

## ***“Army Talks - Combat Medicine ”***

### **Foreword by Alain S. Batens:**

This booklet, a small format (approximately 13 1/2 cm x 20 3/4 cm) pocket version, is one of the Army produced information booklets issued by the United States Army in the European Theater of Operations (ETO). Army Talks was designed to offer straight factual reports and data to the American soldier. Vital combat related topics and issues were covered and brought up as a potential source for combat leaders to organize discussions with their staff and men. These publications were distributed by the United States Army Orientation Branch.

The booklet is offered here in paper form. The original (Army Talks, Vol. II, No. 37, dated 13 September 1944 and entirely devoted to "Combat Medicine") used in the production of this document was courtesy of Alain S. Batens, and was used with his kind permission. Please feel free to use this as a reference source and print it out for personal use.

For clarity and ease of reading, the booklet has been digitally enhanced and enlarged for the reader's pleasure. In addition, it has been produced in such a way that it can be read like the original item, and so cannot be printed and stapled in its current form.

Many thanks,  
The WW2 Medical Research Centre Staff

# Look and Listen

**A**RM Y TALKS, "Warweek" and the American Forces Network are all cooperating to keep the American soldier informed about the progress of the war, current events and the nature of both our enemies and our allies. Combat orientation is specifically focused on your vital problem of how to stay alive while you destroy the enemy. As long as shooting goes on in this or any other theater combat orientation will be of paramount importance.

All these agencies for exchanging information or ideas are dependent on you, the discussion leader, for their successful operation. On the other hand, if you use them to the full, you will find them valuable aids in putting across your unit orientation program.

## Warweek

LOOK for your copy of "Warweek," and make sure there is a sufficient supply for all your men. The subject-matter of this week's ARMY TALKS will appear in an illustrated GI digest in the "Warweek" supplement of "Stars and Stripes" on **Thursday, 21 September, 1944.** "Warweek," official orientation organ for the ETO, is striving to make the American soldier in this theater the best informed soldier in the world.

## AFN

LISTEN in on your American Forces Network Station for a dramatized presentation of the week's ARMY TALKS. Tie it up with your talk, use it as a self-starter for the discussion. Time: **Saturday, 23 September, 1944, at 1430-1500 hours.** Choose any convenient spot where you have a radio and a spot for your platoon to listen in and follow up discussing the subject.



*1st in importance is morale...*

GENERAL GEORGE C. MARSHALL

Vol. II, No. 37  
13 Sept. 1944



# ARMY TALKS



## Combat Medicine



RESTRICTED • EUROPEAN THEATER OF OPERATIONS • UNITED STATES ARMY



# A LETTER FROM THE EDITOR OF



Dear Discussion Leader :

This army of ours is composed of a lot of hard-headed guys who, rightly enough, want to know what the "score" is—who they're fighting, why they're fighting and just what is being accomplished. That is ARMY TALK's job—to give you discussion leaders the "jumping-off-point"—factual information—so that you and your men can discuss these questions and attempt to find a solution.

This week's ARMY TALK gives a straight factual report on how the medics operate, the equipment they use and the latest advances in medicine that are being utilized to save our casualties. No effort is too great for the Medical Corps to make sure that the man who walked into a slug gets immediate medical attention and is transported to safety with the utmost speed and a minimum of discomfort.

Does your unit fully utilize ARMY TALKS? Are your unit commanders aware of the information that they offer—information that means lives

saved. ARMY TALKS are now emphasizing Combat Orientation. These "combat" issues contain the "tricks of the trade"—as reported by the men who have actually used them and know that they work.

You, as a discussion leader, are responsible for seeing that these vital topics are brought before your men and discussed fully. The Army wants to do this job quickly and efficiently with as many men returning home in one piece as is humanly possible. Discussions will help do just that.

We hope your commanders read these pamphlets too. Keep in mind the fact that "Warweek" presents, on Thursdays, a newspaper version of the topic covered in ARMY TALKS. Thus, the GI who reads "Warweek" will come to the discussion hour with some advance knowledge of the meeting's topic.

