11.0 OBSTETRICS AND GYNECOLOGY

Last Revised: July 16 Last Reviewed: July 16

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

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AEROMEDICAL CONCERNS: The aeromedical hazards of cervical dysplasia and glandular cervical changes involve the distraction of knowing a precancerous condition is present, the requirements for specialized follow up and treatment, and the actual risk of developing a cancerous condition. For **squamous cervical dysplasia**, there is a high likelihood of its regression in mild cases and the rate of progression in all cases is generally slow. Currently, the appropriate screening interval for squamous cervical dysplasia is based on age and the screening method. Ignored or inappropriately evaluated cervical changes can allow progression to severe dysplasia in a few years, or cancer within several years. Progression to severe dysplasia or cancer will require more significant treatment. The severity of dysplasia affects the monitoring, management, and treatment requirements, which in turn, may affect deployability. While squamous dysplasia is more effectively treated and progresses in a more predictable course, **glandular cervical changes** are more unpredictable and progress to cancer more commonly.

Because of the evidence regarding age differences for HPV infection, and the persistence, spontaneous resolution, and progression of dysplasia, the American College of Obstetricians and Gynecologists (ACOG), the American Society for Colposcopy and Cervical Pathology (ASCCP), and the American Society of Clinical Pathologists (ASCP) have changed screening guidelines based on the age groups of under 21, 21-29, and 30-65. These guidelines recommend that Pap smear screening of otherwise healthy women begin at age 21 regardless of the age of sexual initiation, then every 3 years until age 30, then every 3-5 years (depending on use of HPV testing) until age 65. MANMED directs Pap smears to be performed starting at age 21, then every three years until age 30 in women with normal Pap Smears. After age 30, screening of women with normal Pap smears is done every three years, or extended to every 5 years if HR-HPV Co-Testing is used and negative. Identification of HPV or dysplasia changes the management and surveillance. Underlying conditions such as HIV or immunosuppression can increase the surveillance to every six months. These guidelines are based on the accumulating evidence and are designed to decrease unnecessary screenings, decrease invasive procedures to the cervix, and reduce adverse effects from the procedures.

Squamous cervical dysplasia involves precancerous changes to squamous cells of the uterine cervix and is associated with human papilloma virus infection (HPV). HPV types include oncogenic (high-risk) and non-oncogenic. Most HPV infections affecting the cervix are non-oncogenic and often resolve spontaneously within one year. As the HPV infection resolves, the dysplasia resolves as well. Infection with high-risk HPV is usually necessary, but not sufficient for the development of cervical squamous intraepithelial neoplasia. HPV-16 and 18 are the most common subtypes associated with cervical cancer and are considered high-risk HPV (HR-HPV). The likelihood of progression to cervical cancer is 55-60% HPV-16, and 10-15% with HPV-18. These two subtypes are included in the available HPV vaccination. HPV infections of all types are most common in women in their teens and twenties. In most women with a normal immune system, especially those under age twenty-one, the HPV infection will resolve spontaneously within 8 months and the average time to eliminate the virus is 8-12 months. An apparent persistence of HPV in this age group more commonly represents reinfection as opposed to persistent infection. As women age, the prevalence of HPV infection decreases. When dysplasia is newly diagnosed after age 30, it is more likely to be persistent. The average time for untreated HGSIL (HSIL) to progress to invasive cancer is 3-7 years. Cofactors that increase the likelihood of a persistent HPV infection and dysplasia include tobacco use, immune

deficiency, and human immunodeficiency virus (HIV). Women with + HIV status require dysplasia screening more frequently than the routine screening recommendations for the general population.

Dysplasia is graded as cervical intraepithelial neoplasia I, II, III (CIN I-III) or carcinoma in-situ (CIS). Dysplasia is more commonly described as low grade squamous intraepithelial neoplasia (LGSIL, LSIL), high grade intraepithelial neoplasia (HGSIL, HSIL), and CIS. In some cases, both systems are used for description. LSIL includes CIN I and + high risk HPV, whereas HSIL includes CIN II and CIN III. The higher the grade, the more likely and more quickly the dysplasia will progress to cancer. Atypical squamous cells (ASC) of undetermined significance (ASC, ASC-US) include cervical changes that are uncertain of the presence of HPV or grade of any dysplasia that may be present. ASC can be associated with inflammatory changes in a cervix with underlying changes that range from no dysplasia to HSIL. For this reason, ASC findings are usually managed based on high-risk HPV reflex testing. When cellular changes are consistent with ASC but cannot rule out HSIL, ASC-H is reported. It is evaluated and managed as dysplasia. When high-risk HPV is absent, it is generally managed with observation.

