



Univerzitet u Beogradu
Fakultet veterinarske medicine

Katedra za biologiju

Predmet:

UZGOJ I NEGA DIVLJIH I EGZOTIČNIH
ŽIVOTINJA
2022/2023

Prva pomoć kod povreda u lovnu i
rada sa divljim životinjama

Prva pomoć je skup mera i postupaka kojima pomažemo povređenom do dolaska službe hitne medicinske pomoći, lekara ili drugih zdravstvenih radnika.

Ciljevi prve pomoći su:

- spašavanje života,
- sprečavanje nastanka trajnih posledica i
- skraćivanje trajanja lečenja i oporavka.

Postupci pružanja pomoći, koje slikovito nazivamo "karikama u lancu spašavanja" su:

- a) preuzimanje neodložnih mera za spašavanje života,
- b) pozivanje pomoći,
- c) pružanje prve pomoći,
- d) intervencija službe hitne medicinske pomoći i
- e) bolničko zbrinjavanje.

Povrede u lovnu

Postupak pružanja prve pomoći u lovnu podeljen je u nekoliko stepena, koje radi lakšeg pamćenja možemo obeležiti sa:

A – airway – obezbeđivanje disajnog puta

B – breathing – disanje

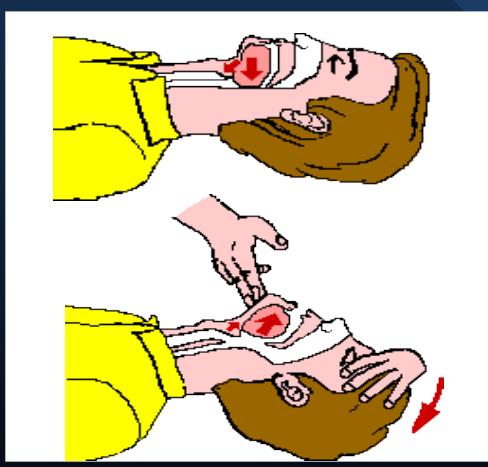
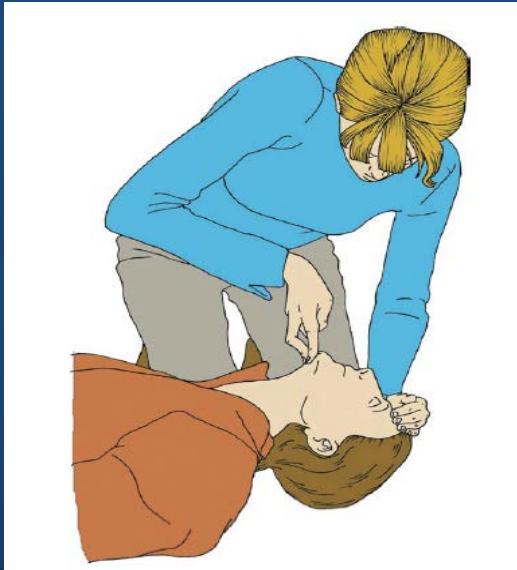
C – circulation – obezbedjivanje cirkulatornog volumena i zaustavljanje krvarenja

D – drugs – davanje određenih lekova kod ujeda ili kod izvodjenja kardiopulmonalne reanimacije

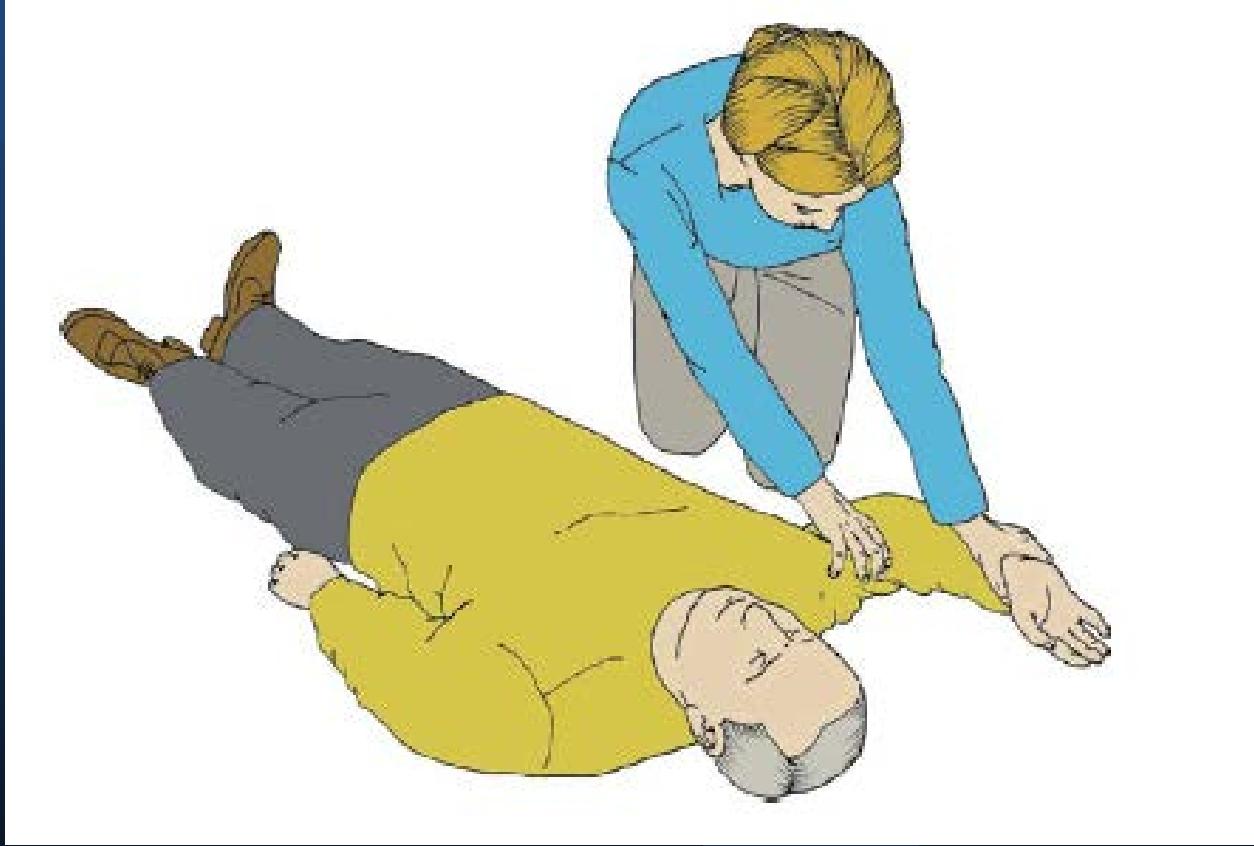
Posle pružanja prve pomoći pacijentu potrebno je obezbititi transport u najbližu zdravstvenu ustanovu.

Pacijenta transportovati u imobilisanom položaju da bi sprečili dodatna povredjivanja pacijenta

Povrede u lovnu - disajni put



Koma položaj



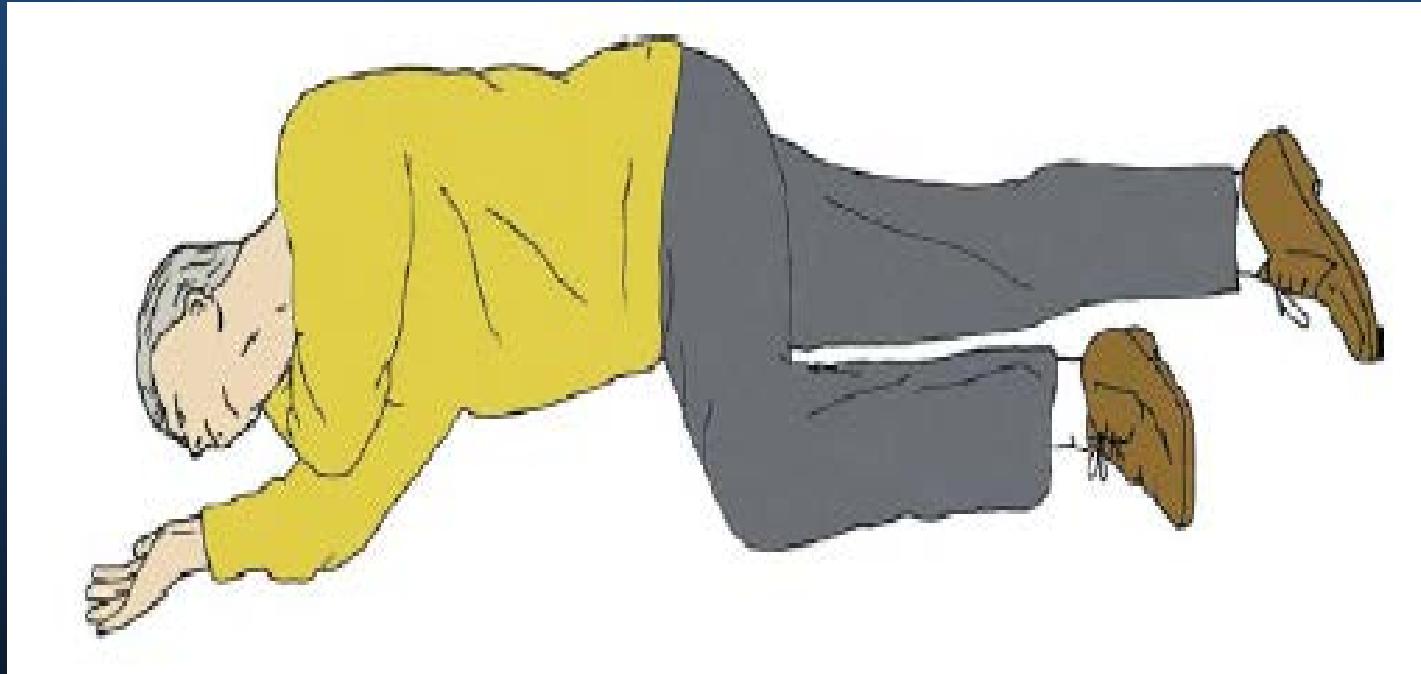
Koma položaj



Koma položaj



Koma položaj



Povrede u lovnu – stabilna cirkulacija i prestanak krvarenja

- Definicija krvarenja: Isticanje krvi iz krvnog suda čiji je zid oštećen povredom ili bolešću. Prema vrsti ozledjenog krvnog suda krvarenje se deli na:
 - ARTERIJSKO
 - VENSKO
 - KAPILARNO

