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REMINDER

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National Lead Poisoning Prevention Week, Oct. 24-30

by Capt. Paul Fowler, Industrial Hygienist

Raymond W. Bliss Army Health Center, Fort Huachuca, Ariz.

Before we realized how harmful it could be, lead was used in paint, gasoline, water pipes, and many other common products. As a result, hazardous levels of lead can be found in the dust of some homes, in paint, in soil, in drinking water, and in some dishes and pottery. Some folk remedies such as “azarcon” and “greta” used to treat indigestion or upset stomach are composed of lead oxides and can cause massive exposures.

Children ages 1 year through 6 years are at the greatest risk for lead poisoning. This is due to their low body weight and developing organs and nervous system. Pregnant women and their unborn babies are also at high risk because a pregnant woman’s body absorbs more lead. Even a small amount of lead can be harmful. Low levels of lead can cause problems with learning, hearing, growth, and behavior. High levels of lead can cause serious brain damage, convulsions, coma, and even death.

Lead paint in older homes is the most common source of lead poisoning. Dust from peeling paint or remodeling can get on a child’s hands, toys, or other objects that a child then puts in the mouth. Dust from leaded paint can also contaminate the soil around older homes.

Lead-exposed children often show no symptoms at all, even at somewhat elevated levels. The only way to know if a child has been exposed to lead somewhere in the environment is to have the child’s blood lead level tested. This test is done with a simple finger-prick test. Blood lead levels are measured in weight per volume. A blood lead level of 10 micrograms per deciliter is considered to be “lead poisoning.”

Some authorities recommend screening of all children 6 years of age and younger. However, lead screening is not a standard part of well-child examinations. If you have a child under 6, ask your doctor to do a lead test and explain the results to you.

Ways to protect your child from lead:

- * Do not remove any lead paint yourself. Sanding or scraping lead-based paint may contaminate your home further. Homes built before 1978 may contain lead-based paint.

- * Do not use azarcon, greta or other folk remedies that contain lead. Do not allow healers or other family members to give your children these powders. The powders are usually mixed with olive oil and are given to the child by spoon.

- * Do not use imported, old, or handmade pottery for cooking or storing food or beverages unless you are certain that it does not contain lead.

- * Keep your home as dust-free and clean as possible, especially where children play. Wet-mop floors and wipe windowsills and cribs with warm soapy water.

- * Do not let children eat dirt. Do not let them eat food that has fallen on the ground.

- * Have children play in clean sand or in grassy areas. Bare soil may contain lead, and the soil sticks to fingers and toys.

- * Wash children’s hands often, especially before eating and sleeping and after playing outside. Wash toys and pacifiers often.

- * Feed children foods that are high in iron and calcium. Avoid high-fat junk foods such as chips and candy. A healthy diet helps the body to absorb less lead.

* Do not bring lead dust home from work. If you work with lead, shower and change into clean clothes and shoes before leaving the workplace. Wash work clothes separately from other laundry. Wipe your feet before entering the home.

* Ask your child's doctor for a blood lead test.

For more information on lead poisoning prevention, go to:

<http://www.cdc.gov/nceh/lead/events/leadWeek.htm>

<http://www.hud.gov/offices/lead/>

(Raymond W. Bliss Army Health Center, Fort Huachuca, Ariz., release)

Deployment and war stress children

by **Michael E. Dukes**

Walter Reed Army Medical Center, Washington, D.C.

Growing up in a military family can bring unique stresses to children: constantly relocating, going to new schools, leaving old friends behind and finding new ones. When their parents deploy, this can further complicate the situation.

“Certainly, the nature of the deployment and the role of the service member in a wartime setting can have a significant impact on children and family left behind,” stated a joint article from Walter Reed Army Medical Center and the Department of Veterans Affairs National Center in the *Iraq War Clinician’s Guide*.

“Generally, military children adjust well to these challenges that have been a part of traditional military life for many years,” said Col. Stephen Cozza, chief of Walter Reed’s Department of Psychiatry. “Deployments can be one of the many ordeals military families and children need to manage. In a wartime setting, deployment of active-duty parents can pose some unique challenges.

“Children are often a more hidden population in general because they often don’t have as much of a voice as adults; sometimes their needs are not understood in the same way as adults,” he said. “Oftentimes they may not understand the circumstances of a deployment because of the developmental age, in a way that an adult would. They may be feeling and experiencing emotions and thoughts that they are not able to express.

“Deployments can be significant challenges to kids in the military,” Cozza said. “Sometimes deployments are known about well in advance and sometimes they’re not. Children can worry about the safety of the service member parent, particularly if they are going into a war zone.”

Deployments can mean additional changes in a military child’s life, according to Cozza.