You, as a discussion leader, are in a position to know how the subjects in ARMY TALKS are going over. If you have any suggestions or criticisms send them in. If you have any topics you think are worthy of discussion let us know. We want to know what you think of ARMY TALKS and will be glad to hear from you.

ARTHUR GOODFRIEND,  
Major, AUS,  
Chief, Orientation Branch.

"The purpose of the program is to give the soldier psychological preparation for combat, and a better realization of the import of every phase of his military training. Emphasis will be placed on combat orientation. The mental and physical conditioning of the enemy, and a proper evaluation of the enemy's weapons and fighting qualities will be stressed. A better understanding of the background of the war, and the soldier's responsibilities in the post-war world will also be developed. . . ."

BY COMMAND OF GENERAL EISENHOWER.

(Extract from letter ETO, 1 August, 1944, AG 352/2 OpSS, Subject: Combat Orientation Program.)



# ARMY TALKS

EUROPEAN THEATER OF OPERATIONS

## Combat Medicine

PRIVATE JACK MARTIN got some breath back into him and eased over onto his back. He knew he was hit all right, in the chest. The question was, how bad? It didn't hurt: just felt numb. But then, he knew, most wounds were like that.

Fighting off the feeling of fear that surged over him, he pulled open his shirt to take a look. Blood welled from a tear several inches long over the edge of his ribs on the left side. He couldn't tell how deep the hole was, and wondered if the ribs were shattered. Busted ribs, he remembered, are bad medicine for lungs, and he resisted the temptation to try a deeper breath.

From a pocket of his cartridge belt, Martin took a small red and white paper packet marked WOUND TABLETS. Fishing out his canteen with as little movement as possible, he washed down the eight white tablets the packet contained.

He was just draining the last of the water when somebody yelled at him through the noise of the firing, "take it easy, pal, be with you in a minute."

## Medics A Good Sight When You're Hit

It was a medic, a company aid man. Martin could see the red cross brassard on his left arm as he came up.

"Where are you hit, boy?" the medic asked. "Let's have a look."

Working swiftly the aid man produced sulfa powder from his kit which he sprinkled in the open wound. Then he applied a sterile compress, taping it down securely. Next a prepared syrette of pain-preventing morphine administered quickly, skilfully. Urging Martin to take a healthy slug of water from his own canteen, he meantime stuck the wounded man's rifle into the ground alongside and tied a bit of gauze to the stock.

"They'll be along to pick you up in no time," said the aid man as he fastened his kit pack up. "Just lay quiet and rest easy. You got smokes and matches handy? Good. Now, don't worry. You're going to be okay." Then he was gone in the direction of the firing to give a hand to the unit's other casualties.

When this company aid man told Private Jack Martin not to worry, and that he would "be okay," he was not just comforting a hurt man. He meant it. He was speaking with the honest conviction of a man who had seen guys a lot worse off than Martin appeared to be fixed up as good as new.



Behind his quiet confidence was the solid fact that in this war only three out of every hundred men of the American Army who are hit in battle, no matter how seriously, and live to receive any treatment, die of their wounds. In the last world war, more than seven in a hundred wounded who lived to be treated still died in a hospital.

If the seriously wounded man today can be gotten into condition to be removed from the combat zone, his chances of pulling through improve to something like 996 out of 1,000. If he makes it to a general hospital back in the communications zone, then his chances of survival increase still further to the point where he actually has odds of about 999 to one on his side for recovery.

### New Discovery Speeds Up Recovery

It isn't just a matter of keeping men alive, either. The odds in favor of a wounded soldier being returned to full health and usefulness follow right along with the life and death figures. In the North African Theater of Operations during 1943, which included the Tunisian campaign, the Sicilian campaign and the early part of the Italian campaign, 62.2 percent of all wounded men of American units there were returned to duty within 90 days. Of the remainder, the great majority merely needed further treatment to make the same recovery.