HPV Type Testing (Reflex Testing and Co-Testing): HPV is the cause of squamous cervical dysplasia. HPV is considered necessary, but not sufficient for cancer. HPV 16 and HPV 18 types are associated with the highest risk for progression to cervical cancer. These types are considered high risk and are included in HPV testing. High risk HPV (HR-HPV) typing is used in two ways: Reflex Testing and Co-Testing. **HR-HPV Reflex Testing** is used in cases of ASCUS *in all age groups* to determine the presence of dysplasia. ASC with a positive HR-HPV reflex test is managed as LSIL. ASC with a negative HR-HPV is managed as no dysplasia. **HR-HPV Co-Testing** is part of a screening method used only for women over age 30. Women younger than age 30 are more likely to have recurrent HPV infections that resolve and as such, Co-Testing is not used in this group. In women aged 30 and older, HR-HPV Co-Testing can be used in conjunction with Pap smear cytology. When both are used and both are negative, the routine screening interval in this age group is every five years. When Pap cytology only is used in this group, routine screening is every 3 years. MANMED Chapter 15 explains that HPV testing (Co-Testing) should not be used in women under age 30. In MANMED Chapter 15, the algorithm for abnormal Pap describes using HR-HPV testing (Reflex Testing) for ASCUS identified at any age.

Atypical Glandular Changes (AGC) are less common, but are significantly different from squamous changes and have a more significant cancer risk and aeromedical hazard that require separate consideration. These changes involve glandular cells of the cervix and endometrium, which are occasionally identified on routine cervical screening. These more concerning glandular changes can occur in association with squamous dysplasia. The types of glandular changes reported include atypical glandular cells-not otherwise specified (AGC-NOS), atypical glandular cells-favor neoplasia, and adenocarcinoma in-situ (AIS). These glandular changes require more significant evaluation, often with a Gynecological Oncologist, since they are associated with greater risk of cancer and recurrence.

Most squamous dysplasia regresses spontaneously and some progress gradually (years) and in a contiguous pattern. In contrast, AIS is associated with skip lesions affecting various areas of the cervix and endometrium. As such, a careful specialty evaluation requires HPV testing, colposcopy with biopsies as indicated, and sampling of the endometrium. Recurrence of AIS and its progression to adenocarcinoma are common and unpredictable. The definitive treatment of choice is hysterectomy. Cervical excision is not considered definitive. Fertility preserving management strategies require close specialized follow up for recurrence or

progression. If child bearing is desired, then an early attempt is recommended to successfully accomplish it prior to recurrence.

AIS is considered disqualifying. Waivers for AIS without definitive treatment are considered on a case-by-case basis, but are uncommon due to the required monitoring, and uncertainty (with high likelihood) of progression, recurrence, and concurrent adenocarcinoma. A history of AIS that has been definitively treated with hysterectomy is not considered disqualifying.

WAIVER:

1. **Applicants and Students** –Most abnormal PAP results are disqualifying and require a waiver for applicants and students. This is especially true when a history or current Pap abnormality requires monitoring and retesting more frequently than every three years. This is to facilitate and ensure adequate follow-ups are obtained as recommended, according to ASCCP/ACOG Guidelines, and prior to post-training deployment. Submit an AMS with all available documentation and lab results for NAMI review.
   a. ASC, ASC-US without adequate evaluation: Waivers are generally not considered without HPV Reflex Testing or completing an evaluation. Requires HR-HPV Reflex Testing and further evaluation as indicated before waiver consideration. ASC-US with a negative HR-HPV is NCD.
   b. LSIL, CIN I, ASC-H, positive HR-HPV: Requires evaluation and follow-up. LSIL and ASC-H evaluated as indicated and is CD during until completion of training.
   c. HSIL, CIN II-III: incompletely evaluated: Waivers are generally not considered. Requires definitive evaluation. Waivers considered when fully evaluated and treated if necessary.
   d. CIS: Requires definitive evaluation. Waivers may be considered when fully evaluated and treated.
   e. AGC incompletely evaluated. No waiver. Requires definitive evaluation. Waivers may be considered when fully evaluated and treated.
   f. AIS untreated or treated without hysterectomy: Requires definitive evaluation. Waivers are generally not considered.. Note: AIS fully treated with hysterectomy is NCD.
   g. Squamous carcinoma or adenocarcinoma: Waivers are considered on a case-by-case basis. See Chapter 9, Malignancies.