“Military children may need to assume additional family responsibilities at home because of the fact that a parent is gone. In many cases, this leads to greater maturation in a child. In some families, for example, in single-parent military families, children’s living arrangements may need to be modified; grandparents or other parent surrogates may be asked to come into the home in order to maintain parental supervision. In other cases, children may go to live with a family member that lives in a different city, or even a different state. This might lead to disruptions in peer or school relationships,” he added.

“When we talk about a wartime deployment, children’s concerns may be even greater because of the worries about true potential injury to the parent,” Cozza explained. “The parent that is home with the children needs to reassure them about the safety of the deployed parent and be truthful in revealing information that is appropriate to their age and developmental level. It can be helpful to remind children that, unlike themselves, service-member parents have been well trained and are well-prepared for the challenges that they might face during a deployment. Parents should look for signs or symptoms, such as behavioral changes or emotional changes — depression, sadness or sleep disturbance — that can be indications that a child is struggling with the deployment and may need some assistance from a professional.”

When a parent is injured during a wartime deployment, the child’s stress level increases even more. “We get particularly concerned, for example, preparing children to visit with an injured parent. It’s important for health-care providers to ask injured soldiers and their spouses: ‘What have

you told your children? How have you prepared them? What have you said about the injury itself? It's important to be clear with them and to not lie," he said.

"When you share any uncomfortable information with children it is important that you be in emotional control and not frighten them," he added. "Talk to children who will be visiting the hospital about what they will see when they go into the hospital room, what equipment might be in the room. If possible, it can be helpful to take pictures of the injured parent, the room, the ward, and other parts of the hospital that can be shared with children ahead of time to better prepare them before their arrival.

"We also realize that spouses sometimes may choose to leave their children at home when they come to visit injured spouses at the hospital. This can result in situations where the children don't have immediate access to either parent," Cozza said. "In making choices about who will be caring for children during parental absences it is helpful to select someone who can maintain as much routine structure and scheduling as possible. Parents who bring their children to the hospital will need to make decisions about how long the children will be here, where they will be staying, what their schedules will be, and how schooling needs will be addressed."

Cozza recommends parents with concerns about the effects on their children, from deployments, the war, or the injury of a family member, to contact their local military treatment facility's psychiatry service for assistance and more information.

(adapted from a Walter Reed Army Medical Center, Washington, D.C., release)

Deployment, war stress affect children — sidebar

“Talking to children when a parent becomes injured or traumatized”

When a parent becomes injured during a combat deployment, the situation can place even the strongest families into challenging situations. The Walter Reed Army Medical Center Child and Adolescent Psychiatry Service offers the following tips to parents or guardians:

When to talk to your child

- Once the panic settles and the parent regains composure.
- Upon knowledge of the injury or trauma.
- Sooner is better.
- Bad news is better given by a parent rather than someone else.

How to tell your child

- * Explain injuries based on children’s ages using their language (like boo-boo or broken leg).
- * Be as calm and truthful as possible.
- * Keep it short and simple.
- * Face-to-face is best.
- * Use a private and quiet environment.
- * Keep eye contact.

What to tell your child

- The parent or other family member is seriously injured.
- The nature and type of injury.
- Your best understanding of what happened to the injured parent.
- That the child is not the cause or at blame.
- The parent is safe and being taken care of.
- Reassurance is key during a traumatic time.

(adapted from a Walter Reed Army Medical Center, Washington, D.C., release)

Insomnia

by **Lt. Col. Roman Bilynski, Pediatric Neurologist**

William Beaumont Army Medical Center, Texas

Do you have problems falling asleep or staying asleep? Insomnia consists of problems falling asleep, staying asleep, early morning awakening with difficulty going back to sleep, or unrefreshing sleep.

It is not enough to just have problems falling asleep. It has to affect your ability to function at home, work, school or socially.

Daytime symptoms that often accompany insomnia include headaches, depression, morning sleepiness, poor concentration, inattention, irritability, anxiety and fatigue.

About half of all people experience transient insomnia (less than four weeks) at some point or points in their lives.

It is often associated with stressful situations, change in work schedules, jet lag, staying up too late the night prior and sleeping in too late the following day, overuse of caffeine or foods or medications containing stimulants.

Chronic insomnia is insomnia that has lasted more than four weeks, and it seems to occur more frequently in shift workers, the elderly, women and people with other medical or psychiatric disorders.

Very common underlying psychiatric conditions include depression and anxiety. Medical conditions include substance use (alcohol, tobacco or caffeine); medications (decongestants, some antidepressants, broncho-inhalers for asthma or chronic obstructive pulmonary disease); other sleep disorders (obstructive sleep apnea, restless-legs syndrome, or periodic leg movements of sleep, though often these lead to excessive daytime sleepiness more than problems falling asleep); and other systemic medical problems involving the heart, lungs, stomach, hormones and nervous system.

In my clinical practice I often see teenagers with reported problems falling asleep. This is usually triggered by staying up very late at night and getting up early in the morning on school days, followed by sleeping in on the weekends and holidays.

