

## 11.1 CHRONIC PELVIC PAIN

**AEROMEDICAL CONCERNS:** Chronic recurrent pain can be a distraction in flight and may occasionally cause incapacitation. Chronic pelvic pain is defined as pelvic pain present throughout most of the menstrual cycle for 3 or more months. The causes of chronic pelvic pain include gynecological etiology, GI tract, urinary tract, musculoskeletal, and psychiatric conditions. Aircrew should be grounded during a work-up for chronic pelvic pain until the etiology is known and the condition is controlled. Waivers may be considered for the individual causes.

**WAIVER:** Chronic pelvic pain is CD. Waiver recommendations will be highly individualized depending on cause and degree of treatment.

### **INFORMATION REQUIRED:**

1. Full gynecological evaluation
2. GI consult (as appropriate)
3. Orthopedic consult (as appropriate)
4. Psychiatry consult (as appropriate)

**TREATMENT:** If chronic pelvic pain is of gynecologic etiology, more than 50% of cases will be controlled with NSAIDS and oral contraceptives. Laparoscopy may be required for diagnosis and treatment. Therapy should be directed at the cause and, if successful, a waiver should be recommended.

**DISCUSSION:** Gynecological causes for chronic pelvic pain include:

- Endometriosis
- Dysmenorrhea
- Adhesive disease
- Uterine fibroids
- Ovarian cysts
- Adenomyosis
- Pelvic Inflammatory Disease/Infection

## 11.2 DYSPLASIA

**AEROMEDICAL CONCERNS:** There are no specific aeromedical concerns for cervical dysplasia. Treatment for cervical dysplasia may require temporary grounding for a period of 2-4 weeks after surgical procedures. The need for frequent retreatment or follow-up may restrict deployability.

**WAIVER:** Not required. Condition is NCD. Carcinoma in Situ (CIS) or any degree of malignancy is CD and considered for waiver on a case by case basis. See Chapter 9, Malignancies, for further guidance.

### **INFORMATION REQUIRED:**

1. Gynecological evaluation
2. Follow-up is recommended as per the member's Gynecologist

**TREATMENT:** Dysplasia may require frequent colposcopy and biopsy and increased frequency of Pap smear follow-up. High-grade squamous intraepithelial lesions (HGSIL) require colposcopy and may need surgical treatment (LEEP, Cold knife conization (CKC)). Evaluation of HGSIL is not emergent and should be performed within 2-4 months. Low grade SIL requires repeat pap smears at 3-4 month intervals and, if persistently abnormal, should be treated as HGSIL.

**DISCUSSION:** The current grading system for pap smears is quite simple and includes only normal, LGSIL, or HGSIL. The cytopathologist's comments on adequacy of specimen and other minor abnormalities tend to be confusing. Anything less than HGSIL need only be followed with pap smears every 3-6 months. There is nothing about dysplasia per se that is disqualifying, but it is important to note that abnormal pap smears should NOT be ignored and gynecology consultation is recommended.

### **ICD-9 CODE:**

**622.1 Cervical dysplasia**

## 11.3 ENDOMETRIOSIS

**AEROMEDICAL CONCERNS:** Dysmenorrhea, intermenstrual pain, and backache can be distracting and the menorrhagia in some women can produce anemia. There is also a rare association with spontaneous pneumothorax.

**WAIVER:** Mild endometriosis, requiring only mild analgesia and oral contraceptive pills is NCD. The use of any medication requires supervision by a Flight Surgeon. For more recalcitrant cases, a waiver can be recommended when the symptoms are controlled; recommendations will be on a case-by-case basis depending on symptoms and medications.

### **INFORMATION REQUIRED:**

1. Gynecology evaluation

**TREATMENT:** Mild analgesia is permitted without requiring a waiver. The use of progesterone or anti-gonadotropin agents such as Danazol may be compatible with selected flight duties once the patient is stabilized on therapy. Patients may also return to flying duties after conservative surgical treatment including laser ablation.

**DISCUSSION:** Danazol, if used for medical treatment of endometriosis to suppress the pituitary-ovarian axis, may cause fluid retention. An increase in the incidence of migraine cephalgia has also been reported. Gonadotropin releasing hormone (GnRH) analogs can lead to perimenopausal symptoms including hot flashes and mood alterations. The ultimate cure of endometriosis is total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAHBSO). Following this procedure, patients should be placed on estrogen replacement therapy and should be considered fit for duty without need for waiver.