Krvarenje

- ARTERIJSKO - isticanje svetlo crevne krvi u povremenim mlazevima čija je pojava u skladu sa otkucajima srca
- VENSKO- stalno (ne u mlazu) isticanje tamno crvene (venske) krvi
- KAPILARNO- se prikazuje kao rošenje, u vidu sitnih kapi koji se javljaju na zidovima rane

Krvarenje

- SPOLJAŠNJA I UNUTRAŠNJA
- Spoljašnja krvarenja su sva ona koja se registruju spolja na telu bilo da se javljaju iz novostvorenih rana ili prirodnih otvora na čovečijem telu (nos, usta, čmar, mokraćni otvor).

Krvarenja

- Unutrašnja krvarenja se javljaju u telesnim dupljama, telesnim šupljinama, tkivima i organima i nisu vidljiva spolja.
- Duplje: lobanjska, grudna, trbušna
- Šupljine: plućna i srčana maramica, zglob
- Krvarenje u tkivima “PODLIV”

Krvarenje – primer unutrašnjih krvarenja

- Unutrašnja krvarenja mogu da ostanu dugo neprepoznata zbog čega su veoma opasna
- Unutrašnje krvarenje iz slezine usled povrede prilikom pada sa visine. Krv se izliva iz pukotine na slezini u trbušnu duplju
- Krvarenje usled bolesti- čir na želucu i dvanaestopalačnom crevu

Krvarenje - znaci

- LOKALNI
- OPŠTI

Lokalni znaci:

- 1.vidljivo isticanje krvi iz rane ili prirodnih otvora (nos, usta, čmar)
2. krvni ugrušak

Krvarenje – opšti znaci

- posledica su reakcije organizma na gubitak krvi
- mogu biti: **SUBJEKTIVNI** (opisuje ih povredjeni) i **OBJEKTIVNI** (registruju ih oni koji ukazuju pomoć)
- SUBJEKTIVNI- malaksalost, mučnina, nesvestica, vrtoglavica, osećaj straha...
- OBJEKTIVNI- bleda koža i sluznice, hladna koža, ubrzan slabiji puls, čelo orošeno hladnim znojem, pospanost ili nekomunikativnost u najtežim slučajevima

Krvarenje - ciljevi prve pomoći

1. zaustavljanje krvarenja (hemostaza)
2. sprečavanje nastanka ili smanjenje posledica šoka
3. priprema za transport uz pratnju

Krvarenje – značaj

- Krvarenje se mora zaustaviti zbog toga što nastavak krvarenja dovodi do gubitka krvi koji ozbiljno remeti rad srca i svih tkiva u organizmu. Za normalno funkcionisanje ljudskog tela potrebno je da u krvnim sudovima ima dovoljno krvi kako bi krvni pritisak bio dovoljno visok da tu krv prebaci do svih tkiva u organizmu.

Krvarenje – zaustavljanje krvarenja

- Postoje tri stepena zaustavljanja krvarenja – hemostaze
- I stepen- „trenutna“ privremena hemostaza se uspostavlja odmah pri registrovanju mesta krvarenja i njen zadatak je trenutno sprečavanje daljeg gubitka krvi i kupovina vremena da se pripremi materijal i pravilno uradi „prava“ privremena hemostaza (II stepen)

Krvarenje - zaustavljanje krvarenja

- II stepen- prava privremena hemostaza koja će kontrolisati krvarenje do dolaska u zdravstvenu ustanovu gde će se uraditi – kompresivni zavoj
- III stepen- definitivna hemostaza

Krvarenje – metode privremene hemostaze

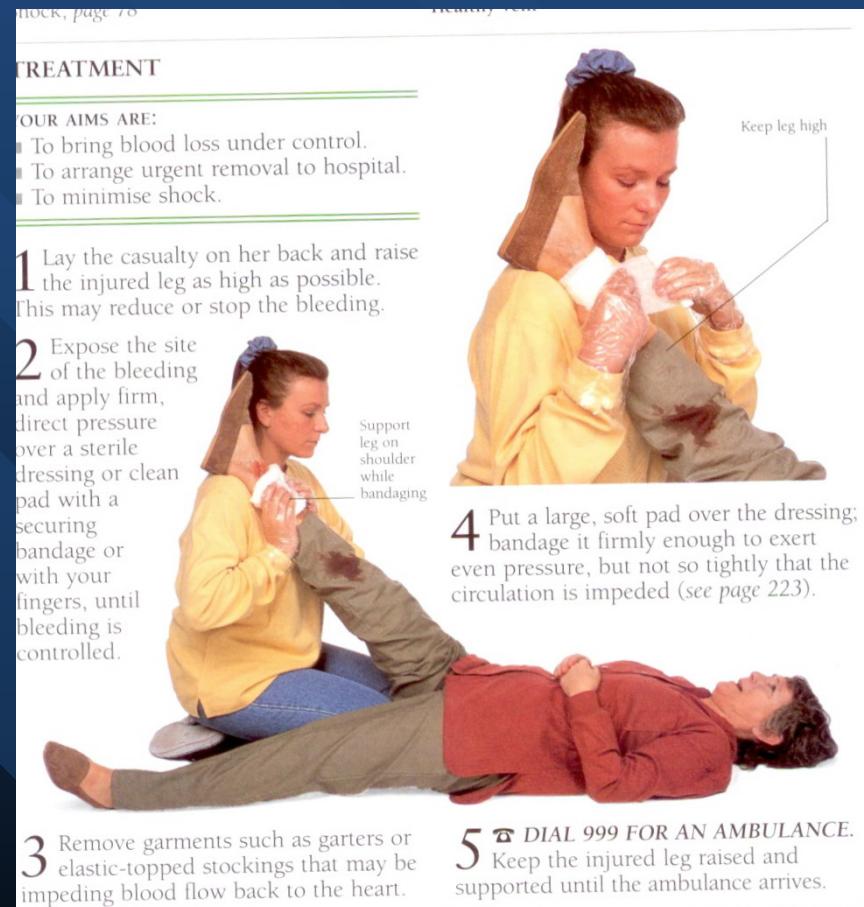
- DIREKTAN PRITISAK (I stepen)
- ELEVACIJA (PODIZANJE UDOVA) (I stepen)
- DIGITALNA KOMPRESIJA (I STEPEN)
- KOMPRESIVNI ZAVOJ (II STEPEN)- prvi zavoj
- PRESAVIJANJE RUKE ILI NOGE (I i II)
- POVESKE

Krvarenje – direktna kompresija

- Rukom u rukavici preko sterilne gaze postavljene direktno na ranu izvrši se pritisak.
- Trenutno se zaustavlja krvarenje dok se ne obezbedi materijal za kompresivni zavoj.
- U kombinaciji sa podizanjem i digitalnom kompresijom.

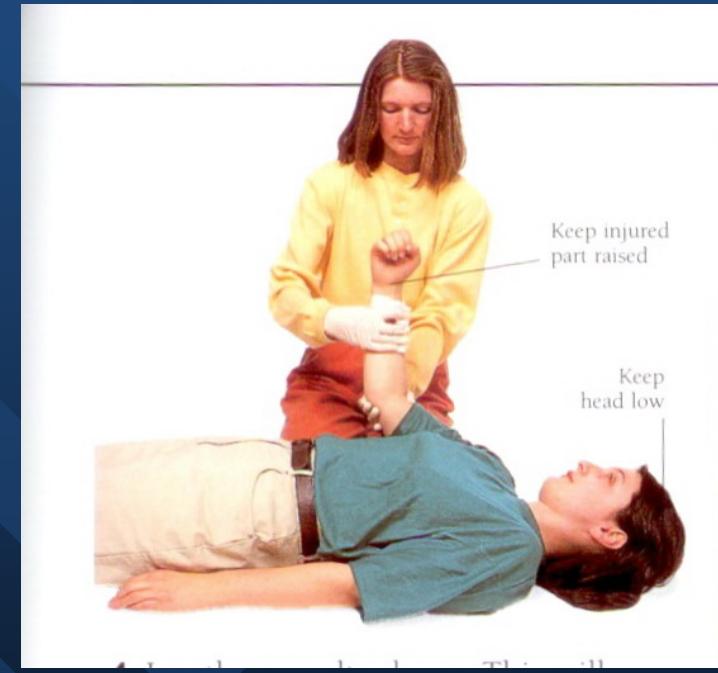
Krvarenje – elevacija ekstremiteta

- Maksimalno podizanje ruke ili noge u vis.
- Venska krvarenja se zaustavljuju, arterijska slabe.
- Ne sme raditi kod sumnje na prelom kosti.



