

## **SCHEDULE 2.**

### **1. INSERTION OF PROTOCOL ON HYPERTENSION**

1. The following protocol is hereby inserted in Document SA-CATS-MR:

#### **“HYPETENSION**

A blood pressure which is consistently >160/100 mmHg disqualifies a person from all classes of medical certification. A person is deemed unfit, until such time the person can prove control on acceptable medication.

#### **1. Mild Hypertension**

- (1) A person is considered to be having mild hypertension if his or her systolic BP is 140-159 or diastolic BP is 90-99.
- (2) In the case of a mild hypertension referred to in paragraph (1), a person shall –
  - (a) undergo regular 3 monthly BP checks for a year;
  - (2) undergo Lifestyle Modification (According to the National Guidelines on the Management of Hypertension);
  - (3) adjust or alter medication if already on therapy;
  - (4) undergo Cardiovascular Risk Assessment; and
  - (5) may continue to fly, in the case of a pilot.

#### **2. Moderate Hypertension**

- (1) A person is considered to be having moderate hypertension if his or her systolic BP is 160-179 or diastolic BP is 100-109.
- (2) In the case of a moderate hypertension referred to in paragraph (1), a person shall –
  - (a) Exclude reactive hypertension
  - (b) If hypertension established:
    - (i) Urine Dipstix for Microalbuminurea
    - (ii) Clinical examination.
    - (iii) Blood tests:
      - (aa) Urea and Electrolytes
      - (bb) Fasting Glucose
      - (cc) Fasting Total Cholesterol, and if Total Cholesterol is > 5.00 a fasting Lipogram should be done

- (c) Begin therapy with an acceptable agent.
- (d) Cardiovascular Risk Assessment
- (e) Ground pilot for two weeks
- (f) After one month a clinical evaluation will be done.

### 3. Normotensive/ Reactive Hypertension

- (1) A person is considered to be having normotensive/reactive hypertension if his or her Systolic BP of 120-129 or a Diastolic BP of 80-84.
- (2) In the case of a normotensive/reactive hypertension referred to in paragraph (1), a person shall –
  - (a) be deemed fit to fly, with 6-monthly follow-up for one year, consisting of:
    - (i) Clinical examination
    - (ii) Resting ECG (<40 or falls into the Blue or Green Risk Categories-see Table 2)
    - (iii) Stress ECG (>40 or falls into the Yellow, Orange, or Red Risk Categories-see Table 2) See note\*
    - (iv) Blood tests
      - (aa) U & E including Creatinine
      - (bb) Fasting Glucose
      - (cc) Fasting Lipogram

*Note \*Stress ECG for Yellow Risk Category to be done by AME. Stress ECG for Orange and Red Risk Categories to be done by a Cardiologist. Risk categories as per Table 2.*

- (b) undergo annual follow-up thereafter consisting of:
  - (i) Clinical examination
  - (ii) Resting ECG (<40 or falls into the Blue or Green Risk Categories-see Table 2)
  - (iii) Stress ECG (>40 or falls into the Yellow, Orange, or Red Risk Categories-see Table 2) See note\*
  - (iv) Blood tests (U&E including Creatinine, Fasting Glucose, Fasting Lipogram).

*Note\*Stress ECG for Yellow Risk Category to be done by AME. Stress ECG for Orange and Red Risk Categories to be done by a Cardiologist. Risk categories as per Table 2.*

#### 4. Moderate / Severe Hypertension

- (1) A person is considered to be having moderate/severe hypertension if his or her Systolic BP is 160-179 mmHg or Diastolic BP is 100-109 mmHg (for moderate) or Systolic BP of >180 or Diastolic BP of >110 (for severe).
- (2) In the case of a moderate/severe hypertension referred to in paragraph (1), a person shall –
  - (a) review medication (therapy);
  - (b) be considered medically fit and not exercise the privileges of his or her licence until hypertension is adequately controlled on acceptable medication

### CARDIOVASCULAR RISK ASSESSMENT

Cardiovascular Risk Assessment shall be done based on the South African Hypertension Guidelines.