### **ICD-9 CODES:**

**617 Endometriosis**

**617.0 Endometriosis of uterus**

**617.9 Endometriosis, site unspecified**

## 11.4 HORMONAL REPLACEMENT THERAPY AND CONTRACEPTION

**DEFINITION:** Hormonal replacement therapy and contraception includes birth control, estrogen replacement therapy, and hormone replacement therapy.

**AEROMEDICAL CONCERNS:** Alterations of hormone balance may lead to nausea and vomiting, depression, bloating, and emotional irritability. Regardless of the reasons for initiation of estrogen hormones, an initial down period of two weeks in order to assess tolerance is recommended.

**WAIVER:** Waiver is not required. Use of estrogen and progesterone preparations is NCD.

### **INFORMATION REQUIRED:**

2. Annual gynecological exam per OPNAVINST 6000.1 series
  - a. Pap smear
  - b. Breast examination
  - c. Pelvic exam

**TREATMENT:** None

**DISCUSSION:** Oral contraceptives in the current dosing formulations contain very low doses of estrogen/progesterone and have minimal side effects. If a patient has taken any preparation of oral contraceptive pill in the past and tolerated it well, a down period is not required. However, as with all medications, the use (or resumption) of contraceptive medication must be with the approval of the local flight surgeon. Side effects of combination oral hormonal contraceptives may include nausea, vomiting, depression or irritability, weight gain and headaches. Side effects of progesterone only preparations (Depo-Provera, Micronor, Norplant, etc.) may include depression, irregular vaginal spotting, bloating, and fluid retention.

Estrogen replacement therapy is generally well tolerated when given in recommended physiologic doses and is strongly recommended for all women without endogenous production of estrogen. Replacement therapy constitutes reestablishing the normal physiologic levels of estrogen/progesterone. This replacement should not be construed as introducing a foreign chemical into the body but rather the restoration of the natural state. Estrogen replacement therapy involves a lower dose of estrogen than is in use in currently available oral contraceptives (Ethinyl estradiol in a dose of 5 micrograms is equivalent to 0.625mg conjugated estrogens).

## 11.5 PELVIC INFLAMMATORY DISEASE

**AEROMEDICAL CONCERNS:** Pelvic inflammatory disease is an acute infection of the upper female genital tract characterized by severe lower abdominal pain. Sequelae can include chronic pelvic pain and infertility. Aviation personnel should be grounded during treatment of the acute phase.

**WAIVER:** A history of pelvic inflammatory disease (PID) in female aircrew who are symptom free is NCD. Female aircrew members who have chronic pelvic pain as a sequelae to PID should be evaluated by a Gynecologist and a waiver may be recommended on a case-by-case basis.

### INFORMATION REQUIRED:

1. Gynecology consult
2. Documenting resolution of acute PID

**TREATMENT:** Antibiotic treatment during the acute phase will result in grounding. Initial outpatient treatment is Rocephin® 250 mg IM plus Doxycycline 100 mg bid for 14 days. Patients should be re-evaluated in two days if symptoms are not better. In those cases, the diagnosis of PID should be reconsidered or the patient should be admitted to the hospital for IV antibiotic treatment. Surgical treatment for the sequelae of PID (adhesions) is compatible with a return to flying duties. Patients may return to flying one week after laparoscopy provided they remain asymptomatic.

**DISCUSSION:** The incidence of PID in the US is approximately 1% in young females. The diagnosis of pelvic inflammatory disease is made based upon the triad of abdominal pain, cervical motion tenderness, and adnexal tenderness (usually bilaterally) along with any one of multiple non-specific indications of inflammation or infection (e.g. temperature elevation, leukocytosis, leukorrhea, etc). Many women are improperly diagnosed with PID, and definitive diagnosis is made with laparoscopy. Sequelae include pelvic adhesions, infertility, chronic pelvic pain, and increased risk for ectopic pregnancy.