Krvarenje - digitalna kompresija

- PRITISAK NA ARTERIJSKI SUD KOJI PROLAZI PREKO KOSTI.
- PRSTIMA, ŠAKOM, PESNICOM, PREKO SMOTULJKA GAZE.
- pazuh, lakatna jama, prepona, zatkolena jama, nadlakat itd.



Krvarenje - kompresivni zavoj

- Gaza, špulna nerazvijenog zavoja, drvo, kamen, itd, obmotani zavoj
- NE STAVLJA SE NA VRAT
- STALNA PROVERA CIRKULACIJE - puls i boja kože
- IMOBILIZACIJA



Krvarenje - poveske

- ESMARHOVA
- GARO



Zaustavljanjem krvarenja ukazivanje pomoći se ne završava

Autotransfuzija položaj tela koji obezbedjuje dotok krvi u organe važne za održavanje života:

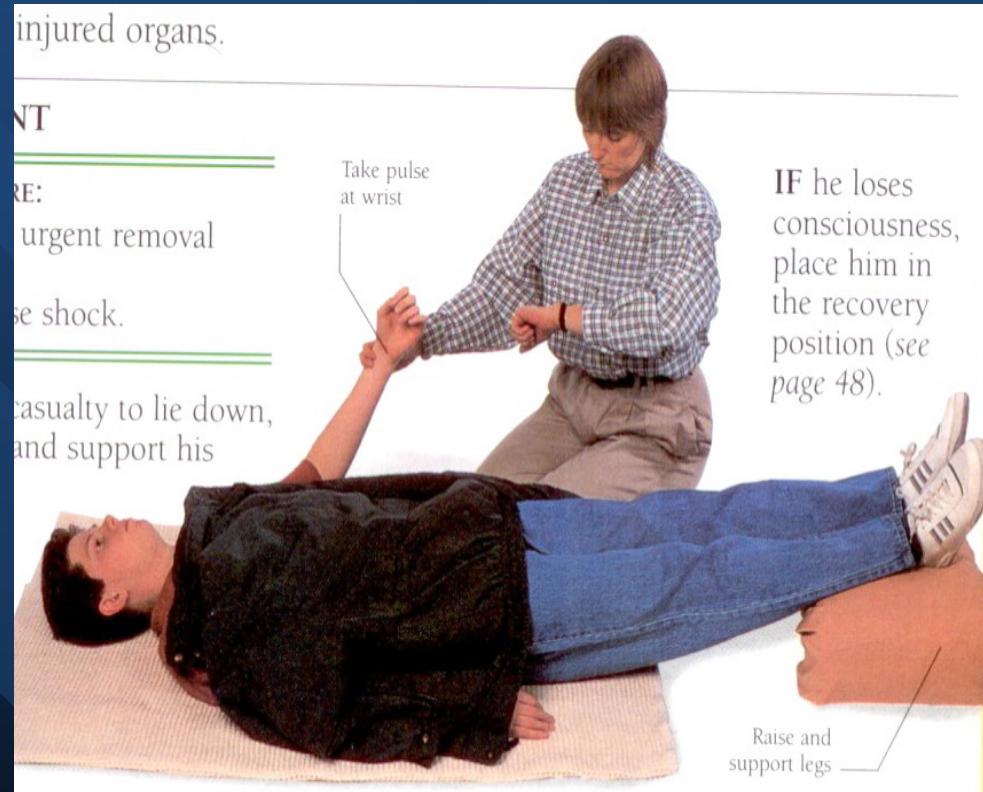
mozak, srce, pluća

**PSIHOLOŠKA
PODRŠKA**

STALNA KONTROLA

PULSA

UTOPLJAVANJE



PRVA POMOĆ KOD RANA

- **CILJEVI
UKAZIVANJA
PRVE POMOĆI:**

1. zaustavljanje krvarenja
2. zaštita rane od infekcije i sušenja
3. mehanička potpora povređenom tkivu (imobilizacija)

- **ŠTA SE NE SME
PRI UKAZIVANJU
PRVE POMOĆI:**

1. vadjenje stranih tela
2. ispiranje rane
3. stavljavanje masti, krema i praškova na ranu

STRANA TELA

- NIKADA SE NE VADE IZ RANE ZBOG OPASNOSTI OD NASTANKA KRVARENJA
- IMOBILISATI IH I POVITI



RANE SA JAKIM SPOLJAŠNJIM KRVARENJEM

- Spasilac treba da koristi rukavice
- Odstraniti odeću sa rane i oko rane da bi omogućili nesmetan pristup rani
- Pritisak na ranu direktno preko smotuljka gaze, zavoja ili jastučića za rane (I stepen). Ako postoji strano telo u rani, ranu pritisnuti s obe strane stranog tela.
- Ako se direktnim pritiskom krvarenje ne zaustavi primeniti paralelno i indirektan pritisak-digitalna kompresija.
- Ovakav pritisak se ne sme primenjivati duže od 10 minuta.



Spare rolled
bandages
make good
padding

injured organs.

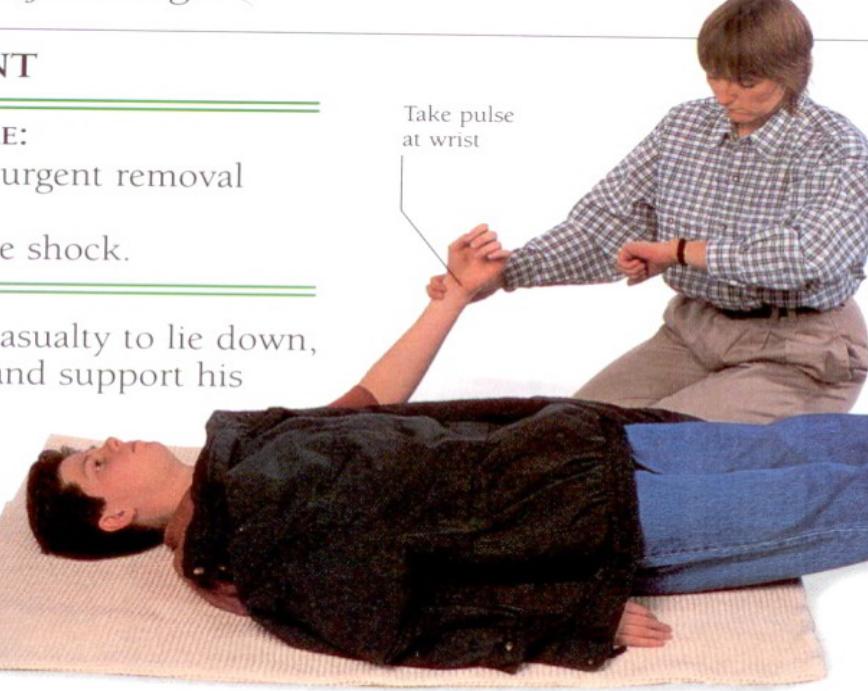
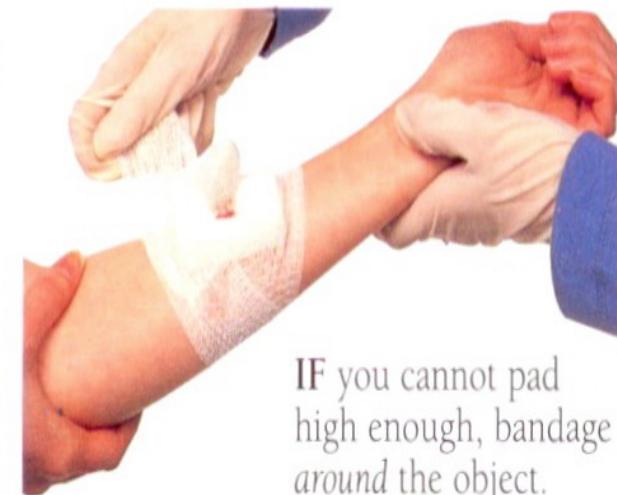
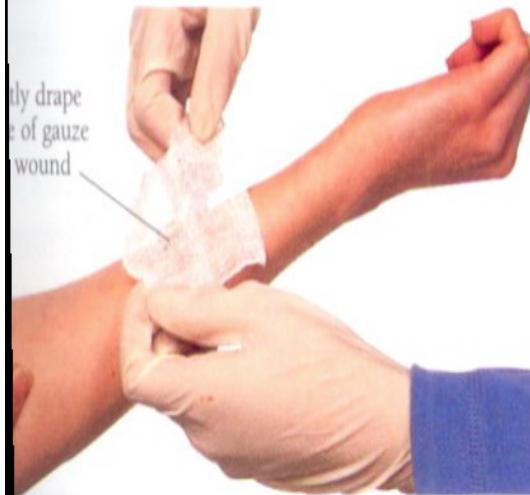
NT

RE:
urgent removal
se shock.

casualty to lie down,
and support his

by raising the wounded part.

the bandaging.