2. **Designated**
   a. ASC, ASC-US, ASC-H: Requires HPV screen and further evaluation as indicated. Continue flight duties while completing evaluation. ASC-US with a negative HR HPV is NCD.
   b. LSIL, CIN I, Positive High-Risk HPV: Requires evaluation and follow-up. Continue flight duties while completing evaluation. LGSIL evaluated as indicated and without more advanced dysplasia is NCD.
   c. HSIL, CIN II-III: Requires definitive evaluation. Continue flight duties while completing definitive evaluation. Waivers considered when fully evaluated and treated if necessary.
   d. CIS: Requires definitive evaluation. Continue flight duties while completing definitive evaluation and treatment. A history of CIS fully treated without residual CIS or HSIL is NCD.
   e. AGC: Requires definitive evaluation. Continue flight duties while completing definitive evaluation. Waivers are considered when fully evaluated and treated if necessary.

f. AIS untreated or treated without hysterectomy: Requires definitive evaluation. Waivers are considered on a case by case basis. AIS fully treated with hysterectomy is NCD.
g. Squamous or adenocarcinoma carcinoma: Waivers are considered on a case-by-case basis. See Chapter 9, Malignancies.

INFORMATION REQUIRED:

1. **Initial waiver**
   a. Gynecological notes (including oncology notes when involved) from diagnosis, treatment, and post-treatment.
   b. Radiological reports if performed for the condition.
   c. Pathology reports before, during, and after treatment.
   d. Follow-up as recommended by the treating Gynecologist

2. **Renewal**
   a. Gynecological notes (including oncology notes when involved) of follow-up and condition status
   b. Interval radiological reports if performed for the condition.
   c. Pathology reports from interval evaluations.
   d. Follow-up as recommended by the treating Gynecologist

TREATMENT: Dysplasia may require frequent colposcopy, biopsy, and increased frequency of evaluations. High-grade squamous intraepithelial lesions (HGSIL) require colposcopy and may need surgical treatment (LEEP, cold knife conization (CKC)). Evaluation of HSIL is not emergent and should be performed within 2-4 months. LSIL may require colposcopy to confirm that more advanced dysplasia is not present. Repeat evaluations are performed as recommended by ACOG. CIS requires cervical sampling with a CKC or LEEP and is typically followed with a gynecological oncologist. AGC and AIS require a more thorough evaluation of the cervix and endometrium. The definitive treatment for AIS is hysterectomy, but this treatment may be delayed for child bearing after a thorough evaluation by a gynecological oncologist.

DISCUSSION: The recommendations for routine Pap smear screening have decreased in frequency based on age-specific evidence. This addresses the age-specific recurrent HPV infections that commonly resolve spontaneously, and differentiates recurrences from the more concerning persistence. These changes have reduced the likelihood of unnecessary cervical procedures, especially for younger women, and the potential side effects they can induce. It also utilizes screening for high risk HPV types (Co-Testing) to reduce screening frequency only for women over age 30 with normal Pap smears. HPV type testing (Reflex Testing) is used in all age groups to evaluate and manage ASC-US. Military women can be considered in a high risk subgroup, and considering the possibility of deployment or training cycles, a greater vigilance is necessary within the guidelines. In addressing the risk of HPV/dysplasia recurrences, preventive measures include appropriate sexual practices, barrier use, and vaccination. Dysplasia of all types, especially HGSIL, still requires appropriate assessment, treatment, and follow-up with military training and deployment consideration. AGC and AIS are occasionally identified through routine evaluations. These glandular changes are significantly different from the more common squamous dysplasia and require different and specific evaluation and treatment to address their greater risk.