This basically results in teenagers (or adults) effectively “jet lagging” themselves every weekend. It often takes two weeks, sometimes more, to readjust your sleep cycle (medically termed “circadian rhythm”), so sleeping in every weekend perpetuates the problem and doesn’t allow the body to adjust to the ever-changing sleep-wake cycles. The other major reason for sleep problems in adolescents is depression and/or anxiety.

Children with attention-deficit/hyperactivity disorder (ADHD) often reportedly have problems falling sleep. However, in many it is more a problem with not wanting to go to sleep, rather than true insomnia, and getting up early in the morning (which is often problematic for parents who do not want to get up at 5 a.m. on a weekend).

This is part of the ADHD. Sleep disorders are potential causes of ADHD symptoms in children, and prior to diagnosis of ADHD they should be screened by medical history for excessive daytime sleepiness or nighttime sleep problems.

Sleep problems may also be prominent in autistic-spectrum disorders and in the mentally retarded.

Why do we care if someone can't sleep well? Insomniacs have decreased performance on various tests of performance and thinking, based on medical research.

Common sense tells you to get a good night's sleep before a big day at work or test at school. Sleepy drivers are impaired, and have more motor-vehicle accidents than awake and alert drivers. Falling asleep or being sleepy on the job can result in demotion or termination.

The first step to take if you have problems sleeping is to look at your sleep habits, termed "sleep hygiene." Just like brushing your teeth, good sleep routines will help alleviate or reduce problems with sleep. These include:

- Keep a regular bedtime and wake-up time, even on weekends and holidays. This doesn't mean you can't sleep in, but if your normal waking time is 7 a.m., I would recommend getting up no later than 9 a.m. – not 11 a.m. I generally recommend to my patients to get to sleep or to get up within a two-hour span of their normal wake time.

- Avoid naps as much as possible. But, if you do nap, do it early in the day, and not in the later afternoon or early evening. The average older child or adult does not need regular naps and, if they do nap, it often disrupts sleep later that night.

- Exercise regularly, but preferably not right before going to bed. About three hours should elapse between completion of exercise and regular bedtime. This varies for people, and I know people who can work out and 30 minutes later be fast asleep.

- Stop working a while before going to sleep. It will allow your mind to relax, and it will generally be easier to fall asleep.

- Minimize stimulants for a few hours before bedtime (recommendations are usually four or more hours). Stimulants include nicotine (cigarettes, cigars, pipes, chewing tobacco, etc.) and caffeine (coffee, strong teas or caffeinated soft drinks).

- Don't use alcohol to fall asleep. It can lead to dependence and other complications.

- Use your bed for sleeping and sex only (adults). Avoid reading, eating, working or watching TV in bed.

- Don't watch your clock, because this will keep you awake rather than help you fall asleep. Turn the clock or yourself around so that you won't see it. Do not try too hard to go to sleep.

- If you can't fall asleep within about 15 minutes, then get out of bed and do something (not something stimulating, i.e., don't exercise, drink coffee or tea, or start watching an interesting movie) until you feel sleepy. But remember, even if you don't go to sleep until much later, don't sleep in or take a nap the next day. If you do, you'll perpetuate the problem night after night.

- Drink a glass of warm milk with some honey before bedtime. This is not an official recommendation...just our family remedy when I was growing up.

If education about sleep problems and sleep hygiene prove ineffective, then there are medication options for transient insomnia.

These medications include Sonata and Ambien and are designed for short-term use only. They will not work effectively over time for chronic insomnia. They help initiate sleep or maintain sleep in the right patients.

For chronic insomnia, if education and good sleep hygiene prove insufficient or ineffective (and, if treatment of any underlying medical or psychiatric disorder has not helped the insomnia problem), there are also some medical options.

These include short-acting benzodiazepines like alprazolam; sedating antidepressants like trazodone, amitriptyline or nortriptyline; and others.

Other options include cognitive behavioral therapy, sleep restriction (minimizing time in bed to increase percentage of sleep time in bed), relaxation techniques, light-phase shift (light-box therapy

in the morning or evening depending on your specific problem), hypnosis, and minimizing stimuli. The key to treatment of chronic insomnia is to find (if present, and there usually is) and treat the underlying condition.

If you have trouble sleeping because you are depressed or anxious, then treating your depression and anxiety with antidepressants, anti-anxiety meds, counseling and/or psychotherapy will help your sleep problems.

If you're having problems with sleep, apply the sleep-hygiene recommendations noted above and see if that helps.

If not, then start keeping a sleep diary. In the diary, record daily when you went to bed, when you think you went to sleep, how many times you remember waking up, when you got out of bed.

Estimate the total amount of time you slept, rate the quality of your sleep from 1 to 10, or how refreshed you felt after sleeping from 1 to 10.

