

# CRITICAL RESULTS

**Critical result** values are those results that may indicate a life-threatening medical condition and require immediate notification to the referring doctor (irrespective of whether the pathology request was marked urgent).

If a result outside the critical limits is obtained, a scientist or pathologist will make every attempt to contact the referring doctor.

If the testing is performed out of hours, our staff will contact a contact number supplied on the request form, or alternately a previously supplied private number (home or mobile) recorded in the doctor database. If this is not successful, the after hours medical service will be contacted or another doctor from the same practice (community patients), or another attending physician or senior nursing staff (hospital patients).

Some other results may be considered urgent enough to contact the referring doctor or ward by phone or fax, but are not considered critical. If the testing is performed out of hours, these results are faxed (or phoned the next working day). These results are indicated \*\* in the table.

Other significant results may be phoned or faxed at the discretion of the pathologist or scientist. Results of tests marked urgent by the referrer will continue to be phoned or faxed according to either specific instructions on the request form or general instructions advised by the doctor.

## Biochemistry

|   |                      |  |                      |
|---|----------------------|--|----------------------|
| Acetaminophen (suspected overdose)          | All results          | Lithium  | >2.0 mmol/L          |
| Albumin                                     | <20 g/L              | Magnesium  | <0.2 or >2.0 mmol/L  |
| Ammonia (venous)                            | >100 µmol/L          | Methaemoglobin                                     | >25%                 |
| Amylase                                     | >1000 U/L            | Osmolality (serum)                                 | <250 or >320 mOsm/Kg |
| ALT   | >1000 U/L*           | pH (arterial)                                      | <7.2 or >7.6         |
| AST   | >=1500 U/L*          | pCO <sub>2</sub> (arterial)                        | <20 or >70 mm Hg     |
| Bicarbonate (Adult)                         | <10 or >45 mmol/L*   | pO <sub>2</sub> (arterial)                         | <50 mm Hg            |
| Bilirubin                                   |                      | Phenytoin (Dilantin)                               | >120 µmol/L          |
| (Adult)                                     | >300 µmol/L          | Potassium  | <2.2 or >6.4 mmol/L  |
| (Neonate)                                   | >225 µmol/L          | Sodium   | <120 or >155 mmol/L  |
| Calcium (corrected)                         | <1.50 or >3.5 mmol/L | Troponin   | >50 ng/L             |
| Carbamazepine (Tegretol)                    | >85 µmol/L           | Urate (in pregnancy (gest <sup>n</sup> dependent)) | >0.30 mmol/L         |
| Carboxyhaemoglobin                          | >15%                 | Urea   | >15 mmol/L*          |
| CK  | >10000 U/L           |  |                      |
| Creatinine (if HCO <sub>3</sub> <20 mmol/L) | >450 mmol/L          |  |                      |
| Cortisol (am)                               | <40 nmol/L           |  |                      |
| CRP   | >300 mg/L            |  |                      |
| Digoxin                                     | >3.8 nmol/L          |  |                      |
| Glucose                                     |                      |  |                      |
| (Adult –diabetic)                           | <2.0 or >30 mmol/L*  |  |                      |
| (Adult -random)                             | <2.0 or >20 mmol/L*  |  |                      |
| (Adult -fasting)                            | <2.0 or >15 mmol/L*  |  |                      |
| (Child -random)                             | <2.0 or >15 mmol/L*  |  |                      |
| (Child -fasting)                            | <2.0 or >11 mmol/L*  |  |                      |
| Iron (Child)                                | >60.0 µmol/L         |  |                      |
| Lactate                                     | >10 mmol/L           |  |                      |
| Lipase                                      | >500 U/L             |  |                      |

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## Haematology

|   |                                    |
|---|------------------------------------|
| Haemoglobin   | <80 or >200 g/L*                   |
| WCC   | <1.1 or >50 x 10 <sup>9</sup> /L*  |
| Neutrophils   | <0.6 x 10 <sup>9</sup> /L*         |
| Platelets   | <50 or >1000 x 10 <sup>9</sup> /L* |
| Leukaemia (new - acute)   |                                    |
| Malarial parasites – Positive *   |                                    |
| Bacterial infection/Sepsis blood films  |                                    |
| Active haemolysis blood film  |                                    |
| TTP/HUS   |                                    |
| - Large foetal maternal haemorrhage   |                                    |
| - Positive blood group antibody screen, which has an impact on blood availability and may result in delayed blood provision |                                    |
| - Positive transfusion reaction   |                                    |

## Coagulation

|  |             |
|--|-------------|
| D Dimer  | >0.50 ug/ml |
| Fibrinogen                                       | <1.0 g/L    |
| INR (Dr dose)                                    | >3.9        |
| New DIC (disseminated intravascular coagulation) |             |
| APTT   | >110 secs   |

## Microbiology

*Positive micro results will be phoned.*

*Blood cultures: positive microscopy/Culture \*\**

*CSF: positive microscopy/culture\*\**

*Gastric aspirate: positive microscopy/culture\*\**

*Sterile site: positive microscopy/culture\*\**

*General: Positive ZN stain*

## Molecular Pathology

*Bordetella pertussis PCR: positive result (paediatric)\*\**

\* First presentation

\*\* Phoned or faxed as soon as results available or if after hours, next working day.

## Reference:

Chemistry Department Risk Levels MPS-CH-PP-0020  
Haematology Critical Results MPS-HA-PP-0048