IF he loses
consciousness,
place him in
the recovery
position (see
page 48).

Raise and
support legs

over
body

UNUTRAŠNJE KRVARENJE

- Znaci:
- stanje šoka posle povrede, a nema znakova spoljašnjeg krvarenja (bleda, hladna i vlažna koža; blede sluznice i beonjače); ubrzani i slab puls; osećaj žeđi; pojava krvi na prirodne otvore; pojava povraćenog sadržaja nalik talogu kafe (krvarenje iz čira); pojava bola u zoni povrede...
- Uznemirenost, zbunjenost, pospanost...

UNUTRAŠNJE KRVARENJE

■ *Sprovodenje prve pomoći:*

1. Pomoći povređenom da legne na leđa.
2. Postaviti povređenog u "položaj autotransfuzije";
3. Raskopčati odeću oko vrata, grudnog koša i struka;
4. Utopliti unesrećenog;
5. Proveravati svakih pet minuta disajne pokrete i puls;
6. Zabeležiti postojanje, vrstu, količinu i poreklo krvarenja iz telesnih otvora.

Obezbediti što brži i udobniji transport uz pratioca, koji treba da nastavi započete postupke u "položaju autotransfuzije".

POLOŽAJ AUTOTRANSFUZIJE KOD POVREDE TRBUŠNIH ORGANA

YOUR AIMS ARE:

- To minimise the risk of infection.
- To minimise shock.
- To arrange urgent removal to hospital.

1 Lay the casualty down on a firm surface. Loosen any tight clothing.



injured organs.

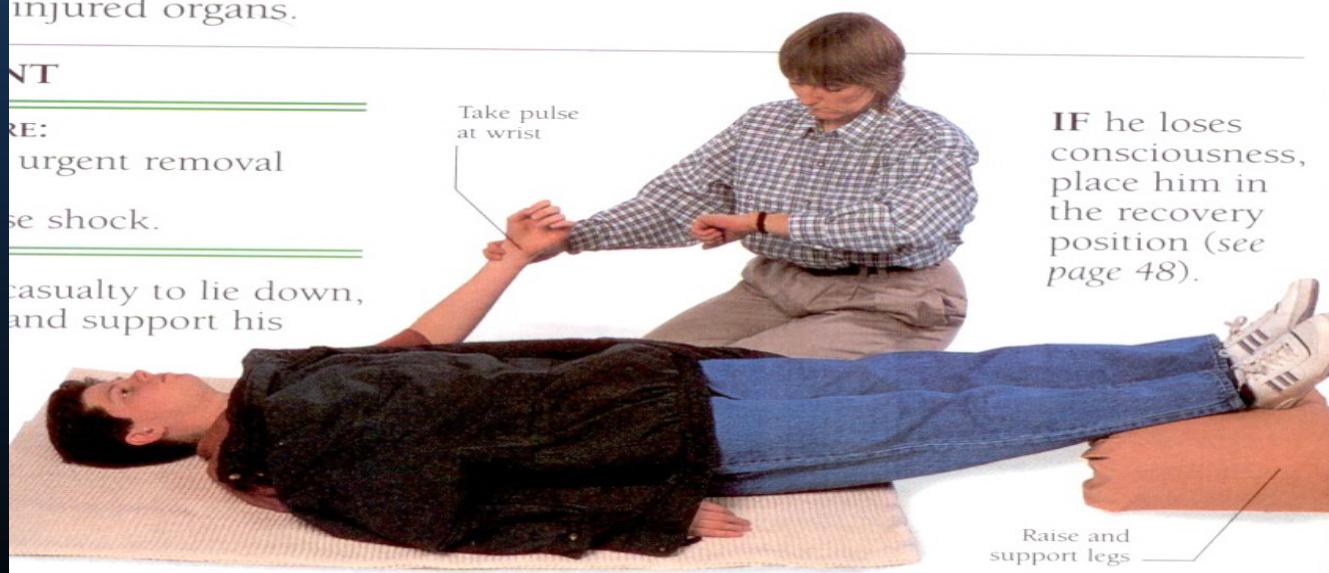
NT

RE:
urgent removal
se shock.

casualty to lie down,
and support his

across abdomen,
raise and support
casualty's knees
to ease strain on
injury

vertical, do not
raise the knees.



Prva pomoć kod preloma kostiju

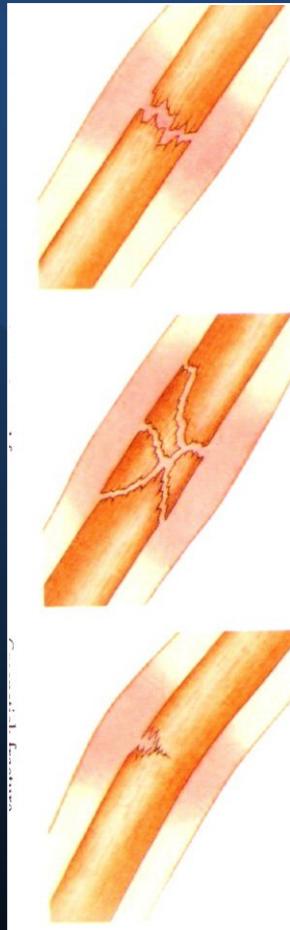
- Pod frakutrom se podrazumeva prekid celine jedne kosti tako da je kost podeljena na dva ili više delova
- Prema uzroku frakture mogu biti patološke i traumatske

Zavisno od dejstva mehaničke sile prelomi mogu biti:

- Direktni
- Indikretni

Prelomi mogu biti nepotpuni (fissure) ili potpuni

Prelomi kostiju



Podela preloma

■ Zatvoreni prelomi (fractura tecta)

■ Otvoreni prelomi (fractura aperta)

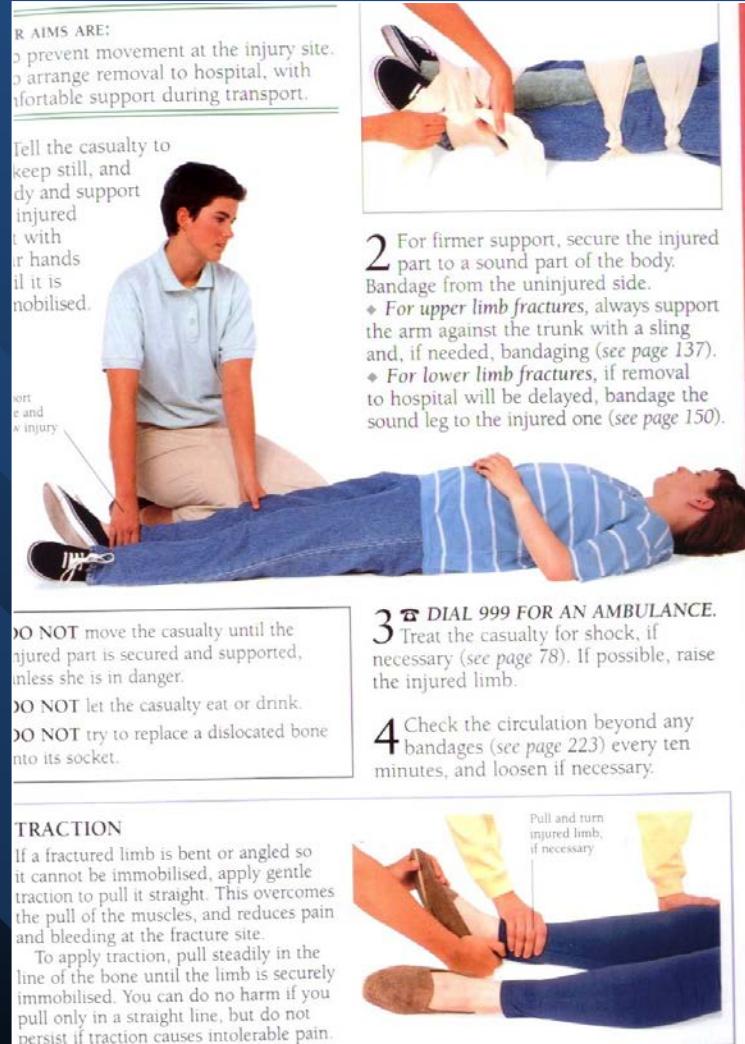
Pomeranje koštanih segemenata može biti :

- U stranu po širini (ad latus)
- Uvrtanjem kosti – ad axim
- Prema dužini – ad longationem et ad brevatinem

Tretman preloma kostiju

- **Pokreti kosti dovode do sekundarnih oštećenja mišićno-nervno-vaskularnih elemenata**
- Potrebno na licu mesta odrediti o kakvom se tipu preloma radi
- Kontrola osnovnih vitalnih parametara
- Potrebno obezbediti disajni put i cirkulaciju – odraditi privremenu hemostazu – prvi zavoj
- Imobilizacija ekstrmiteta ili dela tela koji je povređen
- Transport do prve nadležne zdravstvene ustanove

Tretman otvorenih i zatvorenih preloma



Tehnike imobilizacije

- Imobilizacija stavlja ekstremitet u nepokretan položaj. Na sve otvorene povrede sterilan zavoj.
- Udlage ili priručna sredstva treba da budu postavljena jastučićima od vate ili flanela, pogotovu istureni delovi (trohanteri, kondili femura, maleolusi)
- Uvek se imobilišu dva susedna zglobo (zglob iznad i ispod mesta povrede, kao i sam povređeni zglob)
- Povređeni deo tela treba da je u fiziološkom položaju

Imobilizacija

- Transportna (privremena)
- Terapijska (definitivna)

Transportna se postavlja na mestu povrede i štiti pacijenta za vreme transporta.