If you napped, then record when and for how long. Also note any medications you are taking, alcohol/tobacco/caffeine use, and exercise/TV watching before bedtime.

Make an appointment with your primary-care provider for evaluation and to review your diary (don't forget it).

Before the visit, consider and make a list of any possible underlying triggers, medical or psychiatric problems, medications, substance use, and environmental factors that may be affecting your sleep and bring this information with you to your appointments.

There are various websites, including the American Academy of Sleep Medicine, that are very informative.

For additional information, see my website at <http://www.rbilynsky.yourmd.com>

Remember, there is no magic pill for chronic sleep problems. It is a team effort between the patient and health-care provider, requiring input from both.

The more you know about your sleep problem, the easier and more effective your treatment will be.

(NOTE TO READERS: This article was originally published by the Fort Huachuca, Ariz., *Scout* while Bilynsky was deployed to Tikrit, Iraq, with the 4th Infantry Division)

(Reprinted from the Fort Huachuca, Ariz., *Scout*)

Inside air

compiled by **Jim Brueggemeyer, Industrial Hygiene Technician**

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All of us face a variety of risks to our health as we go about our day-to-day lives. Driving in cars, flying in planes, engaging in recreational activities, and being exposed to environmental pollutants all pose varying degrees of risk.

Some risks are simply unavoidable. Some we choose to accept because to do otherwise would restrict our ability to lead our lives the way we want. And some are risks we might decide to avoid if we had the opportunity to make informed choices. Indoor air pollution is one risk that you can do something about.

In the last several years, a growing body of scientific evidence has indicated that the air within homes and other buildings can be more seriously polluted than the outdoor air in even the largest and most industrialized cities. Other research indicates that people spend approximately 90 percent of their time indoors. Thus, for many people, the risks to health may be greater due to exposure to air pollution indoors than outdoors.

In addition, people who may be exposed to indoor air pollutants for the longest periods of time are often those most susceptible to the effects of indoor air pollution. Such groups include the young, elderly and chronically ill, especially those suffering from respiratory or cardiovascular disease.

While pollutant levels from individual sources may not pose a significant health risk by themselves, most homes have more than one source that contributes to indoor air pollution. There can be a serious risk from the cumulative effects of these sources. Fortunately, there are steps that most people can take both to reduce the risk from existing sources and to prevent new problems from occurring.

There are many sources of indoor air pollution in any home. These include combustion sources such as oil, gas, kerosene, coal, wood and tobacco products; building materials and furnishings as diverse as deteriorating asbestos-containing insulation, wet or damp carpet, and cabinetry or furniture made of certain pressed-wood products; products for household cleaning and maintenance, personal care or hobbies; central heating and cooling systems and humidification devices; and outdoor sources such as radon, pesticides and outdoor air pollution.

Some sources — such as building materials, furnishings and household products like air fresheners — release pollutants more or less continuously. Other sources related to activities carried out in the home release pollutants intermittently. These include smoking; use of unvented or malfunctioning stoves, furnaces or space heaters; use of solvents in cleaning and hobby activities; use of paint strippers in redecorating activities; and the use of cleaning products and pesticides in housekeeping. High pollutant concentrations can remain in the air for long periods after some of these activities.

Amount of ventilation

If too little outdoor air enters a home, pollutants can accumulate to levels that can pose health and comfort problems. Unless they are buildings with special mechanical means of ventilation, homes that are designed and constructed to minimize the amount of outdoor air that can “leak” into and out of the home may have higher pollutant levels than other homes. However, because some

weather conditions can drastically reduce the amount of outdoor air that enters a home, pollutants can build up even in homes that are normally considered “leaky.”

How does outdoor air enter a house?

Outdoor air enters and leaves a house by infiltration, natural ventilation and mechanical ventilation.

In a process known as infiltration, outdoor air flows into the house through openings, joints and cracks in walls, floors and ceilings, and around windows and doors.

In natural ventilation, air moves through opened windows and by wind.

Finally, there are a number of mechanical ventilation devices, from outdoor-vented fans that intermittently remove air from single rooms, such as bathrooms and kitchens, to air-handling systems that use fans and duct work to continuously remove indoor air and distribute filtered and conditioned outdoor air to strategic points throughout the house.

The rate at which outdoor air replaces indoor air is described as the air exchange rate. When there is little infiltration, natural ventilation or mechanical ventilation, the air exchange rate is low and pollutant levels can increase.

An approach to lowering the concentration of indoor air pollutants in your home is to increase the amount of outdoor air coming indoors. Most home heating and cooling systems, including forced-air heating systems, do not mechanically bring fresh air into the home. Opening windows and doors, operating window or attic fans when the weather permits, or running a window air conditioner with the vent control open increases the outdoor ventilation rate. Local bathroom or kitchen fans that exhaust outdoors remove contaminants directly from the room where the fan is located and also increase the outdoor air ventilation rate.