ICD-10 CODES:

R87.610 ASC-US

R87.611	ASC-H
R87.612	LSIL
R87.613	HSIL
R87.614	Evidence of malignancy on smear of cervix
N87	Dysplasia of the cervix
N87.0	Mild dysplasia
N87.1	Moderate dysplasia
N87.9	Dysplasia of cervix, unspecified
Z87.410	Personal History of cervical dysplasia
D06	Carcinoma in situ of the cervix uteri
D06.9	Carcinoma in situ of the cervix, unspecified
C53	Malignant neoplasm of the cervix

Reference

New Cervical Cancer Screening Recommendations from the U.S. Preventive Services Task Force and the American Cancer Society/American Society for Colposcopy and Cervical Pathology/American Society for Clinical Pathology, March 14, 2012, https://www.acog.org/About-ACOG/News-Room/News-Releases/2012/Medical-Groups-Release-New-Cervical-Screening-Guidance

11.3 ENDOMETRIOSIS

Last Revised: November 14 Last Reviewed: November 14

AEROMEDICAL CONCERNS: Endometriosis occurs when the endometrial tissue proliferates outside the endometrial cavity. The ectopic endometrial implants are most commonly located in the pelvis and abdomen, but can occur elsewhere in the body. It is associated with cyclic menstrual pains, non-cyclic pains, ovarian cysts, infertility, and symptomatic adhesive disease. While variable and unpredictable, the condition and its symptoms typically progress over time. The disease affects 5-10% of reproductive aged women and occurs most commonly between the ages of 25 and 29 and a familial tendency has been identified. Endometriosis is the cause in a significant portion (15%) of women with pelvic pain. The pain is typically located in the pelvis and lower abdomen, but also in the lower back. The pain can be exacerbated by exercise, intercourse, micturition, or defecation. Pain is the most common symptom associated with endometriosis and approximately three quarters of symptomatic patients experience pelvic pain and/or dysmenorrhea. The range of symptoms include: chronic pelvic pain, dysmenorrhea, deep dyspareunia, infertility, abnormal menstrual bleeding, chronic fatigue, low back pain, bloating, and bowel or bladder symptoms. These symptoms usually occur in a monthly cyclical pattern in association with the menstrual cycle. The ectopic endometrial tissue of endometriosis responds to the woman's hormonal milieu in the same manner as the endometrium, whether it is proliferating or menstruating. Since the endometriosis implants are embedded in atypical locations, these cyclic changes play an integral role in the associated symptoms and sequelae. These changes are the underlying cause of the cyclic symptoms and subsequently lead to symptomatic abdominal and pelvic adhesions. Menorrhagia is often associated with endometriosis and may lead to an anemia. The dysmenorrhea, pelvic pain, and backache can be distracting and unexpected in the flying environment, while an anemia may affect flight performance and G-tolerance.

TREATMENT: Endometriosis proliferates in response to estrogen and may be suppressed in response to progesterone in a similar fashion to the responses of the endometrium. The diagnosis is generally confirmed surgically, but may be made empirically. Treatment is focused on inhibiting estrogen exposure on the endometriosis. Hormonal contraceptives (including estrogen containing) are the first-line of therapy and can be very effective in controlling symptoms and disease progression. Progesterone-only contraceptives are preferred and can be effective cases that fail estrogen containing contraceptives. The more advanced medical treatments include medications that fully suppress ovarian estrogen and induce a medical menopause. Gonadotropin releasing hormonal analogs fully suppress the ovaries as a reversible medical oophorectomy. These medications are administered in a cyclic fashion and are associated with significant menopausal symptoms including mood, vasomotor, vaginal, and dermatological symptoms. These symptoms are variable within and across individuals making them unpredictable in the flight environment. Other medical treatments include aromatase inhibitors that can have similar adverse side effects in unpredictable patterns. Surgical exploration and treatment may be required before, during, or after medical therapy. Minor surgical treatments can improve the condition, but more extensive surgery may be required. Unilateral/bilateral oophorectomy, hysterectomy, and/or adhesionolysis can be beneficial or curative.