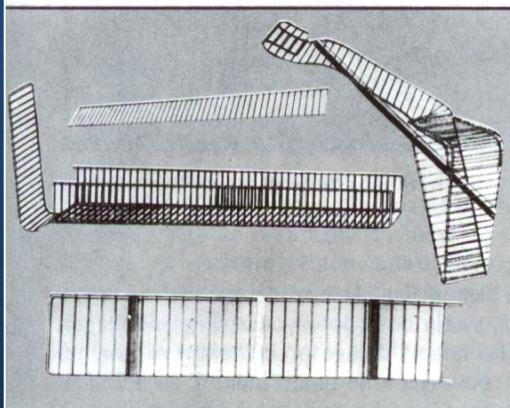
Transportna imobilizacija sprečava:

- Ometanje normalnog krvotoka i inervacije
- Predupređuje nastanak šoka – bolni sindrom
- Sprečava širenje infekcije i krvarenje
- Smanjuje reapsorpciju toksina iz mesta rane

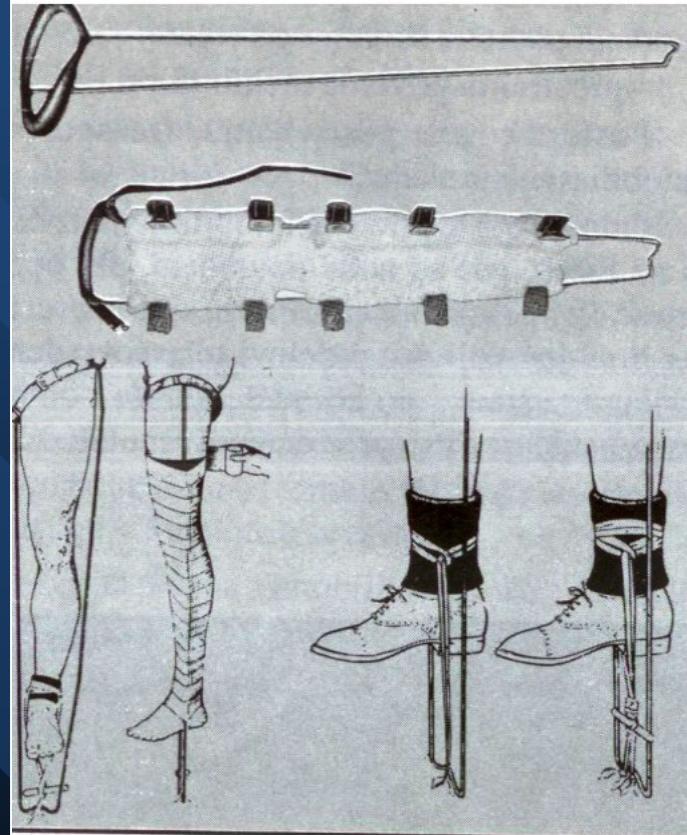
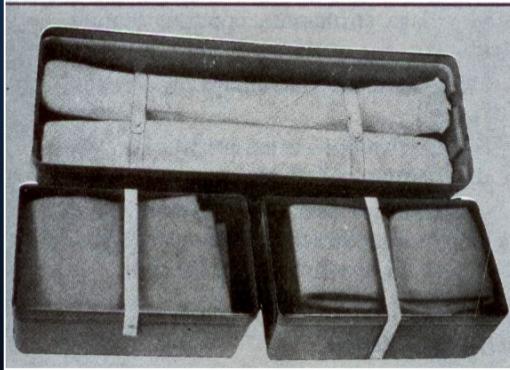
Imobilizacija

- Imobilizacija se provodi standardnim i priručnim sredstvima
- Najčešća standardna sredstva su udlage (Kramerova, Tomasova, Diterihsova)
- Priručna sredstva nalazimo na mestu povređivanja (delovi odeće, vrata, šper -ploča, daske, grane drveća, karton, lopata, ašov, šatorsko krilo, šaša od kukuruzovine, itd)

Udlage -standardne

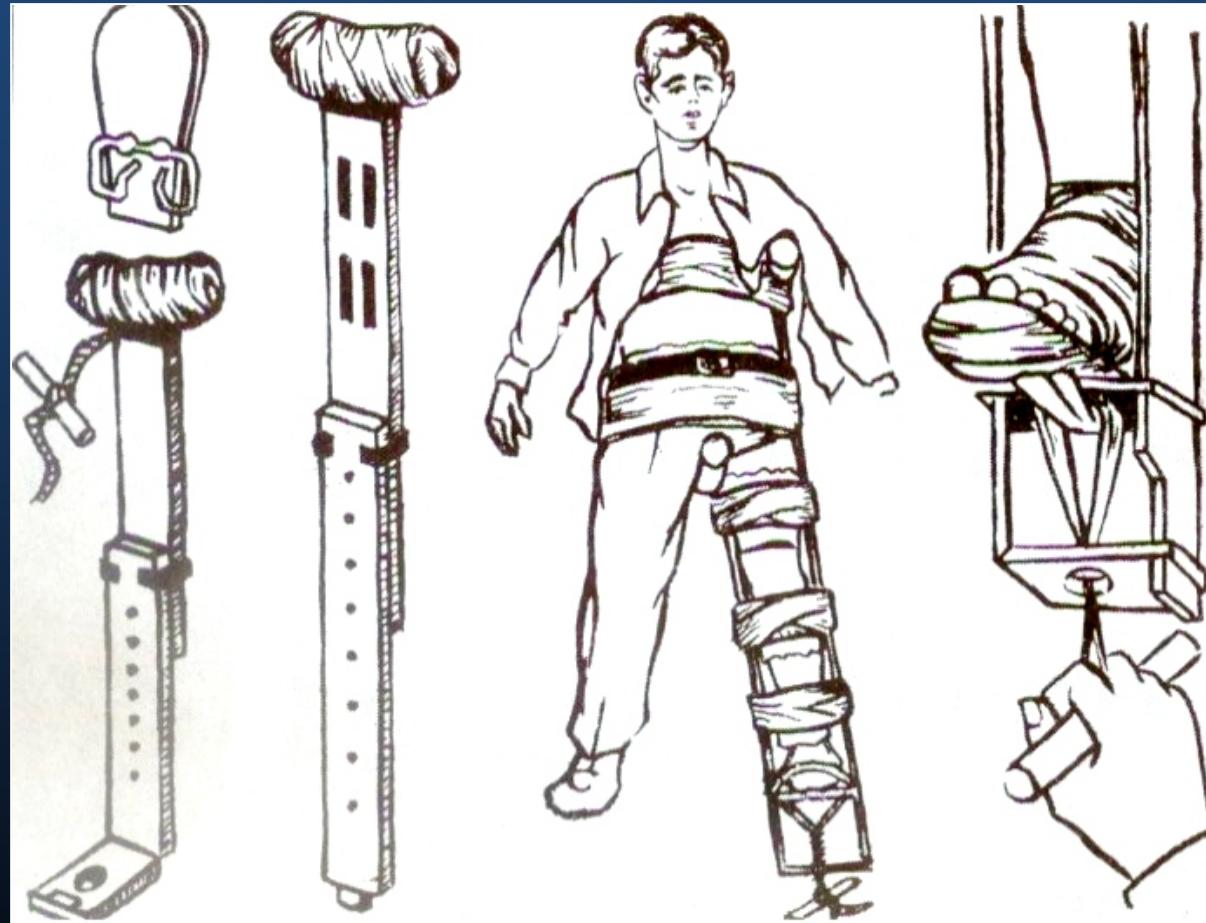


KRAMEROVA UDLAGA

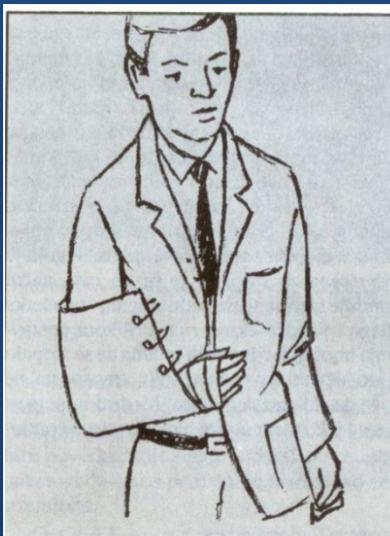
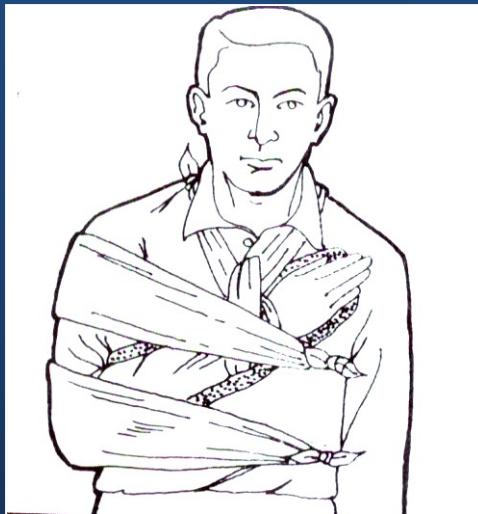