It is particularly important to take as many of these steps as possible while you are involved in short-term activities that can generate high levels of pollutants. For example, painting, paint stripping, heating with kerosene heaters, cooking, or engaging in maintenance or hobby activities such as welding, soldering or sanding. You might also choose to do some of these activities outdoors, if you can and if weather permits.

There are many types and sizes of air cleaners on the market, ranging from relatively inexpensive table-top models to sophisticated and expensive whole-house systems. Some air cleaners are highly effective at particle removal, while others (including most table-top models) are much less so. Air cleaners are generally not designed to remove gaseous pollutants.

The effectiveness of an air cleaner depends on how well it collects pollutants from indoor air (expressed as a percentage efficiency rate), and how much air it draws through the cleaning or filtering element (expressed in cubic feet per minute). A very efficient collector with a low air-circulation rate will not be effective, nor will a cleaner with a high air-circulation rate but a less efficient collector. The long-term performance of any air cleaner depends on maintaining it according to the manufacturer’s directions.

Another important factor in determining the effectiveness of an air cleaner is the strength of the pollutant source. Table-top air cleaners in particular may not remove satisfactory amounts of pollutants from strong nearby sources. People with a sensitivity to particular sources may find that air cleaners are helpful only in conjunction with concerted efforts to remove the sources.

Over the past few years, there has been some publicity suggesting that houseplants have been shown to reduce levels of some chemicals in laboratory experiments. There is currently no evidence, however, that a reasonable number of houseplants will remove significant quantities of pollutants in homes and offices. Indoor houseplants should not be overwatered because overly damp soil may promote the growth of microorganisms which can affect allergic individuals.

Health effects from indoor air pollutants may be experienced soon after exposure or, possibly, years later.

Immediate effects may show up after a single exposure or repeated exposure. These include irritation of the eyes, nose and throat; headaches; dizziness; and fatigue. Such immediate effects are usually short-term and treatable. Sometimes the treatment is simply eliminating the person's exposure to the source of the pollution if it can be identified. Symptoms of some diseases, including asthma, hypersensitivity pneumonitis, and humidifier fever, may also show up soon after exposure to some indoor air pollutants.

The likelihood of immediate reactions to indoor air pollutants depends on several factors. Age and preexisting medical conditions are two important influences. In other cases, whether a person reacts to a pollutant depends on individual sensitivity, which varies tremendously from person to person. Some people can become sensitized to biological pollutants after repeated exposures, and it appears that some people can become sensitized to chemical pollutants as well.

Certain immediate effects are similar to those from colds or other viral diseases, so it is often difficult to determine if the symptoms are a result of exposure to indoor air pollution. For this reason, it is important to pay attention to the time and place the symptoms occur. If the symptoms fade or go away when a person is away from the home and return when the person returns, an effort should be made to identify indoor air sources that may be possible causes. Some effects may be made worse by an inadequate supply of indoor air or from the heating, cooling or humidity conditions prevalent in the home.

Other health effects may show up either years after exposure has occurred or only after long or repeated periods of exposure. These effects, which include some respiratory diseases, heart disease and cancer, can be severely debilitating or fatal. It is prudent to try to improve the indoor air quality in your home even if symptoms are not noticeable.

Usually the most effective way to improve indoor air quality is to eliminate individual sources of pollution or to reduce their emissions. Some sources, like those that contain asbestos, can be sealed or enclosed. Others, like gas stoves, can be adjusted to decrease the amount of emissions. In many cases, source control is also a more cost-efficient approach to protecting indoor air quality than increasing ventilation because increasing ventilation can increase energy costs. (NOTE TO READERS: Information for this article came from the U.S. Environmental Protection Agency and the U.S. Consumer Product Safety Commission.)

(Reprinted from the Fort George G. Meade, Md., *Soundoff*)

Flea prevention

by **1st Lt. Joshua Bast, Entomologist**

Brooke Army Medical Center, Fort Sam Houston, Texas

Fleas are tiny wingless insects that annoy pets and disgust owners. When an adult flea bites an animal, a variety of irritating and/or allergy-causing substances from its saliva are injected into the skin, causing an itchy area. After a blood meal, the fleas drop off the host to lay eggs.

After the immature stages develop into adults, they wait for another host to come along. Humans can serve as incidental hosts, but fleas cannot survive solely on human blood. Fleas enjoy temperatures in the 70s, and like 70 to 80 percent humidity. Depending on whether your pet resides indoors or outdoors, this can make fleas a year-round problem in some areas.

Individuals who don't even own a pet are often aggravated by flea bites. The bites are usually from fleas carried by feral cats roaming the neighborhood or entering spaces under the house. Adult fleas may enter the first floors of the buildings through small cracks or other openings and subsequently bite people inside.

This is one reason the feeding of stray dogs and cats (intentional or otherwise) is not permitted on installations. Personnel must place rotten (or decaying) materials in sealed garbage bags and close lids to refuse containers to minimize attracting flea-infested animals.