WAIVER: Current or history of endometriosis is disqualifying for all aviation duties. Mild endometriosis, which requires only mild analgesia and hormonal contraceptives, is considered for waiver with evidence of persistent pain control and medication tolerance. Treatment with long acting, reversible, systemic progesterone-only hormonal contraceptives is preferential in

many cases and when oral contraceptives have been ineffective. Progesterone emitting intrauterine devices provide a local inhibiting effect on the endometrium and may not be as effective for control of endometriosis symptoms. Treatment with Gn-RH analogs or aromatase inhibitors is associated with more unpredictable adverse side effects and are typically not considered for waiver.

With the diagnosis of endometriosis, continuation of the oral contraceptives (or other hormonal suppression medication) is recommended to reduce the risk of symptom recurrence and endometriosis progression. 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:
Initial and renewal:

1. Gynecology evaluation
2. History of symptoms and treatments
3. Notes regarding diagnostic and treatment procedures
4. Pertinent labs and hematocrit
5. Evidence of sustained treatment tolerance
6. Evidence of sustained symptom control

DISCUSSION: Endometriosis symptoms often begin in the late teens in a periodic fashion with the menstrual cycle. The symptoms may begin as mild, responding well to hormonal contraceptive treatment, and may elude early diagnosis. Endometriosis is typically persistent and progressive. Over time, the disease generally progresses and can cause the development of abdominal and pelvic adhesions, which induce additional non-cyclic symptoms independent of the menstrual cycle. Its adverse symptoms are variable and unpredictable. The disease progression often results in the need for additional diagnostic/therapeutic surgical procedures, medication adjustments, and subsequent re-evaluations.

ICD-9 CODES:
617 Endometriosis
617.0 Endometriosis of uterus
617.9 Endometriosis, site unspecified

11.4 HORMONAL REPLACEMENT THERAPY AND CONTRACEPTION

Last Revised: January 15 Last Reviewed: January 15

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:

1. Annual gynecological exam per OPNAVINST 6000.1 series
   a. Pap smear as indicated
   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

Last Revised: July 18 Last Reviewed: July 18

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 and UAS/UAV personnel. Pregnancy is not considered disqualifying (NCD) for Air Traffic Controllers and UAS/UAV personnel, provided the pregnancy remains uncomplicated. Designated aviators may request a waiver to continue flying after a complete obstetrical evaluation for flying from 12 weeks to 28 weeks gestation, as Class I-Service Group 3, Class II, or Class III. Waivers are considered for singleton pregnancies. 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 Summary shall be completed for all pregnant flight personnel and submitted to NAMI Code 53HN. All abnormalities must be addressed on the Summary 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 Summary (LBFS), with all documentation, to NAMI Code 53HN for final review and submission to BUPERS/CMC via AERO.

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 53HN as a grounding physical.

Pregnancy, Uncomplicated: For aeromedical purposes, pregnancies are considered uncomplicated when a formal obstetrical evaluation has determined it to be an uncomplicated (low risk), single gestation, 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 53HN 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 53HN 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 53HN, and forwarded to the appropriate waiver authority for final disposition. For circumstances involving a complicated pregnancy, a completed Pregnancy Summary, obstetrical notes, and documentation regarding all other non-pregnancy condition(s), medications, and waivers must be submitted to NAMI Code 53HN.

Air Traffic Controllers: An uncomplicated pregnancy is not considered disqualifying (NCD) for Air Traffic Controllers. A Pregnancy Summary is submitted to NAMI for information only. They may continue to perform their duties, until the medical officer, the member, or the command determines the member can no longer perform her duties as an ATC. At the time of medical grounding from controlling duties, a Pregnancy Summary shall be submitted to NAMI Code 53HN 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 Summary 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 Summary may be checked if there are no specific restriction recommendations. The reason for a PIC restriction recommendation should be listed on the AMS.

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 Summary (LBFS) with any abnormalities evaluated by the obstetrical care provider and explained in the Flight Surgeon comments section.
4. Physical exam with associated electronic AMS created and submitted in AERO

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 53 HN notified immediately.

Postpartum Return to Flight Status (submit completed 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 53HN:
   a. Completion of Pregnancy Summary to NAMI
      (1) Information of aeromedical significance regarding the pregnancy, delivery, post-partum course or complications.
      (2) Information of aeromedical significance regarding the health of the child and mother.
   b. Postpartum obstetrical exam
   c. Long Form Flight Physical Complete to include:
      (1) Hematocrit
      (2) Visual acuity

d. Electronic AMS created and submitted in AERO

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 53HN 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