TOMASOVA UDLAGA ZA IMOBILIZACIJU NATKOLENICE
POTKOLENICE

Udlage -standardne



Udlage – priručna sredstva



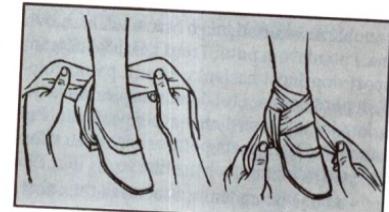
IMOBILIZACIJA UZ POMOĆ SKUTA KAPUTA



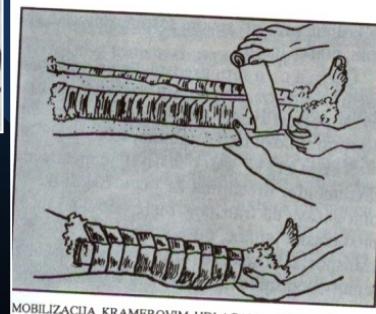
Povrede potkoljenice

Imobilizacija potkoljenice može da se izvrši pomoću Tomasove ili Diterihsove šine ili se pak vrši pomoću Kramerove udlage koje se postavljaju u obliku slova U. Jedna udlaga se postavlja od vrhova prstiju, a zatim preko stopala i zadnje strane potkoljenice do donje trećine natkolenice. Druge dve udlage se postavljaju sa bočne strane. U toku postavljanja ove imobilizacije može se napraviti greška. To se dešava ako se ne postave jastučići od vate na izbočena mesta, a na Kramerovoj udlazi se ne napravi podesno udubljenje za petu i mišiće potkoljenice; dalje, ako se imobilizacija vrši samo pomoću jedne udlage, koja se postavlja sa donje strane, a da nisu postavljene i druge dve udlage sa bočnih strana u obliku slova U

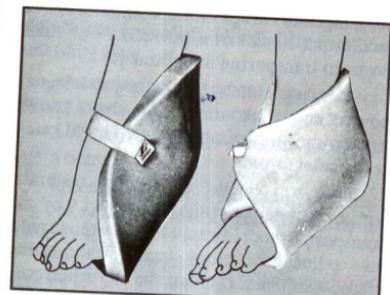
zgloba, i ide ispod stopala, a zatim prema unutrašnjoj strani skočnog zgloba duž potkoljenice sve do unutrašnje strane kolenog zgloba. Druga udlaga se postavlja od vrhova prstiju na stopalu, ide preko pete i zadnje strane potkoljenice sve do iznad potkolene jame (fossa poplitea). Ovako postavljene udlage se učvršćuju pomoću kružnih turica zavoja koje se zavijaju oko povredenog ekstremiteta i udlage. U toku transporta paziti da udlaga ne spadne ili se ne olabavi. Na mestu nezgode može se koristiti i marama koja se postavlja preko obuće, a ispod potpetice, i ukrišta se oko zgloba.



ZAVOJ SKOČNOG ZGLOBA POMOĆU TRAKE OD PLATNA



MOBILIZACIJA KRAMEROVIM UDLAGAMA



Povrede glave i vratne kičme

BONE, JOINT, AND MUSCLE INJURIES

TREATMENT FOR A CONSCIOUS CASUALTY

OUR AIMS ARE:

To prevent further injury.
To arrange urgent removal to hospital.

DO NOT move the casualty from the position found, unless she is in danger or becomes unconscious (see opposite). If she must be moved, use a scoop stretcher (see page 244) or a log-roll (see opposite).

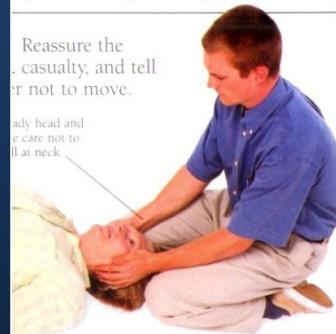
Reassure the casualty, and tell her not to move.

Steady head and neck to roll at neck

Steady and support her head in the neutral position (see page 147) by placing your hands over her ears. Maintain this support throughout.



Support head with folded towels



IF you suspect neck injury, get a helper to place rolled-up blankets or articles of clothing on either side of the casualty's neck and shoulders.

DIAL 999 FOR AN AMBULANCE.

IF arrival of the ambulance is imminent, maintain support of the head and the neck with your hands until it arrives.

IF removal to hospital is delayed and the neck is injured, you may apply a collar. You must continue to hold the head and neck while, and after, the collar is fitted.

MAKING A COLLAR



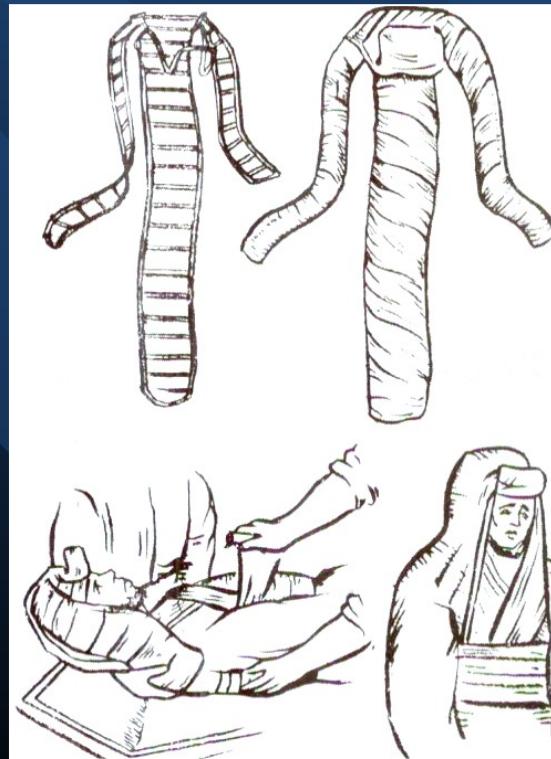
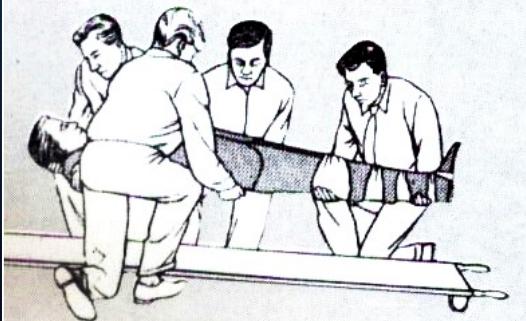
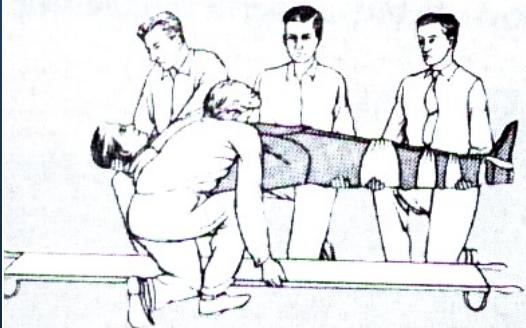
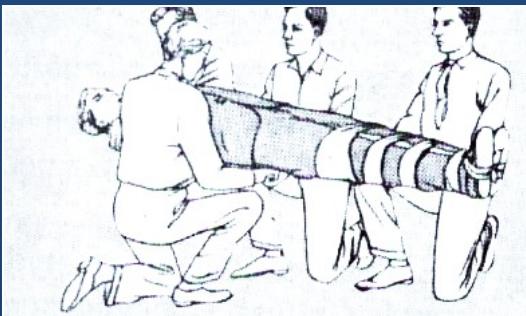
1 Fold a newspaper and wrap it in a triangular bandage or scarf, or insert it into a stocking or a leg

2 Bend the wrapped newspaper over your thigh. Place the centre of the collar at the front of the casualty's neck and tie in position at the front. Ensure that

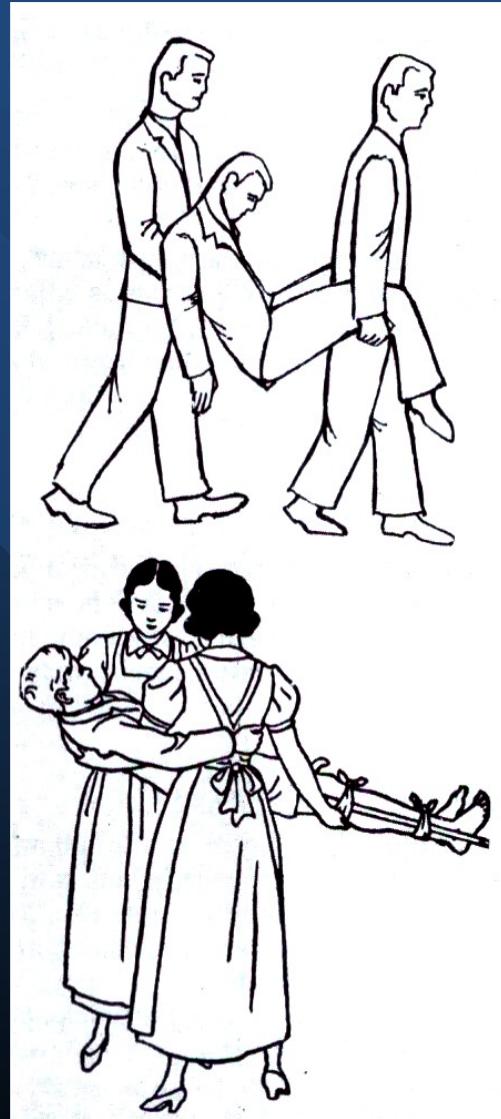
3 Gently pass the loose ends around the casualty's neck and tie in position at the front. Ensure that



