

Tobacco Use

And Its Effects on Readiness

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Tobacco use by soldiers is the number one *preventable* detriment to combat readiness. Leaders can increase overall unit readiness by reducing their soldiers' use of tobacco products.

As a young soldier 25 years ago, the only risks I was ever briefed on in regard to smoking involved cancer and emphysema. The standard procedure was to use scare tactics, showing black lungs and people with cancerous lips and gums. But youth is forgiving, and when you're 19, you feel bullet-proof and think cancer and emphysema are diseases for old people, so those tactics don't usually work.

But I did want to be a good soldier—the best soldier—and if someone had addressed tobacco in terms of readiness factors, I may have listened. So I would like to discuss the importance of stopping tobacco use in relation to the following readiness factors:

Stamina. Nicotine accelerates the accumulation of plaque in the coronary arteries, which limits blood flow and oxygen to the brain and the extremities.

Tobacco destroys the platelets in your blood, which interferes with the healing of wounds.

A study of 419 airmen during their initial six weeks on active duty showed that the subjects who did not smoke performed better on the 12-minute running test at the beginning, middle, and end of the training course. It also showed that

the more a subject smoked the worse he performed. Furthermore, nonsmokers showed the greatest gains in performance as a result of training. The authors of the study concluded that “a person never could achieve maximum performance or respond completely to training as long as he continued to smoke any number of cigarettes.”

If you can pass your two-mile run or foot march while smoking, imagine what you could do if you *didn't* smoke. Why accept less than the best effort from yourself? When you're on the battlefield, you'll need every advantage available to you. Your stamina and endurance will improve greatly with increased blood flow and oxygen capacity after you're tobacco-free, and you'll be able to last longer under stressful conditions.

Healing of Wounds. Tobacco destroys the platelets in your blood, which interferes with clotting and healing. Your ability to recover from a battlefield or training-related injury will therefore be impaired. We already have enough empty slots in units without more from increased recovery time and delayed return to duty. Combat soldiers want to return to duty as soon as possible so they can be with their comrades when they are in harm's way. Leaders cannot fully count on wounded tobacco users, who may be a loss to the mission.

Cold Weather Injuries. Any soldier who has been stationed in or deployed to a cold weather region knows the hazards associated with tobacco use. In cold weather, tobacco causes a marked reduc-

tion in blood flow to the extremities. This constriction of the capillaries in the hands and feet greatly increases the risk of frostbite. The chain of command is forced to intensify overwatch of tobacco users who are more prone to cold-weather injuries. Frostbitten soldiers become a liability to the unit and to themselves.

Night Vision. The same vasoconstriction that causes susceptibility to cold injuries also affects night vision. On the

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modern battlefield, not every soldier will have high-tech night vision devices, and unaided night vision will be of the utmost importance. Tiny capillaries that feed blood to the rods, cones, and retina of the eye help a soldier see during periods of limited visibility. Tobacco use causes immediate constriction of these blood vessels and leads to a reduction in a soldier's night vision. The outcome affects his ability to engage enemy targets and the overall security of the unit.

Hand-Eye Coordination. The nicotine in tobacco causes fine muscle tremors that no amount of determination can control. In today's highly lethal force, “If you can see it, you can hit it; and if you can hit it, you can kill it.” Therefore, when tobacco use affects gunnery, it is of great concern to leaders. A soldier who

has been using tobacco cannot hold the cross-hairs on the target because of these fine motor tremors. This greatly limits the unit's stand-off kill capability. (It is ironic that many smokers claim they smoke so they can relax.)

Overall Injuries. Long-term studies, both military and civilian, have concluded that those who use tobacco are injured three times more often than those who don't. These injuries are not from accidents resulting from a driver losing control while lighting a cigarette, or a soldier tripping over a footlocker while tilting his head back to put a pinch of tobacco between cheek and gums. Tobacco users actually have a greater incidence of lower back injury, shin splints, and stress fractures, just to name a few. This, along with their prolonged recovery time, only serves to exacerbate the problems unit leaders face. Cigarette smokers use more sick leave and health benefits and have more occupational accidents and injuries and higher rates of absenteeism than nonsmokers. These associations account for sizable cost for military and civilian employers alike.