### ICD-9 CODE:

**614.9 Pelvic Inflammatory Disease**

## 11.6 PREGNANCY April 2010

**AEROMEDICAL CONCERNS:** Pregnancy is a normal female condition associated with various dynamic physiological changes capable of modifying an aviator's expected tolerance to the aviation environment. Examples of aeromedically relevant changes include hypotension, physiologic anemia (dilutional), hypercoagulability, and alterations in pulmonary function, glucose metabolism, and visual acuity.

Pregnancy is also associated with certain pregnancy-specific disorders that may pose additional risk in the aviation environment. Examples of these disorders include ectopic pregnancy, hypertension-seizure, bleeding, miscarriage and even morning sickness (hyperemesis). Pregnancy can also increase the risk of other non-pregnancy specific conditions that could affect the member's flight safety. Pregnancy increases the risk of blood clots and pulmonary emboli. Underlying clotting disorders increase this risk. Screening for preexisting clotting disorders should be considered and may be offered to pregnant aviators.

Although incompletely researched, flying during pregnancy may place the fetus at risk. The physiologic stresses of aviation duty, in addition to noise, vibration, Gz forces, pressure changes, and hypoxia all introduce potential risk to the mother and fetus. See [Request to Continue Flying While Pregnant](#) for common physiologic changes in pregnancy and potential hazards to the pregnant aviator.

**WAIVER:** Pregnancy is considered disqualifying (CD) for all aviation duties except for Air Traffic Controllers. Pregnancy is not considered disqualifying (NCD) for Air Traffic Controllers, provided the pregnancy remains uncomplicated. Designated aviators may request a waiver to continue flying after the completion of a full obstetrical evaluation by 12 weeks to remain in effect up to 28 weeks gestation, as Class I-Service Group 3, Class II or Class III. No waivers are considered for candidates or student aviators in training. Participation in aviation physiology, aviation water survival, or other water survival programs is not authorized at any time during pregnancy. Aviation physiology qualifications and anticipated expiration dates must be considered prior to waiver request. Specific guidance on pregnancy in flight personnel is contained in the OPNAVINST 3710.7 and OPNAVINST 6000.1 series, and includes the following conditions:

1. A waiver of physical standards may be granted for pregnant designated aviators to Service Group 3 only, and will not include shipboard operations.
2. A waiver will only permit flight in Transport/Maritime/Helicopter aircraft with a cabin altitude of 10,000 feet or less.
3. Flying in solo or ejection seat aircraft will not be considered for waiver.
4. The member may request an authorization for Pilot-in-Command, as described in OPNAVINST 3710.7 series. In these circumstances, a completed Pregnancy AMS (LBFS) with ultrasound, laboratory, and full obstetric evaluation will be accepted in lieu of a typed SF 88.

Upon confirmation of her pregnancy, an aviator shall immediately notify her flight surgeon, and obtain a referral for initial obstetric evaluation. To continue flying during

pregnancy, an aviator must request a pregnancy-specific waiver by signing and submitting the Request to Continue Flying while Pregnant form. The flight surgeon shall recommend the member's Commanding Officer convene a Local Board of Flight Surgeons (LBFS), comprised of the member's flight surgeon, a second flight surgeon, and the member's obstetrical care provider. A Pregnancy Aeromedical Summary shall be completed for all pregnant flight personnel and submitted to NAMI Code 342. All abnormalities must be addressed on the AMS by the obstetrical care provider and the LBFS. The unit flight surgeon shall notify the Commanding Officer of the LBFS's recommendation, in addition to the member's condition and intentions. If the pregnancy is uncomplicated (as defined below), the LBFS recommends a waiver, the Commanding Officer is in concurrence, and there are no other medical conditions requiring a waiver, a 90-day aeromedical clearance notice may be issued to the aviator. The flight surgeon shall submit the completed Pregnancy Aeromedical Summary (LBFS), with all documentation, to NAMI Code 342 for final review and submission to BUPERS/CMC.

For those aviators who do not desire to continue flying while pregnant or a waiver is not recommended, the aeromedical summary may be signed solely by the member's flight surgeon, and submitted to NAMI Code 342 as a grounding physical.