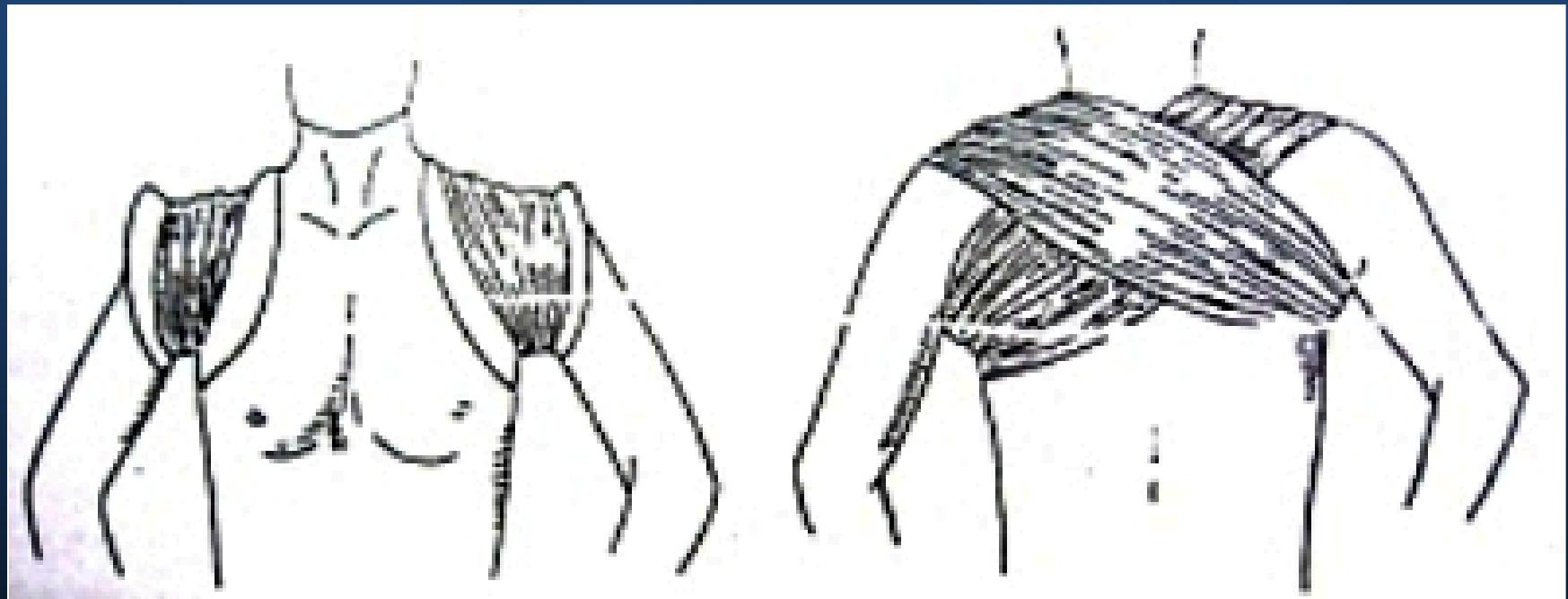
Povreda vratne kičme - transport - priručna sredstva



Prenos pacijenta – 2 lica



Prva pomoć - prelom klavikule - zavoj osmice



Preлом nadlaktice – postavljenje trouglaste marame

upper arm may be fractured across its shaft by a direct blow, but it is much more common, especially in the elderly, for the neck of the arm bone (*humerus*) at the shoulder to break, usually in a fall.

Because this type of fracture is a stable injury (see page 129), a casualty may put up with the pain and walk around with an

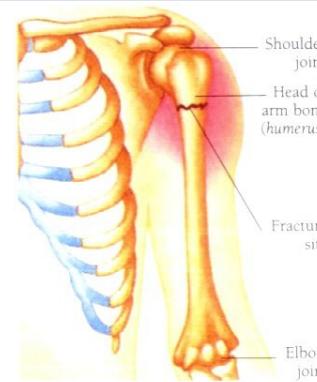
some time without seeking medical advice.

Recognition

- ◆ Pain, increased by movement.

There may also be:

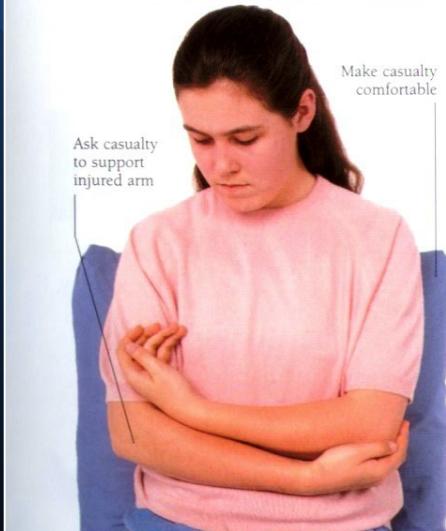
- ◆ Tenderness over the fracture site.
- ◆ Rapid swelling.
- ◆ Bruising, which may develop more slowly.



TREATMENT

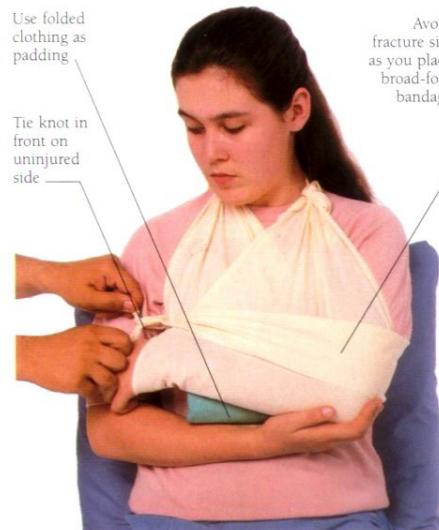
YOUR AIMS ARE:

- To immobilise the arm.
- To arrange removal to hospital.



1 Sit the casualty down. Gently place

2 Place the affected arm in an arm sling (see page 232), and place soft padding between the arm and the chest.



3 Secure the limb to the chest by tying a broad-fold bandage (see page 229)

Povrede podlaktice, šake i prstiju

BONE, JOINT, AND MUSCLE INJURIES

INJURIES TO THE HAND AND FINGERS

Any one of the many small bones and movable joints in the hand may be injured by direct or indirect force.

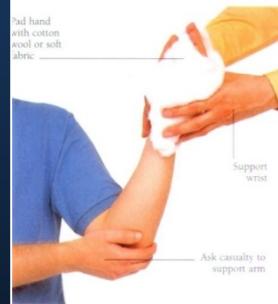
Minor fractures are usually caused by direct force. The most common injury often results from a misdirected punch and consists of a fracture of the knuckle between the little finger and the hand. Multiple fractures, affecting all of the bones in the hand, are usually caused by crushing injuries, and may produce severe bleeding and swelling.

Dislocations and sprains may affect any of the fingers. Falls on to the hand (for example, while skiing) are a common cause of dislocations of the thumb.

TREATMENT

YOUR AIM IS:

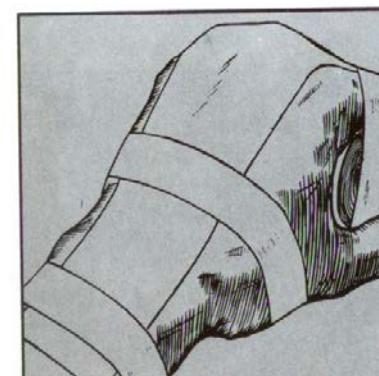
- To immobilise and elevate the hand.
- To arrange removal to hospital.



1 Remove any rings before the hand begins to swell and keep the hand raised to reduce swelling. Protect the injured hand by wrapping it in folds of soft padding.



TRANSPORTNA IMOBILIZACIJA KOD POVREDE PRSTIU



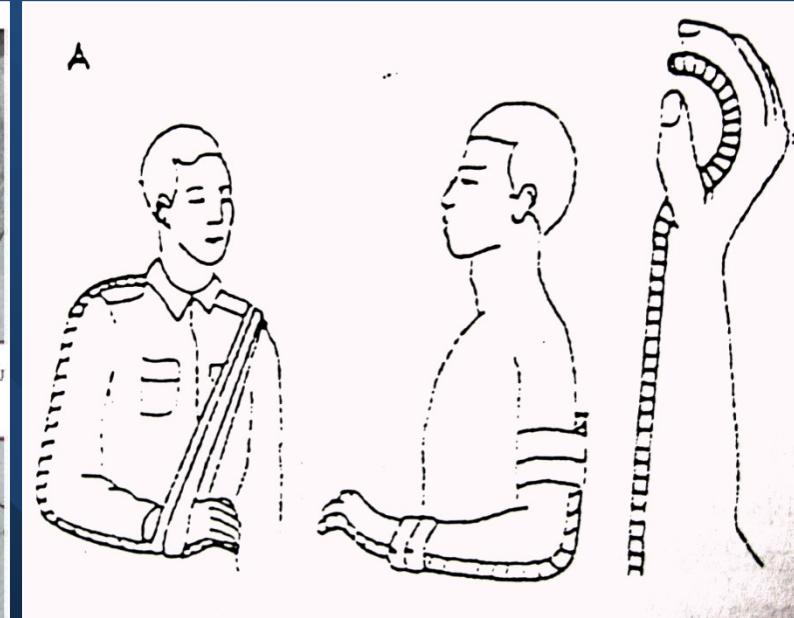
2 Gently support the affected arm in an elevation sling (see page 233).