TABLE 1

MAJOR RISK FACTORS, TARGET ORGAN DAMAGE, AND ASSOCIATED CLINICAL CONDITIONS		
MAJOR RISK FACTORS	TARGET ORGAN DAMAGE	ASSOCIATED CLINICAL CONDITIONS
Levels of systolic and diastolic BP	Left ventricular hypertrophy: based on ECG	Coronary heart disease
Smoking	Microalbuminuria: albumin/creatinine ratio 3 - 30 mg/mmol	Heart failure
Dyslipidaemia Total cholesterol > 6.5 mmol/l, OR creatinine ratio > 30 mg/mmol LDL > 4 mmol/l, OR HDL men < 1 and women < 1.2 mmol/l	Slightly elevated creatinine Men 115 - 133 µmol/l Women 107 - 124 µmol/l	Chronic kidney disease: albumin creatinine ratio > 30 mg/mmol
Diabetes mellitus Men > 55 years Women > 65 years		Stroke or transient ischaemic attack
Family history of early onset of cardiovascular disease Men aged < 55 years Women aged < 65 years		Peripheral arterial disease

Waist circumference – abdominal obesity Men ≥ 102 cm Women ≥ 88 cm The exceptions are South Asians and Chinese: men > 90 cm and women > 80 cm		Advanced retinopathy Haemorrhages OR Exudates Papilloedema
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**TABLE 2**

Stratification of risk to quantify prognosis					
Other risk factors and disease history	BP (mmHg)				
	Normal SBP 120 - 129 or DBP 80 - 84	High-normal SBP 130 - 139 or DBP 85 - 89	Stage 1 Mild hypertension SBP 140 - 159 or DBP 90 - 99	Stage 2 Moderate hypertension SBP 160 - 179 or DBP 100 - 109	Stage 3 Severe hypertension SBP > 180 or DBP > 110
No other major risk factors	Average risk	Average risk	Low added risk	Moderate added risk	High added risk
1 - 2 major risk factors	Low added risk	Low added risk	Moderate added risk	Moderate added risk	Very high added risk
≥ 3 major risk factors or target-organ damage or diabetes mellitus	Moderate added risk	High added risk	High added risk	High added risk	Very high added risk
Associated clinical conditions	Very high added risk	Very high added risk	Very high added risk	Very high added risk	Very high added risk



**Average Risk and Low Added Risk**

- Bloods (Fasting Glucose, Fasting Lipogram, U&E-including Creatinine)
- Resting ECG : less than the age of 40 years
- Stress ECG : 40 years of age and above (to be done by a DAME)



#### Moderate Added Risk

- Annual Stress ECG (done by a DAME- Designated Medical Examiner)
- Annual Bloods (U&E-including Creatinine, Fasting Glucose, Fasting Lipogram) for all Classes
- Applicable Protocol for Co-morbidity



#### High Added Risk

- Stress ECG (to be done by a Cardiologist- minimum stress level should be 85%)
- Annual Bloods (U&E-including Creatinine, Fasting Glucose, Fasting Lipogram)
- Applicable Protocol for Co-morbidity



#### Very High Added Risk

- Stress ECG (to be done by a Cardiologist-minimum stress level should be 85%)
- Annual Bloods (U&E-including Creatinine, Fasting Glucose, Fasting Lipogram)
- Applicable Protocol for Co-morbidity

### **SCHEDULE 3.**

#### **1. INSERTION OF PROTOCOL ON OBSTETRICS AND GYNAECOLOGY**

The following protocol is hereby inserted in Document SA-CATS-MR:

#### **“OBSTETRICS AND GYNAECOLOGY**

##### **(a) General Requirements**

The provision for aviation personnel with obstetrics and gynecology medical conditions to obtain a medical certificate may be considered for any class of medical certificate based on individual medical condition of the applicant and risk factor management.