

Hypertension

Subject

Instructions for screening clients with high blood pressure in the context of the Canadian immigration medical examination (IME).

Goal/Objective

These instructions are provided to ensure that panel physicians (PPs) follow a consistent and appropriate process for the following:

- identification of clients with hypertension;
- further investigation of clients with hypertension in order to provide all the information that will allow the medical officer to assess potential medical service requirements for the client; and
- completion and grading of an IME for a client with hypertension.

Instructions

Screening and Testing

Measure of the blood pressure is a mandatory and essential part of any medical examination. High blood pressure is a serious cardiovascular condition with repercussions for several vital organs.

In taking the medical history, PPs will be vigilant for the presence of cardiovascular risk factors such as: smoking, excess body weight, low levels of physical activity and poor eating habits which are of utmost importance. It is also important to question the client concerning possible symptoms of hypertension such as headache, dizziness, blurred vision, nausea and vomiting, and chest pain and shortness of breath. If an interpreter is used, PPs must select and ensure that the interpreter is unbiased and has no connection to the client. Family members or friends cannot act as an interpreter for a client. The use of a professional interpreter is at the client's expense.

During the physical examination, PPs will pay special attention when taking the blood pressure and identify signs associated with **end-organ damage**:

- funduscopy is necessary to assess **retinopathy**;
- check for symptoms or findings of peripheral anaesthetic **neuropathy** or pain, autonomic neuropathy e.g. erectile dysfunction, gastrointestinal disturbance, orthostatic hypotension; include screening via monofilament during foot exam;
- chest auscultation/radiography is necessary to assess cardiomegaly and **cardiopathy**; and
- to assess **nephropathy**, special attention should be brought during the IME to blood pressure measure as well as to urinalysis result.

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Blood Pressure Screening:

- Blood pressure measurement is required for all clients ≥ 15 years.
- Blood pressure measurement is required for all clients < 15 years if they present with abnormal medical history or clinical findings such as the following:
 - seriously overweight/underweight or known diabetic;
 - stayed in the ICU (intensive care unit) for any amount of time after birth;
 - have/had any known heart, lung or circulatory problems; or
 - experienced any complications or difficulty before, during, or shortly after birth.
- **High blood pressure is defined as a repeated blood pressure (repeated 3 times) measured in the doctor's office, of:**
 - ≥ 140 mmHg systolic pressure; or
 - ≥ 90 mm Hg diastolic pressure.

Note: Interpretation of blood pressure readings in the pediatric population requires adapted equipment and can be complicated. Please refer to Blood Pressure Tables for Children and Adolescents (see link below in references).

If hypertension/cardiac disease is identified during the IME, the following information will assist the Regional Medical Office in its assessment of the IME are:

- diagnosis and prognosis;
- duration and progression of symptoms;
- level of functioning (e.g. provide the internationally accepted New York Heart Association functional classification);
- details of past investigations and treatments (medications, referrals, hospitalizations, surgery, etc);
- any specialist reports available from previous consultations;
- current medications used to treat the disease; and
- anticipated treatment needed (surgery, etc).

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Additional Investigation

Additional testing is required for clients identified with hypertension in order to rule out cardiac disease.

- **Serum creatinine** testing (refer to IMEI on serum creatinine).
- **Referral to a cardiologist** for assessment, investigation and determination of the prognosis and the need for treatment must also be done when there is a history or clinical evidence of the following:
 - coronary artery disease;
 - valvular heart disease;
 - cardiomyopathy;
 - congenital heart disease; and/or
 - peripheral (including cerebral) vascular disease.

Reporting

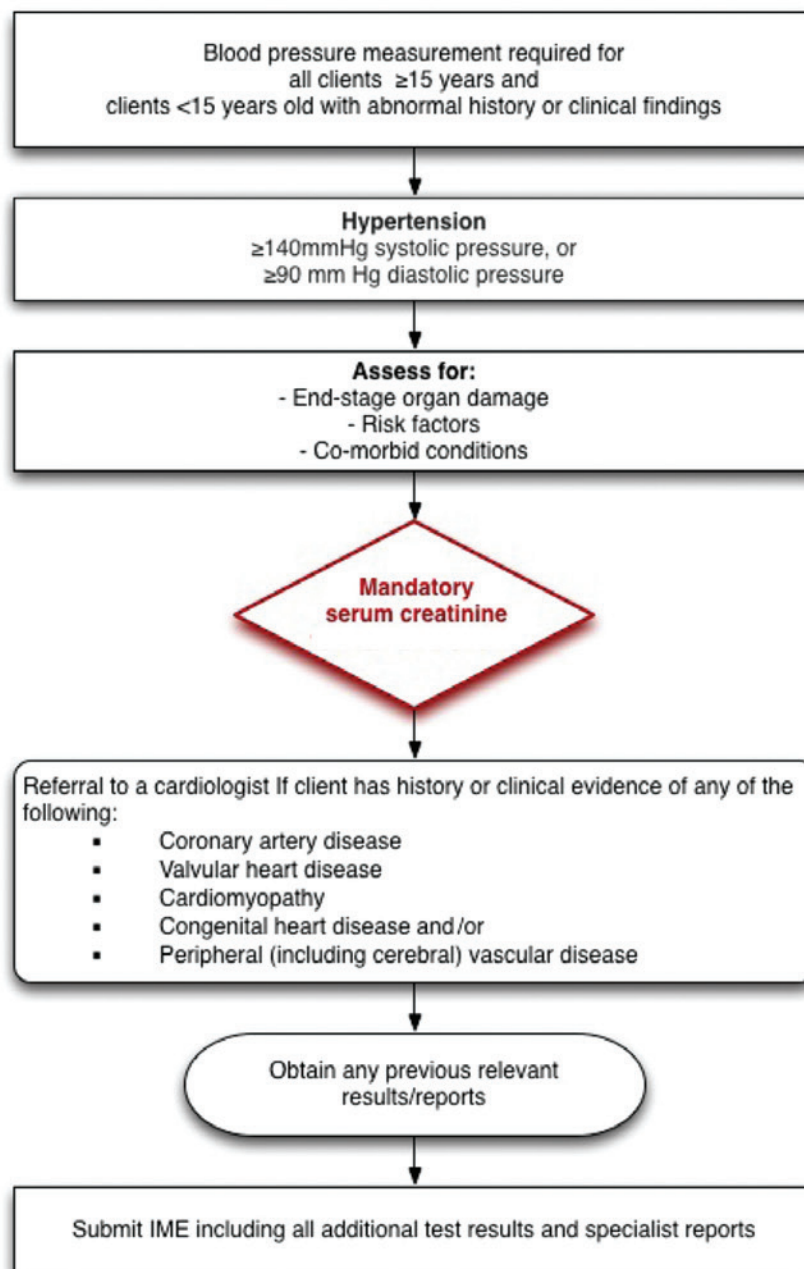
- Any available additional testing information must be attached to the IME report.
- Any specialist report that may be available from previous consultations should also be attached.

Grading

All IMEs for clients with hypertension must be graded B.

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Algorithm



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References

Cardiovascular disease guidelines, BC

http://www.bcguidelines.ca/guideline_cvd.html#figure_1

New York Heart Association Functional Classification:

<http://www.cebp.nl/media/m149.pdf>

Blood Pressure Tables for Children and Adolescents

http://highbloodpressure.about.com/od/newlydiagnosed/a/kids_bp_charts.html

http://www.nhlbi.nih.gov/guidelines/hypertension/child_tbl.pdf

HB Approval and Authority

Director General, NHQ, Health Branch, CIC

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