3 You may, if necessary, secure the arm to the chest by tying a broad-fold bandage (see page 229) around the chest and over the sling.

Use elevation sling to raise hand and to reduce swelling and bleeding



4 Take or send the casualty to hospital, keeping him seated.



Povrede grudnog koša i rebara

FRACTURES OF THE RIBCAGE

FRACTURES OF THE RIBCAGE

Ribs may be fractured by direct force to the chest, from a blow or a fall, or by indirect force produced in a crush injury. If the rib fracture is complicated by a penetrating wound, breathing may be seriously impaired.

Flail chest injuries

Multiple chest injuries can result in part of the chest wall moving contrary to normal chest movement: moving in when the casualty breathes in, and out when he or she breathes out. This "paradoxical breathing" will cause severe respiratory difficulties.

TREATMENT

YOUR AIMS ARE:

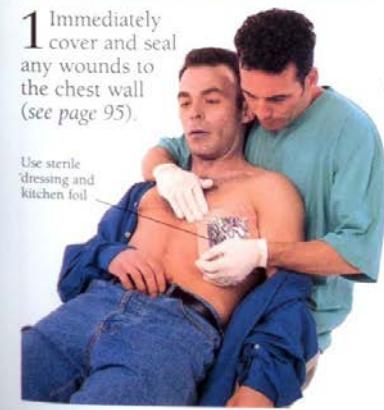
- To support the chest wall.
- To arrange removal to hospital.

FOR A FRACTURED RIB

Support the limb on the injured side in an arm sling (see page 232). Take or send the casualty to hospital.

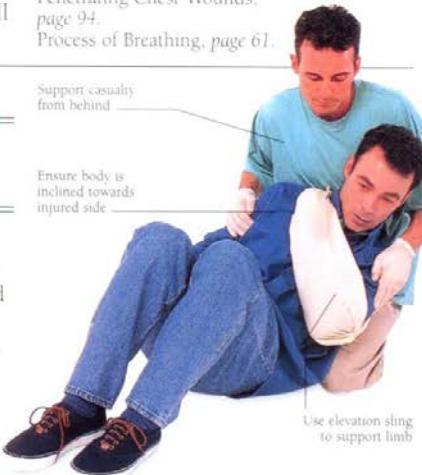
FOR OPEN OR MULTIPLE FRACTURES

1 Immediately cover and seal any wounds to the chest wall (see page 95).



Use sterile dressing and kitchen foil

2 Place the casualty in the most comfortable position, which may be half-sitting, with head, shoulders, and body turned towards the injured side. Support the limb on the injured side in an elevation sling (see page 233).



Support casualty from behind

Ensure body is inclined towards injured side

Use elevation sling to support limb

DIAL 999 FOR AN AMBULANCE.

If the casualty becomes unconscious, or breathing becomes difficult or noisy, place him in the recovery position (see page 48), uninjured side uppermost.

Prelomi karličnih kostiju

FRACTURED PELVIS

FRACTURED PELVIS

Injuries to the pelvis are usually caused by indirect force, such as in a car crash or by crushing. The impact of a car dashboard on a knee can force the head of the thigh bone through the hip socket.

Pelvic injuries may be complicated by injury to internal tissues and organs, such as the bladder and urinary passages, which the pelvis protects. Because of the bulk of body tissue around the pelvis, internal bleeding associated with the fracture may be severe, and shock often develops.

Recognition

There may be:

- ◆ Inability to walk or even stand, although the legs appear uninjured.
- ◆ Pain and tenderness in the region of the hip, groin, or back, increased when the casualty moves.
- ◆ Blood at the urinary orifice, especially in a male casualty. The casualty may not be able to pass urine or may find this painful.
- ◆ Signs of shock and internal bleeding.



The pelvic girdle

This consists of two hip bones formed by the fusions of the paired bones, the *ischium*, the *ilium*, and the *pubis*.

TREATMENT

YOUR AIM IS:

- To arrange urgent removal to hospital.

Keep head low to minimise shock



Prelomi butne kosti

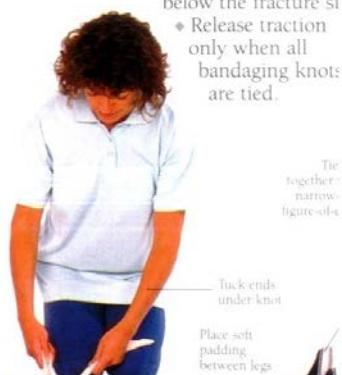
4 Take any steps possible to treat the casualty for shock; insulate him from the cold, but do not raise his legs.

If the ambulance is delayed, immobilise the limb by securing or splinting it to the uninjured limb.

- Gently bring the casualty's sound limb alongside the injured one.
- Maintaining traction throughout at the ankle, gently slide two bandages under the knees. Ease them into place above and below the fracture by sliding them backwards or forwards. Position more bandages under the knees and ankles.

- Insert padding between the thighs, knees, and ankles, to stop the bandages displacing the broken bone once tied.

- Tie the bandages around his ankles and knees. Then tie the bandages above and below the fracture site.
- Release traction only when all bandaging knots are tied.



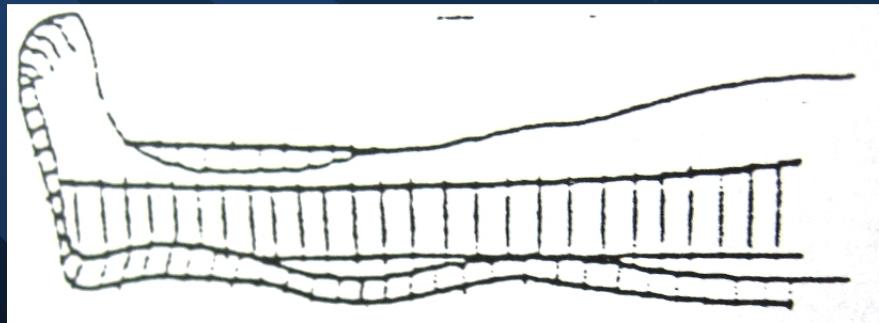
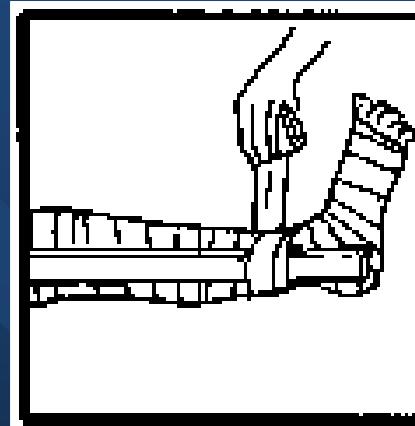
TRANSPORTING A CASUALTY OVER DISTANCE

Log-roll casualty on to carrying canvas or blanket after bandaging



If you have to transport a casualty on a

Secure the splint to the pelvis with broad-fold bandages



Prelomi potkolenice i stopala

INJURIES TO THE LOWER LEG

The sturdy shin bone (*tibia*) of the lower leg will usually be broken only by a heavy blow (for example, from the bumper of a moving vehicle). The thinner splint bone (*fibula*) can be broken by the type of twisting injury that sprains the ankle. If the load-bearing shin bone remains intact, the casualty may be able to walk, and may be unaware that a fracture has occurred.

TREATMENT

YOUR AIMS ARE:

- To immobilise the leg.
- To arrange urgent removal to hospital.

1 Help the casualty to lie down, and carefully steady and support the injured leg. If necessary, gently expose and treat any wound (see page 130).

2 Straighten the leg using traction (see page 131); pull in the line of the shin.

TRANSPORTING THE CASUALTY

If you are transporting the casualty on a stretcher, place extra padding (such as blankets) on either side of the legs, from the upper thigh to the foot. Secure with broad-fold bandages at the thigh and knee, and above and below the fracture.

Recognition

- Localised pain.

There may also be:

- A recent blow or wrench of the foot.
- An open wound.
- Inability to walk.

3 DIAL 999 FOR AN AMBULANCE. Support the leg with your hands until the ambulance arrives.

IF the ambulance is delayed, splint the injured limb to the sound one.

- Bring the sound limb to the injured one.
- Gently slide bandages under the knees and ankles. Slide them to the knees and ankles, and above and below the fracture; avoid the fracture if it is close to a joint.
- Insert padding between the knees and ankles and between the calves.
- Tie the bandages firmly around ankles and knees, then above and below the fracture. Knot on the uninjured side.