Three things account for the 100 percent better chance the 1944 GI has of pulling through if he should get hit in battle, than the American Doughboy of 1918 had—in spite of the fact that modern war weapons are more destructive, and today's soldier faces greater hazards than his "old man" encountered. They are :

1. The tremendous advances made in medical science in the past 25 years—the discovery of new drugs, surgical technique, etc.
2. The vast, complex yet highly workable system of removing wounded from the combat zone that the Army Medical Department has developed and operated.
3. The system of taking medical and surgical care up into the combat zone right to the wounded man who cannot be removed safely to the distant rear.

The life and rehabilitation figures speak for themselves. The weapons of life-saving that the American Army now wields have more than kept pace with the weapons for killing and crippling that the enemy has produced.

When Jack Martin swallowed the eight white wound tablets, he was putting to use one of the greatest discoveries of the present medical age.

Today, every American soldier going into combat carries these sulfadiazine pills, and is instructed to take them immediately with plenty

of water if he is hit any place except in the belly. They practically amount to a new lease on life, right on the spot.

When a man is hit by a bullet or a shell fragment, the wound is always contaminated. In the past, unless such a wound could be surgically cleaned and dressed within a few hours, infection was an almost inevitable result. That meant complications, long periods of



treatment and slow healing at best. Often, if the wound went beyond those few hours without treatment, it meant gangrene, and amputation or even death.

There were actually more deaths from infection in World War I than from the primary effects of wounds, like bleeding. Now infection seldom gets a real foothold in a battle wound, and, if it does, it is quickly brought under control through prompt surgery and the use of the new drugs.

Sometimes these drugs are taken internally, as in the case of the pills; applied to the open wound, as in the case of the powder the aid man used, and sometimes they are administered hypodermically. They act to "pin the infection down," making it impossible for bacteria to multiply. Then a man's natural defences, the white corpuscles of the blood, sometimes called the body's infantry, can step in and wipe out the isolated remnants of infection.

Great as the sulfa drugs are, however, they have only a limited effectiveness against certain types of bacteria which sometimes take root in wounds, burns and compound fractures. In the main, these are the pus-forming microbes, and that's where penicillin comes into the picture. The "miracle drug," as it is often referred to, has proved to be a safe, sure and rapid treatment for infection of this previously dangerous type.

### Penicillin Plays Havoc With Bacteria

Penicillin is a drug that is taken from common green mold, the type that forms in cheese or bread. Scientists are not yet sure what it is chemically, but they have no doubt as to its life-saving power. One form of the drug literally suffocates bacteria by shutting it away from oxygen ;



another form literally burns the bacteria alive by feeding it too much oxygen.

Wounded American soldiers now get penicillin shots directly into the body, where the drug can do the greatest good, every four hours. Sometimes wounds are flushed with a solution of penicillin salts, and sometimes they are covered with compresses saturated with the parent mold.

The armed forces get practically the entire supply of penicillin that is produced in the United States at present. A supply adequate to the needs of every wounded soldier has been assured by the efforts of the home drug industry in increasing the source of the drug and in speeding its processing.



One of the most terrible results of wound infections in the last war was tetanus, or lockjaw as it is called. Many men died of this extremely painful disease, which is caused by a tiny germ—a germ on which the sulfa and penicillin drugs, potent as they are, would have no effect. Fortunately, an anti-tetanus toxoid of practically 100 percent effectiveness has been developed since World War I, and every man gets the shots that “burn like hell for a minute” long before he gets into combat. Cases of this once terrible threat to the wounded soldier are so infrequent in the American Army in this war as to be a negligible medical problem.

### Thousands Were Saved By Blood Banks

Another great victory which medical science has scored since the last war in the interests of the battle casualty, is in the treatment of shock, particularly where it is caused by loss of blood fluid.

Blood transfusion is the best possible means of combating shock, a condition which arises when the heart has difficulty in maintaining a proper flow of blood in the body. The old method of carrying out a transfusion necessitated direct contact between the person giving blood and the person receiving it. Both had to be in the same blood group. This system could only be used under conditions which were difficult to set up near the battlefield.

Now medical science has eliminated the need for direct contact between the donor and the recipient. Sometimes whole blood in its natural form is stored in blood banks, where it can be held for a time pending the need for it. Sometimes the blood plasma, that is, blood from which the red corpuscles have been removed, is reduced to a powdered form, in which it is more easily preserved and transported.