**Pregnancy, Uncomplicated:** For aeromedical purposes, pregnancies are considered uncomplicated when the formal obstetrical evaluation determines the pregnancy to be uncomplicated, and the member has no other medical condition requiring a waiver. The minimum determinants for an uncomplicated pregnancy require consultation with an obstetrical care provider, ultrasound confirmation of a singleton intrauterine pregnancy with estimated gestational age, routine obstetric laboratory studies, and a visual acuity examination documenting 20/20 vision. Complications, or new disqualifying conditions which arise in a pregnancy after initial granting of the waiver, shall terminate the waiver, and NAMI Code 342 will be notified immediately.

**Pregnancy, Uncomplicated; with Other Medical Conditions/Waivers:** Pregnancies are considered uncomplicated, with other medical conditions/waivers for aeromedical purposes when the formal obstetrical evaluation is found to be uncomplicated, but the member has other medical condition(s) that require a waiver. Pregnancy can affect or be affected by other medical conditions and/or medicine regimens. Even if these conditions were previously waived and stable pre-pregnancy, they must be reevaluated. In general, these cases must be deferred to NAMI for final disposition on the pregnancy and other conditions, before an upchit can be issued. In some instances, the "other condition(s)" may be unaffected by and inconsequential to the uncomplicated pregnancy. In these cases, a 90-day upchit may be issued only after discussion with and approval from NAMI. The other medical condition(s) and the current status of each must be described in the aeromedical summary. The minimum determinants for an uncomplicated pregnancy are described under pregnancy, uncomplicated. Complications or new disqualifying conditions which arise in a pregnancy after initial granting of the waiver shall terminate the waiver, and NAMI Code 342 will be notified immediately.

**Pregnancy, Complicated:** For aeromedical purposes, pregnancies are considered complicated if the formal obstetrical evaluation finds the pregnancy complicated, any abnormal pregnancy-specific condition exists at any time in the pregnancy, or the member has another medical condition(s) shown to be affected by, or influencing the pregnancy. In these cases, an aeromedical clearance notice shall NOT be given until reviewed by NAMI Code 342, and forwarded to the appropriate waiver authority for final disposition. For circumstances involving a complicated pregnancy, a completed Pregnancy AMS, obstetrical notes, and documentation

regarding all other non-pregnancy condition(s), medications, and waivers must be submitted to NAMI Code 342.

**Air Traffic Controllers:** An uncomplicated pregnancy is not considered disqualifying (NCD) for Air Traffic Controllers. A Pregnancy AMS is submitted to NAMI for information only. They may continue to perform their duties, until the beginning of the 28<sup>th</sup> week gestation, or until the medical officer, the member, or the command determines the member can no longer perform her duties as an ATC. At this time, a Pregnancy AMS shall be submitted to NAMI Code 342 as a grounding physical or to request a waiver with restrictions. Complicated pregnancies are considered disqualifying (CD) for Air Traffic Controllers. These members shall be grounded and processed as a complicated pregnancy with a Pregnancy AMS as described above.

**For CNATRA Air Traffic Controllers:** Uncomplicated pregnancy is not considered disqualifying (NCD) for CNATRA Air Traffic Controllers. These personnel may continue to perform their duties until the beginning of the 28<sup>th</sup> week gestation. After the 28<sup>th</sup> week gestation, they may work in a supervisory capacity only, and shall not work in the tower. At 28 weeks, a Pregnancy AMS shall be submitted to NAMI Code 342 as a grounding physical, or notification for continuation of non-tower duties. Complicated pregnancies are considered disqualifying (CD). These members shall be grounded and processed as a complicated pregnancy with a Pregnancy AMS as described above.

**Pilot in Command:** According to OPNAVINST 3710.7 series, waivers to Class I, Service Group 3, automatically include Pilot In Command (PIC) authority, unless the PIC authority is specifically restricted. In addition, student aviators may not assume flight controls /fly with a Service Group 3 Pilot. The appropriate box in the Pregnancy AMS (LBFS) may be checked if there are no specific restriction recommendations. The reason for a PIC restriction recommendation should be listed on the AMS (LBFS).

**INFORMATION REQUIRED (templates on ARWG front page):**

1. Request to Continue Flying while Pregnant – signature required.
2. Obstetric Evaluation to include an Obstetric Ultrasound, Estimated Date of Confinement (EDC), and baseline labs.
3. Pregnancy AMS (LBFS) with any abnormalities evaluated by the obstetrical care provider and explained in the Flight Surgeon comments section.

