

## MISCELLANEOUS WAIVERS

CONDITION: SMOKING CESSATION

Revised June 2002
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**AEROMEDICAL CONCERNS:** Cigarettes smoking is the leading cause of preventable death and disability in the United States. Smoking is associated with heart disease, stroke, certain cancers, chronic obstructive pulmonary disease, and adverse pregnancy outcomes. Smokeless tobacco products increase the risk for oropharyngeal cancers. In the US, 25% of the adult population smokes and this is felt to contribute to 400,000 + deaths per year. In the aeromedical environment, tobacco use leads to increased carbon monoxide levels with subsequent ophthalmologic effects and potentially harmful peripheral capillary effects on thermoregulation. Heavy smokers may desaturate as much as 10% of their oxyhemoglobin with carbon monoxide. This produces at sea level a 90% oxygen saturation level equivalent to an altitude of 10,000 feet. Visual changes at this equivalent or physiologic altitude include loss of 20% of night vision, and decreases in accommodation, convergence, brightness sensitivity, color detection, oculomotor coordination, flicker detection, and peripheral vision.

As aeromedical healthcare providers, assisting our aircrew in smoking cessation is associated with substantial health benefits and furthers our work in health promotion, and improves flight safety. This policy helps to provide an effective, safe methodology for achieving smoking cessation while ensuring a close monitoring program to provide a supportive platform, as well as to detect significant side effects as soon as possible. This policy also applies to weaning from smokeless tobacco products.

### **WAIVERS:**

Initial Applicants (All Classes) & Rated Aviation Personnel: No waivers or exceptions to policy are required for smoking cessation therapy. Use of Bupropion (Zyban) must be closely monitored as noted below and its use must be annotated on the annual FDME for Information Only.

**INFORMATION REQUIRED:** Local flight surgeons must be fully familiar with the potential effects of any prescribed medication, assess the patient's motivation for smoking cessation, and thoroughly counsel the patient regarding the role of medication in smoking cessation, the need for absolute smoking abstinence while using a patch or gum, the correct technique for chewing gum to avoid nicotine overdose, the possible side effects, and a discussion of all restrictions while under treatment.

For use of Bupropion (Zyban), an annotation in the annual FDME reference use of therapy, any side effects, and success of therapy is required. This information will be filed as Information Only.

**FOLLOW-UP:** For Nicotine replacement therapy (NRT) (patch, inhaler, gum), initial follow-up should occur after 72 hours and then within 14 days; subsequent visits should be at least every 30 days. Nicotine gum may not be used while flying. Nicotine patches may be worn while flying; however, it is advisable to fly with another fully qualified, rated aviator. Local flight surgeons are responsible for prescribing and managing the nicotine weaning program for all aviation personnel. When initially prescribed a nicotine patch or gum, the aviator will be restricted from flying for 72 hours. Once 72 hours has passed with no evidence of significant side effects and the patient has successfully abstained from smoking, the aviator may return to full aviation duties. Smoking is absolutely forbidden at all times. One episode of smoking voids the contract made with the flight surgeon and the aviator must be considered to be medically restricted until cleared by the flight surgeon (FS). Temporary clearance should be granted for the duration of treatment while under the direct guidance of the FS.

For Bupropion (Zyban) therapy, aircrew that meet criterion for treatment must be grounded for at least the initial 2 weeks of therapy. During this time, the FS must closely monitor the individual for medication side effects to include insomnia and elevations in blood pressure. At the end of the two week grounding period, the FS must determine if the individual can resume flight duties and a temporary upslip can be issued. The aircrew should be seen by the flight surgeon every two weeks while on therapy to assess effectiveness, potentially hazardous side effects, and to offer support to the individual. Those on combination Bupropion (Zyban) and NRT must be closely monitored for elevations in blood pressure. Using Bupropion (Zyban) in association with group or individual counseling in a smoking cessation program is highly encouraged.