Flea allergy is an extremely itchy condition that can be triggered by only a couple of flea bites. In dogs, the abdomen and rump are the most commonly affected areas. These itchy areas may develop oozing scabs. Cats, on the other hand, typically overgroom; they may have hair loss but not develop skin lesions.

Many times residents returning home from vacation will find their houses infested with fleas soon after their return. This is because the developing immature fleas can go into a form of hibernation when no hosts are present. When the pet or residents return, the vibrations cause all the fleas to mature into ravenous adults all at the same time.

In heavily infested areas, flea-control treatment must include all pets and the pet's indoor and outdoor environments. Skipping any of these areas may mean treatment won't be successful. If there's not a heavy infestation, treating the pet may be all that's necessary. Extensive vacuuming and washing of your pet's bedding is also important to prevent adults from developing.

Flea preventatives are the simplest way to treat animals. If your pet has flea allergies, a topical adult flea preventative is better than an oral product. The goal is to kill adults before they bite so that the animal is not exposed to saliva. Many products require monthly application. Preventive flea treatments will neither harm you or your pets due to mild toxicity and targeted modes of action.

Getting rid of fleas will make both pet and owner happy. For more information on specific flea-control products or with questions about diagnosing and treating flea allergies in your pet, contact your installation's Veterinary Treatment Facility. If your home is infested with fleas despite treating your pet, contact your installation pest control or, if living off-post, a commercial exterminator.

(Adapted from the Fort Sam Houston, Texas, *News Leader*)

Asthma

by Capt. Renee L. Busse, Community Health Nursing

Evans Army Community Hospital, Fort Carson, Colo.

Allergies are a common condition that occurs in about 20 percent of children in the United States. Asthma is one of the most common chronic illnesses of childhood, affecting more than 3 million children in the United States alone.

Allergies and asthma are leading causes of school absenteeism, accounting for more than 125 million school days annually. The impact of both allergies and asthma can be seen not only in school absenteeism but also in the lack of participation in athletic and exercise programs, and in the amount of time spent taking medication during school hours. In some cases, allergies or asthma can precipitate a life-threatening crisis for a child.

These negative impacts do not need to happen. When allergies and asthma are controlled, children can maintain good performance in school and participate fully in physical activities, including sports.

If a management plan is needed to control allergies or asthma, consult with your doctor. Initially, the physician should outline a management plan that enables the child to control allergies or asthma in order to maintain normal age-related levels of activity.

Once the management plan has been developed with the physician and the family, the parents and the school or Child and Youth Services (CYS) need to work together to implement the plan.

Conferences with classroom teachers, day-care providers, physical-education teachers, school nurses or aides, addressing the following items, will help ensure a complete plan of care:

— **Symptoms.** Parents should discuss the child's asthma/allergic symptoms.

— **Avoidance measures.** Parents should provide a written list of factors in the environment that bring on the symptoms. This helps the school or CYS make plans for activities.

— **Medications.** Discuss the child's medication timing, expected effects and potential side effects. The parents should provide the medication, making sure it is current and labeled with the child's name, instructions for use, name of drug, dosage, start and stop dates, and doctor's name. Parents should alert school or CYS personnel to changes in medication, treatment or status of asthma/allergies.

— **Medication policies.** Discuss the school or CYS's established policies regarding medications and administration.

— **Management plans.** Your physician should establish a written plan of action for daily care and for acute episodes. It should include guidelines for when the parents and/or the physician need to be notified, along with accurate telephone numbers.

— **Communication between the school or CYS and home.** Teachers, day-care providers, parents and children should clarify how to communicate with each other about the child's asthma/allergies and participation in school activities.

Monitor progress, report difficulties, or make adjustments to ensure everyone works together to keep the child's asthma or allergy well controlled.

(Reprinted from the Fort Carson, Colo., *Mountaineer*)

Low-carb diets

by Lt. Col. Deborah Simpson

U.S. Army Center for Health Promotion and Preventive Medicine

Anyone who has tried to lose weight knows it can be challenging. Some people choose a low-carbohydrate diet for help in losing weight. Like most fad diets, low-carbohydrate diets produce fast results. But does the weight stay off? Is it safe?

Restricting carbohydrates typically produces short-term weight loss. Reasons are:

- * Loss of water weight .
- * Decreased appetite.
- * Reduced calories.

In the short term, these diets throw the body's chemical balance off. Burning fat without carbohydrates creates byproducts called ketones that build up in the bloodstream (ketosis). Research indicates that prolonged ketosis may deplete mineral stores in the bones, causing them to become porous and brittle. Ketosis can cause the body to produce high levels of uric acid, which is a risk factor for gout (painful swelling of the joints) and kidney stones. Ketosis is also dangerous for people with diabetes and kidney disease and pregnant women.

