.html)
- Contact the WRAPS Laboratory at **416-235-6092**
- OPHL Helpline 1-800- 640-7221