**Contraindications to Bupropion (Zyban) use are as follows :**

- History of seizure disorder,
- Conditions predisposing to lowered seizure threshold:
  - History of head trauma or seizures
  - Excessive alcohol use/abuse/dependence
  - Concomitant use of other drugs: theophylline, or corticosteroids
- History of eating disorder (bulimia, anorexia nervosa),
- Hepatic or renal disease,
- Uncontrolled hypertension,
- Pregnancy or lactation; and,
- Recent use of other medications: monoamine oxidase (MAO) inhibitors, other antidepressants, and antipsychotics. (These are not authorized for use in aviation personnel)

**TREATMENT:** Aircrew members are encouraged to participate in formal smoking cessation or similar tobacco abuse programs with individual or group counseling offered. Bupropion (Zyban) dosing for smoking cessation starts at 150 mg qd for 3 days and then increases to 150 mg bid. Doses should be taken 8 hours apart and doses higher than 300

mg should not be used. Usual treatment course is 8-12 weeks. The medication is started while the aircrew is still smoking and a target quit date is set for within the first two weeks of treatment. If no progress towards abstinence has been made, stopping treatment should be considered after 7 weeks of therapy.

**DISCUSSION:** In the U.S. in 1990, smoking was directly responsible for 418,690 deaths. It was linked to nearly one in five of all deaths and more than one in four deaths in people ages 35-64. Cigarette smoking significantly increases the risk of cardiovascular disease, including coronary heart disease, stroke, sudden death, aortic aneurysm, and peripheral vascular disease. Of the more than 4000 substances in cigarette smoke, 43 are known carcinogens. Cigarette smokers have twice the risk of death from cancer as nonsmokers, and smoking accounts for 30% of all cancer-related deaths. Cigarette smoking is the leading cause of pulmonary illness and related deaths in the U.S. Smoking has also been shown to increase the risk of miscarriage and stillbirth and smokers have a higher risk of neonatal death. Smokers not only harm themselves, they harm those around them. Environmental tobacco smoke is increasingly being recognized as a major cause of morbidity and mortality; children are particularly vulnerable. Cigarette smoking is a preventable hazard in the aviation environment.

The health benefits of smoking cessation are substantial. After 10-15 years of abstinence, the overall risk of mortality approximates the mortality rate of those people who have never smoked. After one year of abstinence, excess risk of CAD is reduced by one-half and approaches normal after 3 to 4 years. After 10 years of abstinence, the risk of lung cancer is reduced by 50-70% and almost all other smoking-related cancers occur less frequently. Behavioral modification is the mainstay of most smoking-cessation programs. Nicotine-replacement therapy has clearly been established as effective when used in combination with such programs. There have been no controlled studies showing that nicotine replacement is effective when used alone. Complications of nicotine replacement therapy are mostly minimal, but occasionally excessive nervousness, gastrointestinal complaints, sleep disturbance including insomnia and vivid dreams, and lightheadedness have been reported.

A simple strategy to aid in smoking cessation attempts uses the 5 "A"s: 1) Ask about tobacco use, 2) Advise to quit, 3) Assess willingness to make quit attempt, 4) Assist in quit attempt, and 5) Arrange follow-up- starting with one week after quit date.

The most frequently used method for smoking cessation is to quit "cold turkey." Fifty percent of those who attempt this method do have success but only after 7-9 attempts. Of those who quit on recommendation of a health care provider, 8.5-10% are still successful at six months. On Bupropion (Zyban) therapy, 10-25% of those treated remain abstinent at six months. Bupropion (Zyban) assists with the weight gain issue often encountered by smokers after quitting, and also helps to decrease the anxiety and cravings often experienced. The most frequent reasons to discontinue Bupropion (Zyban) therapy are tremors and skin conditions - rash and pruritis. Use of Bupropion (Zyban) does increase seizure risk, but limiting use to patients without the contraindications listed above

decrease that risk. Insomnia can also be a problem and this effect is increased with simultaneous use of NRT.

REFERENCE:

Tobacco Cessation Guideline

<http://www.surgeongeneral.gov/tobacco/>