Low-carbohydrate diets can also hurt health in the long term. Most low-carbohydrate diets are high in total fat, saturated fat, and protein.

Excess protein can:

- Put a strain on kidneys.
- Promote calcium excretion and electrolyte imbalance.
- Cause nausea, fatigue and weakness.

Low-carbohydrate diets are low in fiber and can result in constipation. Also, the high fat content of low-carbohydrate diets increases the risk for heart disease and some cancers. Low-carbohydrate diets lack vitamins, minerals and other nutrients that can help reduce the risk of diabetes, heart disease, cancer and other conditions.

Carbohydrates are the body's main source of energy. The National Academy of Science recommends that most adults consume at least 130 grams of carbohydrates daily. This is approximately equal to 4 slices of bread, two medium pieces of fresh fruit, three 1/2 cup servings of vegetables, and two 8 ounce glasses of milk.

There is no magic formula for losing weight. The only way to lose weight and keep it off is to eat a balanced diet, exercise, and commit to permanent lifestyle changes.

Remember:

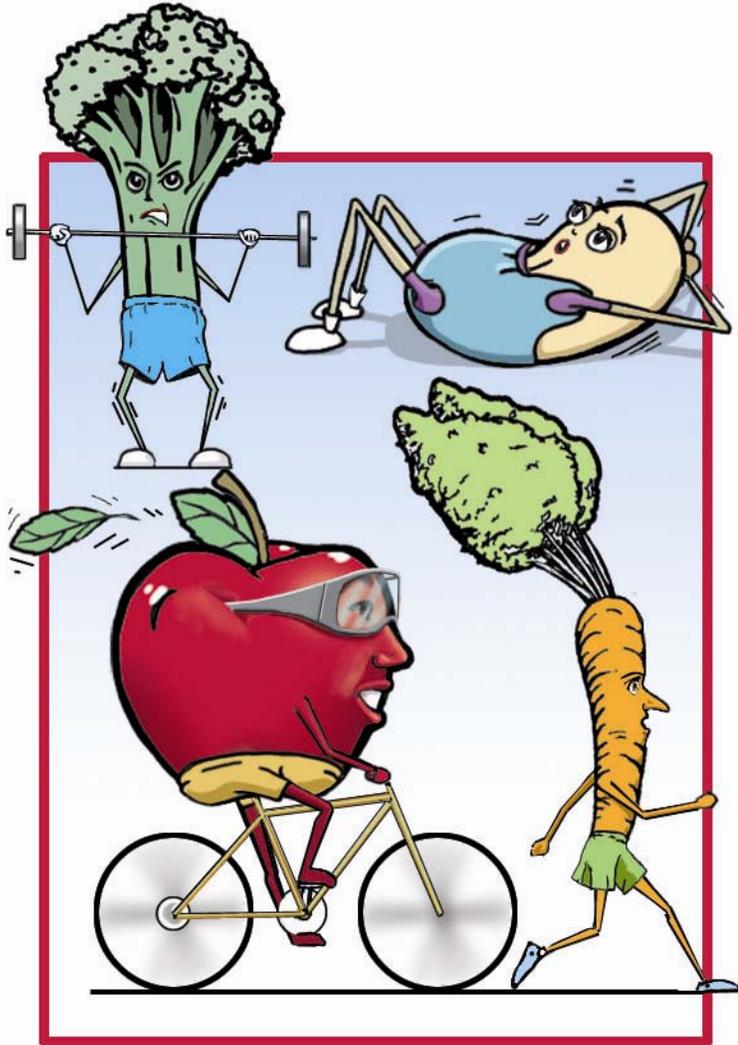
- * Talk to your doctor BEFORE starting a weight-loss program.
- * Talk with a registered dietitian for assistance in planning a personalized nutrition program
- * Change habits. It takes at least 21 days to maintain either a good or bad habit.

If considering a weight-loss diet, avoid diets that:

- Promise quick weight-loss results (more than 1-2 pounds per week).
- Claim that people can lose weight and keep it off without making changes in diet and exercise habits.
- Limit food choices.
- Base claims on “before” and “after” photos.

- Offer “expert” testimonials.
- Draw simple conclusions from complex medical research.
- Require spending a lot of money on supplements or prepackaged meals.

Your body is one of your most valuable assets. Take good care of it and it will take good care of you! Resources to help you manage your weight can be found at <http://www.hooah4health.com/>



(NOTE TO EDITORS/PAOs: This art should be credited to Mark Fischer, U.S. Army Center For Health Promotion and Preventive Medicine.)

Backpack common sense

by Marcie Birk, Directorate of Health Promotion and Wellness

U.S. Army Center For Health Promotion and Preventive Medicine

Backpacks are great for carrying more than can be carried in the arms and hands alone. And, for children, backpacks help to keep important books and papers organized.

