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.

(b) Background

Approximately 30 per cent of pregnant women experience nausea and vomiting, and this can result in dehydration and malnutrition. Approximately 15 per cent of embryos will abort in the first trimester. Cardiac output rises in early pregnancy, accompanied by an increase in stroke volume, heart rate, and plasma volume. Haemoglobin (and haematocrit) begins to fall between the third and fifth month of pregnancy and is lowest by the eighth month. Adequate diet with supplementary iron and folic acid is necessary, but self-medication and prescribed medicine should be avoided. The incidence of venous varicosities is three times higher in females than males and deep venous thrombosis and pulmonary embolism are among the most common serious vascular diseases occurring during pregnancy.

As the uterus enlarges, it compresses and obstructs the flow through the vena cava. Progressive growth of the fetus, placenta, uterus and breasts, and the vasculature of these organs, leads to an increased oxygen demand; and increased blood volume and oxygen demands produce a progressive increase in workload on both the heart and lungs. Hormonal changes affect pulmonary function by lowering the threshold of the respiratory centre to carbon dioxide, thereby influencing the respiratory rate.

In order to overcome pressure on the diaphragm, the increased effort of breathing leads to greater consciousness of breathing and possibly greater cost in oxygen consumption. The effect of hypoxia at increased altitude further increases the ventilatory effort required to provide for increasing demands for oxygen in all tissue.

Aviation personnel must inform their Designated Medical Examiner (DAME), if they become are aware of any medical condition that would make them unable to meet the requirements of the licence they are applying for or if they are taking medication that is not compatible with flying.

The medical examiner should consider the important physiological changes associated with pregnancy, which might interfere with the safe operation of an aircraft at any altitude throughout a prolonged or difficult flight:
Factors which may considerably reduce flight safety and classify an "abnormal" pregnancy include:

- A history of multiple pregnancies,
- Previous pre-term deliveries,
- Cervical incompetence,
- Bleeding, increased uterine activity,
- Reduced oxygen carrying capacity in the blood (anemia),
- Reduced placental respiratory reserve such as intrauterine growth retardation,
- Post maturity,
- Pre-eclampsia,
- Chronic hypertension or
- Placental infarction.

- Flight during pregnancy increases the risk for oedema (swelling) and blood clot formation due to obstruction of the vena cava from uterine compression and lack of mobility

2. Menstrual Disturbances

Applicants for all classes of medical assessments, with gynecological disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

Dysmenorrheal is a common condition with symptoms ranging from mild discomfort to severe abdominal pain, headache and backache, nausea and vomiting, diarrhea, dizziness and fatigue. Usually, the condition is limited to 24-48 hours around the onset of the menstrual flow and fitness for aviation duties is rarely reduced to a significant degree. Treatment with oral contraceptives and NSAIDs (non-steroidal anti-inflammatory drugs) is very efficient and is generally well tolerated.

The use of oral contraceptives is acceptable in the aviation environment, but when medication with a NSAID is first used, an initial off-duty trial should take place so that the medical examiner can ascertain that there are no significant side effects such as gastro-intestinal symptoms, visual disturbances and drowsiness. In severe cases, especially when an underlying disease such as endometriosis or pelvic inflammatory disease is suspected (secondary dysmenorrhea), appropriate diagnostic evaluation is important and specialist opinion should be sought.

Premenstrual syndrome (PMS) may occur during the week before the onset of menstruation. The symptoms are partly mental such as mood swings, anxiety and depression, and partly physical such as bloating, headache and poor coordination. Because of the broad spectrum of symptoms and their varying severity and the many different kinds of medication usually prescribed, each case has to be assessed on its own merits. In most cases pharmaceutical therapy will prove unsatisfactory, and fitness for aviation duties is often reduced for a number of days every month.

3. Endometriosis

Endometriosis can cause quite severe discomfort such as lower abdominal or suprapubic pain, usually just before or during the first days of the menstruation period. There are several medical and surgical treatment options. If symptoms are well controlled by oral contraceptives or mild analgesics, this condition is usually compatible with aviation duties. Those who undergo surgical treatment with a successful outcome will normally be cured and able to fly safely after a suitable period of recovery.

The middle group, consisting of patients with moderate symptoms but on medication and with decreased fitness several days per month, is more difficult to evaluate and assess. Usually the final decision should be deferred to the medical

panel for further evaluation. The medical panel, in consultation with a gynecologist, should weigh all relevant factors carefully before making a recommendation.

4. Genitourinary System

Applicants for all classes of Medical Assessments with sequelae of disease of or surgical procedures on the kidneys or the genito-urinary tract, in particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with the best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

Major gynecological surgery will normally entail unfitness for a period of two to three months and some procedures such as hysterectomy may require more extensive periods of recovery.

Applicants who are pregnant shall be assessed as unfit, unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

Once pregnant, a report from a gynecologist and an aviation medical examiner to confirm the pregnancy.

It is advisable that a treating obstetrician is aware of the type of flying the applicant intends to carry out. Common complications of pregnancy can be detected and treated, by careful prenatal evaluation, observation, and care.

Low-risk uncomplicated pregnancy must be evaluated and supervised. Pregnancy is considered a normal, uncomplicated and low-risk, if there is supporting medical information from her obstetrician, family physician and/or midwife supporting that the applicant may continue to exercise the privileges of her licence.

Close medical supervision must be established for the part of the pregnancy where the applicant continues to carry out their duties, and all abnormalities should be reported to the medical examiner.

4. Applicability

Medical Requirements for Pregnant Class I, II & IV

Applicant may continue to exercise the privileges of her license from the end of the 12th week (first trimester) until the end of the 26th week of the gestational period.

- Applicant will be declared to be medically fit if their pregnancy is considered normal, uncomplicated and low-risk.

- A medical report from a treating obstetrician, family physician and/or midwife will be required.

- Close medical supervision where the pilot continues flying, and all abnormalities should be reported to the medical examiner.

5. Medical Requirements for Class III

During the gestational period, precautions should be taken for the timely relief of an air traffic controller in the event of early onset of labour or other complications.

- The fit assessment should be limited to the period until the end of the 34th week of gestation.

- Once pregnancy is confirmed, the pregnant air traffic controller should report to the medical examiner. If declared fit, she may continue to exercise the privileges of her licence.

6. Medical requirements following confinement or termination of pregnancy

Miscarriage (spontaneous abortion) occurs in about 15 per cent of all pregnancies and is terminated spontaneously. Observation for a few days to ensure that bleeding has stopped may be all that is needed, but vacuum suction or dilatation and curettage to ensure completion of the abortion is frequently performed.

Induced abortion, usually by vacuum suction or by dilatation and curettage, will in the majority of cases entail unfitness for less than a week as these procedures are generally very safe, the rate of serious complications is < 1% and the mortality rate is < 1 in 100 000 cases. Complication rates increase as gestational age increases. Although uncommon, post abortion bleeding and pelvic inflammation, peritonitis and septicemia may occur.

The "abortion pill" (mifepristone, a progesterone-receptor blocker) is used within the first seven weeks of pregnancy. A second drug (prostaglandin) is given two days later to start uterine contractions and complete the abortion. This method is very safe and unfitness is limited to a few days. For most women, abortion has no adverse mental sequelae but for those who have a desired pregnancy terminated for medical reasons (maternal or fetal) or who have considerable ambivalence, the mental sequelae may be pronounced. The medical examiner should therefore pay particular attention to the psychological effects of induced abortion before allowing return to aviation duties.

The applicant shall not be permitted to exercise the privileges of her licence, until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings. Uncomplicated pueperium and full recovery: able to resume aviation duties *six* weeks after confinement.