**Monitoring by Flight Surgeon:**

1. The pregnant aviator shall routinely meet with her flight surgeon every two weeks.
2. The member will be evaluated to confirm she:
  - a. Desires to continue flying while pregnant
  - b. Is receiving routine obstetrical care
  - c. Has not developed any condition which defines a complicated pregnancy
  - d. Has not developed any condition which impairs her safety in flight or emergency egress
  - e. Maintains 20/20 vision (or corrects to 20/20)
3. The member shall be educated to return to her flight surgeon should any concerning symptoms develop between visits.
4. Any time in the continuum of care these conditions are not met, the pregnancy waiver shall be terminated and NAMI Code 342 notified immediately.

**Postpartum Return to Flight Status (template on ARWG front page):**

1. In accordance with OPNAVINST 6000.1 series, convalescent leave, following any uncomplicated delivery or cesarean section, will normally be for 42 days after discharge. For aviation purposes, this will allow adequate time for recovery and return to pre-pregnancy physiologic baseline. This form is also used for miscarriage and termination. A shorter grounding period may be considered for a first trimester pregnancy loss with a normal obstetrical exam, aeromedical exam and appropriate grieving period.
2. Return to flight status may be requested after convalescent leave. The aviator must meet physical standards before returning to flight duty. The flight surgeon shall submit to NAMI Code 342:
  - a. Completion of Pregnancy Aeromedical Summary (AMS) to NAMI
    - i. Information of aeromedical significance regarding the pregnancy, delivery, post-partum course or complications.
    - ii. Information of aeromedical significance regarding the health of the child and mother.
  - b. Post Partum obstetrical exam
  - c. Long Form Flight Physical Complete to include:
    - i. Hematocrit
    - ii. Visual acuity

**DISCUSSION:**

The reasons for flight restrictions vary with each stage of pregnancy. As in aviation, one can employ a risk management model to determine when a pregnant aviator can safely fly. In this case, both the probability and severity of adverse outcomes are greatest in the first and third trimester, effectively eliminating these times for waiver consideration. In the first trimester, ectopic pregnancies, bleeding and miscarriages are common, and often present unexpectedly. These complications are difficult to predict, and frequently present with life-threatening or incapacitating emergencies. Also in the first trimester, potential teratogenic exposures, vibration, hypoxia, Gz forces and other stresses of the aviation environment can have undesirable effects on the developing fetus. The uncertainties of the first trimester, combined with the severity of pregnancy-specific complications, present unacceptable risks to the pregnant aviator, thus limiting the consideration for waivers at this time.

In the second trimester, a normal intrauterine pregnancy can be confirmed with ultrasound, therefore mitigating some of the risk uncertainty present in the first trimester. For this reason, the aviator with an uncomplicated pregnancy can more safely fly at this time, assuming careful consideration is given to limit her exposure to other potentially harmful effects of the flight environment, such as hypoxia or excessive Gz exposure.

In the third trimester, pre-term labor, rupture of the membranes and bleeding can occur in an unpredictable fashion, creating an emergent risk to the mother, fetus, and aircrew. These events introduce unacceptable risks to the safety of flight and prohibit the issuance of waivers in the third trimester.

Pre-existent medical conditions represent an additional risk consideration in the pregnant aviator. Pre-gravid, stable medical issues may become exacerbated during pregnancy, or impart an adverse effect on the pregnancy. Additionally, chronic medication regimens are frequently discontinued or changed during pregnancy. For these reasons, each aviator with a previous medical waiver, including medication waivers, must be evaluated in the context of her pregnancy, prior to issuance of a pregnancy waiver. In these circumstances, NAMI Code 342 must be consulted prior to determination of waiver recommendation or LBFS upchit.

Prior to waiver recommendation, and during waiver continuance, careful consideration must be given to the effects of pregnancy on the aviator, including how she is coping with the physiologic, emotional, and professional stresses of pregnancy. Regular follow-up is required to confirm her desire to continue flying during pregnancy, and the absence of any condition(s) which may adversely impact her safety in flight.

**ICD-9 Codes:**

**V22 Pregnancy, Uncomplicated**

**630-650 Pregnancy, Complicated**