Medical field units carry dried blood plasma with them. Since it is a simple matter to place the preserved plasma back into solution, wounded soldiers can be given transfusions very near to the battlefield before the condition of shock can set in. Certainly thousands of men are alive today because the new technique used by the Army Medical Department served to replace and supplement their own blood in time.

### Time Is Precious—Medics Know It

Equally important to advances in medical science in the greater saving of wounded American soldiers in today's fighting, is the swift and smooth evacuation system operated by the Army Medical Corps. No longer does the battle casualty lie for precious hours awaiting the treatment or surgery that can give him a running start on the road to recovery.

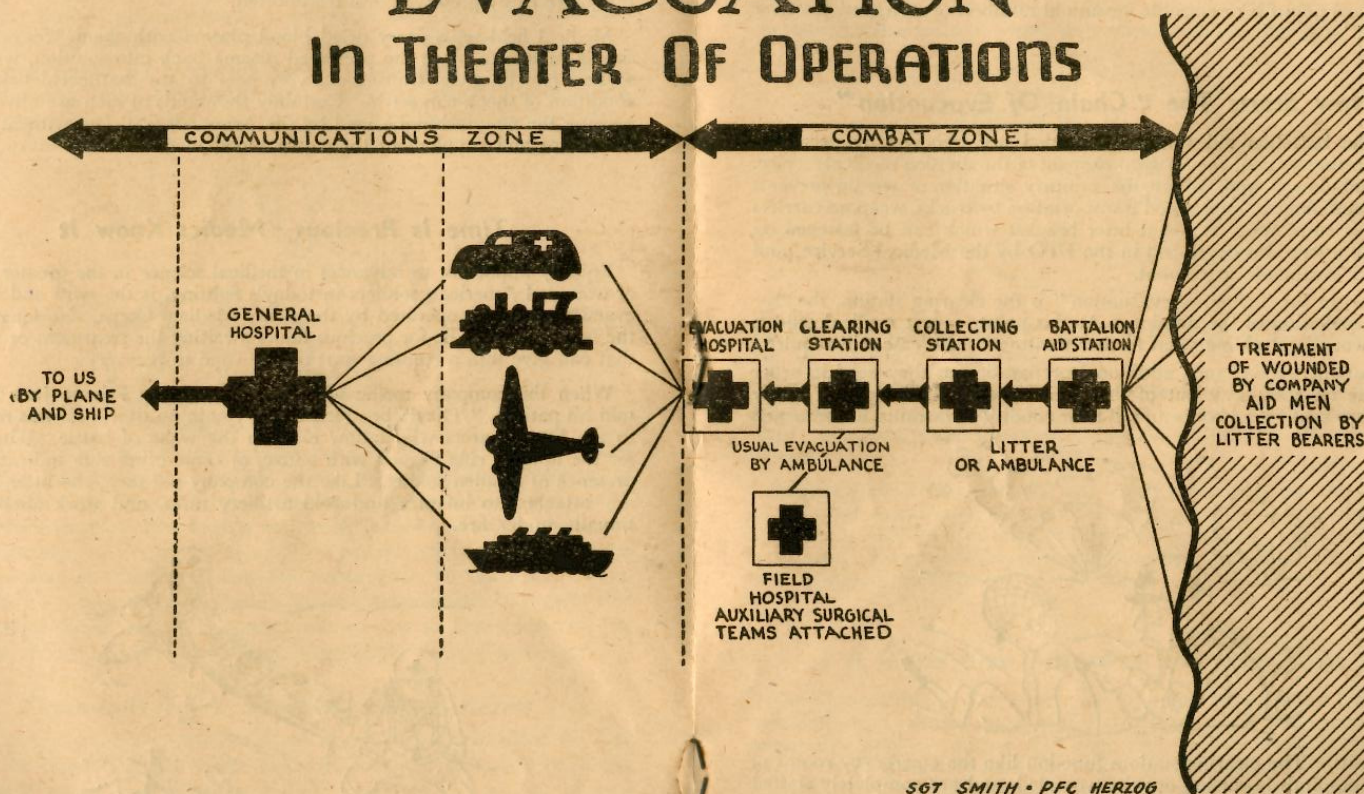
When the company medic who gave first aid to Private Jack Martin told his patient, “They’ll be along to get you in no time,” he was referring to the litter bearers who follow close in the wake of battle. They look for the upright rifle flagged with gauze, or some other sign indicating the presence of a fallen soldier. Like the company aid men, the litter bearers are attached to infantry and field artillery units, and work almost continually under fire.