However, overloaded backpacks can cause headache along with neck, back and arm pain. In addition, constantly carrying a backpack over one shoulder makes muscles of the middle back, ribs, and lower back strain to compensate for the uneven weight. In the short term, this strain can cause muscle spasm and back pain. In the long term, this muscle imbalance can lead to back problems later in life.

Parents can take steps to help reduce the chance that their child or teen will risk injury from carrying a backpack.

Backpack design features to look for:

- Lightweight material (canvas as opposed to leather).
- * Two padded, adjustable shoulder straps at least 2-inches wide.
- * Padded back.
- * Individualized compartments.

Teach children how to properly load and wear the backpack:

- * Pack heaviest objects first so they are lower and closer to the body.
- * Use compartments so items don't shift during movement.
- * Distribute the load evenly throughout the backpack.
- * Use both shoulder straps
- * Adjust straps to fit the backpack snugly to the body, holding the bottom of the backpack two inches above the waist.
- * Do not carry the backpack low near the buttocks.

Use common sense:

- * Train children to clean out backpacks at least once a week.
- * Watch to make sure children aren't leaning forward when walking with the backpack.
- * Ask children if they have any backaches or pains.
- * Encourage children to carry to and from school only those items needed.
- * Consider buying a copy of the heaviest books to keep at home.

For more information, visit the American Physical Therapy Association at

http://www.apta.org/news/feature_releases/backpack

Diabetes

by MAJ Colleen Kesselring, Nutrition Care Division

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The American lifestyle is plaguing our health. Top health officials are now identifying declining physical activity and obesity as top health problems. Why the concern? Decreasing physical activity and an increase in weight gain can lead to many chronic diseases, including diabetes.

What is diabetes?

The diagnosis of diabetes means that your body cannot use food and drinks for energy as easily as before. The problem is caused by deficient insulin. Insulin comes from the pancreas and allows the glucose, commonly called sugar, to be used by your muscles and other cells. People with diabetes are either not making enough insulin or the insulin they make doesn't work as efficiently.

Most people cannot feel their blood sugar go from normal to high. This is why it is important for people who do not have a diabetes diagnosis to get their blood sugar tested periodically.

There are three different types of diabetes:

Type I diabetes — The body stops making insulin in childhood or early adulthood. Once diagnosed, children or teenagers are treated with insulin injections.

Type II diabetes — The body doesn't make enough insulin or the insulin produced doesn't work as well as before. Patients are generally treated with oral medications and urged to make changes in diet and exercise.

Gestational diabetes — Gestational diabetes occurs only during pregnancy. Doctors do not know why some women develop diabetes during pregnancy, but women who have experienced gestational diabetes after the 26th week of pregnancy are known to be at an increase risk for developing Type II diabetes later in life.

Who is at risk?

A family history of diabetes indicates that you are genetically susceptible. Other risk factors include ethnicity (especially African-Americans and those of Hispanic or Native American descent); those who gain weight mostly in their stomachs; patients with high cholesterol levels; and patients who were diagnosed with gestational diabetes while pregnant.

Health-care providers are seeing large increases in the incidence of Type II diabetes, even in children. One of the reasons for the dramatic rise in the diagnosis of diabetes is the American lifestyle, filled with high stress and fast food.

Not only does diabetes challenge patients and their loved ones, but it also results in huge medical costs. The direct cost of diabetes in the U.S. in 1997 was \$44 billion.

How can diabetes be prevented?

Diabetes can be prevented or delayed in many people. A recent study by the National Institutes of Health found that 58 percent of people with impaired glucose tolerance did not progress to diabetes when they made lifestyle changes. The study participants did not lose large amounts of weight. However, the average person walked briskly for 150 minutes per week and lost 7 percent of his or her initial weight.

The study was so successful that it was stopped prematurely so that the results could be published as quickly as possible.

The best thing Americans can do to prevent diabetes is change their lifestyles. That may sound overwhelming, but small steps make a big difference.

While exercising at a gymnasium is recommended, just increasing your physical movement during the day can make a big difference. Start by moving your body more during the day. Small steps add up to help burn body fat and tone muscle.

The following changes will increase your metabolism and make your insulin work better:

- Stand or pace while talking on the phone.
- Wash your own car instead of asking someone to do it for you.
- Take the stairs.
- Park your car at the back of the lot.
- Try taking your children for a walk; or start a new family habit by taking a walk after dinner.
- Use a pedometer, which counts the number of steps you take each day, to track your physical movement. This is a great tool to remind you to do more physical activity.

Another way to change your lifestyle is to critically examine what you eat and drink. Americans can help prevent diabetes by losing the “bargain buffet” attitude. You don’t need to clean your plate at every meal: save it for leftovers. Downsize instead of supersize. There is no bargain to buying a value meal when it is high in fat and you can’t save any for leftovers.

(Reprinted from the Fort Hood, Texas, *Sentinel*)