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**TIA definition:** a loss of focal or monocular function of sudden onset, maximal at the outset and without spread or intensification, which resolves within 24 hours.

CLINICAL PROBLEM	ACTIONS	IMPLEMENTATION
<b>Acute TIA</b> i.e. seen within 48hrs of onset <i>(note 1)</i>	<ul style="list-style-type: none"> <li>• Full history</li> <li>• Full examination including neurological, cardiac and carotids</li> <li>• BP series (if serial BPs not already available)</li> </ul>	Refer acutely to general medicine (ie the TIA doctors for the Organised Stroke Service)(note 2)
<b>Subacute TIA</b> i.e. > 48 hrs since onset	For all <ul style="list-style-type: none"> <li>• Full history</li> <li>• Full examination including neurological, cardiac and carotids</li> <li>• BP series (if serial BPs not already recorded)</li> <li>• CBC, ESR, fasting lipids, fasting glucose.</li> <li>• ECG</li> <li>• Order carotid doppler ultrasound (note 3)</li> <li>• Patients under 60 with no other risk factors (note 4), or &lt; 50 with other risk factors should also have thrombophilia screen, anti cardioliopin antibodies, prothrombin mutation, autoantibodies, rheumatoid factor and serum electrophoresis.</li> </ul>	All patients should be referred to a neurologist with request for urgent appointment (note 5)  All available results should be included and indication given that ultrasound has been requested  If carotid doppler shows >70% narrowing of the appropriate artery, and the patient wishes private referral, consideration should be given to direct referral to a vascular surgeon (note 6)

## NOTES

- The risk of stroke following TIA is 5% within 48hrs, so these patients should be referred acutely. Acute management of TIA can prevent 18 strokes per year in the Waikato DHB area. TIA for these purposes will not include blackouts, dizziness or confusion.
- Admission will occur in selected cases based on access to thrombolysis and patient safety issues. GP management after acute TIA management in the Emergency Department should include; Follow-up each case at about 48hrs and at about 1 week to optimise intensive therapies:
  - aspirin
  - statins at high dose
  - ACEi/diuretic combination,
  - lifestyle advice and stroke education.
  - dipyridamole (if aspirin naïve: cost <\$35/month long term).
  - other blood thinners may be considered short term by the Organised Stroke Service doctor
 Reinforce lifestyle advice including:
  - temporarily no driving (1 month for TIA, 3 months if multiple, longer if disabled)
  - stopping tobacco, marijuana, cocaine or amphetamines
  - moderating alcohol intake (no more that 2 small drinks per day)
  - exercising regularly (aim 30-60mins puffing and sweating 5-6x/week)
  - eating a good diet with low salt, low fat, low sugars (depending on later blood tests for diabetes and blood pressure), and 6+ servings of fruit and vegetables each day. Plenty of fish and vegetarian, occasional meat.
 Follow up on fasting lipids and diabetic investigations, and carotid duplex (if delayed)
- Waiting times for carotid doppler ultrasound in private are very short. In public the target is within two weeks. The referral should include details of symptoms and neurological deficit at the time of the TIA, the date of the event and whether the patient would be suitable for carotid endarterectomy. Carotid doppler ultrasound will only be helpful if symptoms indicate pathology in the carotid territory.
- Risk factors are:
  - hypertension
  - diabetes
  - smoking
  - hyperlipidaemia
  - known arterial disease
 Family history is not included as a risk factor
- Depending on the outcome of other investigations, some may also need review by other specialities, but this will be arranged by Neurology.
- Secondary prevention after endarterectomy can be completely managed in general practice. Issues are risk identification and treatment, plus instituting indapamide and ACE inhibitor therapy in all TIAs and strokes, if not contraindicated by pre-existing hypotension or other factors. Need to start gently to avoid side effects. Best to start with indapamide, then add ACE.
- For many ethnic groups, in particular Maori, whanau/family plays an intrinsic role in one's overall well being. It may be valuable to encourage family members to participate in the consultation process and to be part of the management plan. It is also worth remembering that for some cultures the head is tapu or sacred. The manner in which this is acknowledged, before and during the examination, will ensure all parties are comfortable.