Upon finding a wounded soldier, these trained medical teams carefully place him on the litter and carry him back—usually no more than a few hundred yards—to the battalion aid station. Here the battalion surgeons render emergency medical care. They give immediate treatment



# EVACUATION IN THEATER OF OPERATIONS



Reading from right to left, the above diagram shows the chain of evacuation for casualties from the battlefield to the United States. Casualties receive first aid right on battleground and are carried on litters to Battalion Aid Station where degree of wound is ascertained and treated. From this station the wounded are transported by litter or ambulance through the Collecting Station to the Clearing

Station where emergency cases are routed to the Field Hospital for immediate surgery. The remainder are sent to the Evacuation Hospital to await transportation by ship or plane to Communications Zone, where they will be taken to General Hospitals by ambulance or train. Cases requiring over 180 days convalescence are then transported, as soon as possible, to the United States by plane or ship.



for shock, check persistent bleeding, give transfusions, immobilize fractures and, in general, prepare the wounded for evacuation to the rear as comfortably and safely as possible.

While major surgery cannot be undertaken at the exposed battalion aid stations, the prompt professional attention given to the wounded at these forward points is responsible for untold numbers of men getting "over the hump."

### Now Starts The "Chain Of Evacuation"

From the battalion aid stations, wounded are removed by personnel of the collecting station, the forward element of the division medical service. Litters, ambulances and, where the military situation of terrain prevents the use of ambulances, improvised transportation by trucks, weapons carriers and jeeps is employed. A metal litter bracket which can be fastened on the back of a jeep was developed in the ETO by the Medical Service, and has proved invaluable in combat.

Next step in the "chain of evacuation" is the clearing station, the rear medical installation of the division. At this point, expert medical officers diagnose wounds, deciding what further treatment each case will require.

Some patients receive such additional preparation as they need in order to continue on their way out of the combat zone. The sick or lightly wounded are kept for 24 hours and, if their condition warrants, are returned



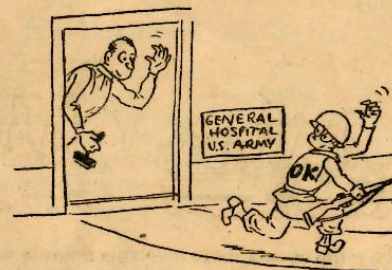
to their units. The clearing stations function like the emergency rooms of large city hospitals in sorting out the wounded, and are completely staffed with doctors and skilled assistants.

Beyond the division clearing stations, most casualties are transported by ambulance to evacuation hospitals located at the rear of the combat zone. The remaining cases, urgent chest and abdominal wounds and the like, are moved instead to nearby field hospitals until they are out of danger.

At the evacuation hospital, a wounded soldier begins to receive complete treatment for his injuries, the kind of treatment that is necessary to restore

him to full health. Up to this point his treatment has been more in the nature of emergency care, designed to offset the first effects of his wound, and to give him new strength.

Evacuation hospitals in the United States Army medical system are completely equipped installations, where any type of surgery or treatment can be undertaken, but where only men who are expected to recover



rapidly are ordinarily retained. The rest are sent out of the combat zone into the communications zone.

The transporting of battle casualties to the rear communications zone is accomplished by ship and plane from the Continent, but in other theaters where no water must be crossed, hospital trains and ambulances are utilized.

Hospital ships, white-painted and brightly lighted, are designed and equipped to carry battle casualties in large numbers with a minimum of discomfort. The staffs of these carriers include doctors, nurses and medical corps men. Every attention is given to the care and well-being of patients, with treatment continuing while enroute.