Furthermore, when comparing the healing rates of smokers and nonsmokers, research shows that smoking inhibits the healing of fractures. Smokers in the study took an average of 268 days before returning to full weight-bearing without pain; nonsmokers took an average of 159 days—or 40 percent less.

Military studies of basic combat training suggest that smoking—in addition to past injuries, low levels of physical fitness, and greater amounts of running—is associated with higher injury rates. Before training, 303 men (average age 19

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years) were evaluated using questionnaires and measurements of physical fitness. The subjects were followed over 12 weeks of training. Physical training was documented daily, and injuries were determined by review of medical records

TIPS FOR QUITTING TOBACCO

- Drink lots of water.
- Have substitutes on hand—cinnamon sticks, gum, hard candy.
- Eat fresh fruits.
- Expect your body to react favorably.
- Counter weight gain by increasing exercise and watching high-calorie and high-fat substitutes for tobacco. (Actually, weight gain occurs only in about 25 percent of cases.)

for every trainee. The most common injuries were muscle strain, sprains, and knee overuse conditions. A number of risk factors were identified, including age, smoking, previous injury, low levels of previous occupational and physical activity, low frequency of running before entering the Army, flexibility, low physical fitness on entry, and unit training levels (high running mileage).

Yet another study evaluated a light infantry unit and followed it throughout one year of infantry training and operation. Fifty-five percent of the soldiers experienced one or more injuries. Eighty-eight percent of the injuries were training related conditions that resulted in 1,103 days of limited duty. Lower-extremity overuse injuries were the most common type documented. Fractures accounted for the greatest number of days of limited duty. Risk factors for training-related injuries identified by this study were cigarette smoking, high percentage of body fat, extremely high or low body mass index, low endurance levels, and low muscular endurance levels (as evaluated by performance on sit-ups). It was determined that smoking and low endurance levels were independent risk factors for training injuries. In other words, if you smoke you get hurt more.

Many soldiers think using smokeless tobacco is safer, or they use it to taper off from cigarettes, but they are actually placing themselves at greater risk. Nicotine is absorbed more rapidly through porous tissues in the mouth than through inhaled smoke, resulting in a stronger addiction. The tobacco leaf also generates heat through the chemical properties of nicotine, and the plug burns away at delicate, porous tissue in the mouth and throat. Gumlines recede and become a hotbed for infections. With all the deployments to

such countries as Rwanda, Somalia, and Haiti, the increased chance for infections alone makes this an unacceptable risk.

In addition, the sugar that is added to the tobacco increases tooth decay and creates a hygiene problem. Chemical burning from nicotine also starts precancerous lesions on the side of the tongue, jaw, and throat along with the roof of the mouth—wherever the plug of tobacco comes into contact with tender tissue.

Another excuse for chewing tobacco is to stay awake, but all the dangers of caffeine cannot compare to the serious health

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hazards of nicotine. In addition, there are the biological minefields created when snuff and tobacco users spit onto the pavement or ground, or into cups that the people around them must then endure. Spitting continues to spread germs, causing more illness.

Baseball players, like soldiers, contend that smokeless tobacco improves their playing by helping them relax, concentrate, and remain alert. Yet in dental studies of baseball players, those who used smokeless tobacco had lower mean batting averages and lower fielding percentages. They also experienced a significantly higher rate of leukoplakia (white patches on the mucous membranes of tongue and cheek), recession of the gums, and loss of tooth structure.

Tobacco continues to drain the Army's human resources, and we can no longer afford its debilitating effects. I finally quit smoking and chewing, after 30 years of heavy use and now perform to my maximum. As I coach and teach young soldiers and leaders, I present the facts and the choice they can make in the way it affects them the most—in terms of combat readiness.

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