### A Plane Ride—But You'd Rather Walk

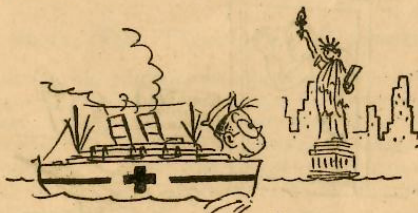
The planes used are C-47s especially equipped for the job of transporting wounded men swiftly and safely to England. The wounded are constantly attended during the brief trip by a professional nurse and trained medical technicians. Thousands of casualties have been flown to England from France in carrier planes thus far in the campaign.

Wounded soldiers evacuated to the communications zone go to huge general hospitals of 1,000 beds or even greater capacity. Here the most exacting and complete treatment is given. In equipment and facilities the U.S. Army general hospitals compare with the finest municipal or private institutions in the world.

There is yet another step in the chain of evacuation, however. If a soldier cannot be returned to duty status within 180 days, he is sent by



hospital ship to the United States. There he may receive treatment at Halloran General Hospital on Staten Island in New York harbor, or at one of the other great hospitals in the zone of the interior. If a period of convalescence is necessary, the recuperating soldier is removed to the hospital set up for that purpose nearest his own home, where he may see his family and friends frequently. Convalescent hospitals are distributed throughout the States.



Or he may need a series of operations involving delicate skin and cartilage grafts to restore his features or bring usefulness and conformity back to a badly burned or broken hand. Through the miracles of modern surgery amazing physical restorations are possible, and no wounded American soldier is returned to his home without having had the benefit of the finest skill his country affords.

There are a lot of Joes who will be going home from this war, and who wouldn't have gone home from any previous one, simply because the Army Medical Service now takes the surgeon right to the dangerously wounded man far up in the combat zone.

In the last war, wounded men died altogether too often because they had to wait too long for surgery, or because they couldn't stand the rigors of the trip to the rear in their weakened condition.

### Specialists Ensure Best Possible Care

Now, the Medical Service has hundreds of highly skilled surgeons, trained technicians and surgical nurses organized into what are known as Auxiliary Surgical Groups. The groups in turn are made up of Auxiliary Surgical Teams which work as separate units attached to field hospitals far forward within the combat zone.

Most of these units do general surgical work, although some of the teams are specially qualified for bone, facial, chest, nerve or brain surgery. A general team may consist of a general surgeon, an assistant surgeon, an anesthetist, a nurse and two surgical technicians.

Auxiliary Surgical Teams have their own surgical equipment, tents and special trucks which carry sterilizers and an auxiliary power unit to provide current for electric lights. They are highly mobile, and can move on short

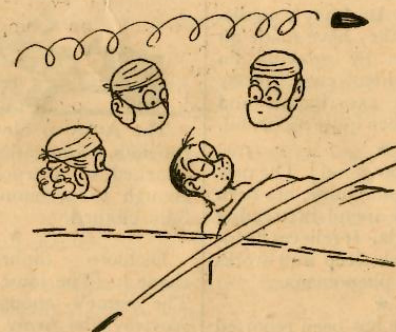
notice. If Jack Martin's ribs had been shattered, with the consequent danger that much movement might have led to a punctured lung or some other internal damage, he would have been taken straight from the division clearing station to the field hospital instead of being sent to an evacuation hospital for shipment to the communications zone by ship or plane.

### It's Teamwork All Of Its Own

Chances are, the field hospital would have been set up no more than a stone's throw from the division clearing station. There Jack would have received the attention of the hospital surgeons, or of the personnel of the Auxiliary Surgical Team attached to the hospital. If he had needed an operation to set him right inside, he would have had it then and there.

Only when he could travel without danger of complications from his wound would he have been placed back into the regular channel of evacuation.

The picture of white-clad surgeons calmly saving life by the delicate skill of their hands while rifle fire crackles in the distance and shells whine overhead will always be one of the most dramatic of the war. Yet, it symbolizes the spirit which drives the whole of the United States Army Medical Department—from the men who planned and made this vast machine of mercy to the dogged aid man in the line.



**This article has been written by an ARMY TALKS staff writer. The material was gathered from official Medical Corps sources, hospital authorities and the casualties themselves.**

**It is straight, matter-of-fact reporting on what the Medical Corps is doing to make sure that you get the breaks. It's important—it's your life!**



## On the Medical Front

The Army Medical Corps distinguished itself on D-day by moving the wounded so swiftly that many a GI hit on a Normandy beach in the morning found himself in an English hospital that evening.

★  
Army psychiatrists have OK'd griping. They claim it to be the certain cure for the "Army blues."



The soldier who "bottles his misery up" is heading for a crackup. He should let off steam and really b—! It's the Army way—and for once—the right way.

★  
Flee, flu, flee! An Army commission reports that they have made an influenza vaccine by growing flu virus in fertile hens' eggs (messy business!). But experiments and tests so far have been quite successful.

★  
More ersatz—but good! The new synthetic drug, Sontoquine, has been found to be very useful in treating typhus and malaria. It relieves headaches, brings back sleep and works well on nervous phenomena.

★  
A new advance has been reported in skin grafting. Skin grafting is completed more easily and more successfully with "blood glue." The

new method eliminates painful stitching.

★  
A new drug—Dicumarol—is now saving lives by preventing dangerous blood clots in the veins. Patients need not fear of bleeding to death—the effects can be counteracted by (1) transfusion; or (2) taking vitamin K, the anti-hemorrhagic vitamin.

★  
Does it pain you to sit down? Is your base section tender? Diagnosis: "jeep disease." Or simply, a pilonidal cyst has invaded your serenity. These cysts are being caused by the rigors of jeep and tank riding. Don't worry, soldier, Army medics have developed operative techniques which reduce the healing time to 30 days.



The Army is now using, behind the lines, a fumigation and bath unit, attached to a truck. It is large enough to accommodate a soldier fully clothed.

★  
Dichloro - diphenyl - trichlorethane! (The louse is on the run.) The name's enough to kill 'em! Anyway, the Army has proved that this jawbreaker's the best typhus preventive yet discovered, better than steam or typhus vaccine.

### HINTS from the MEDICS

1. On long marches, men should hook fingers in shoulder straps of packs, continually moving hands and elbows to be sure of good circulation to handle guns when near front.
2. By wearing Plexiglas goggles or masks you can protect your eyes from tiny land mine fragments.

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## How to prepare this Army Talk

SOME civilians do not like to talk about life insurance because it brings up the unpleasant possibility of dying. Perhaps a few soldiers shy away from the subject of combat medicine because it suggests the possibility of getting hit. Most men in the Army, however, are tough minded enough to realize the importance of the topic. Knowing what to do if you become a casualty may save your life. Knowing what your chances are and how good the care is if you are wounded will make you a better soldier.

Everybody in the ETO knows that he or she can be wounded through enemy action. A substantial portion of all casualties are so called non-combatant troops. Even paragraph troopers stationed in England may have a ticket to the hospital delivered by a buzz bomb. So whatever your service or wherever you are stationed you're on Jerry's mailing list. He'll be trying to get in touch with you.

Here are some of the questions which will help get your discussion rolling:

1. What are your chances of recovery as a casualty if you get in the hands of the medics?
2. Why should a wounded man use a tourniquet if he is losing blood rapidly? Get the low down from your unit medical officer.
3. How do the chances of the wounded of this war compare with those of the last?
4. How do the chances of the wounded in this theater compare with the casualties in other theaters?
5. What new developments affecting combat medicines have been devised in this conflict? (see p. 14).

Start off with a 10 or 12 minute talk on the subject. End up with five minutes of summary. Encourage the free exchange of ideas. Invite anyone in your outfit who has been a casualty or who has seen the medical service function in combat conditions to make a contribution. By all means, if you are near a general hospital ask a convalescent to sit in on your session. If there is a radio available use the ARMY TALKS on the air program over AFN, 1430 hours each Saturday to introduce your discussion.