



CI|Zeta Cell

Insurgency Medical Faction

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Table of Contents	2
Section I - Medical Terminology	3
Doctor ABC	3
Bleeding	4
Burns	4
Sterilisation	4
Anatomy	5
Baseline Vitals	6
Heart Rate / Pulse	6
Blood Pressure	6
Respiratory Rate	6
Section II - Pharmacology & Dispensing	7
Section III - Tools & Equipment	8
Syringes	8
Medical Dressings	8
Suturing Kit	9
Surgical instruments	9
Miscellaneous	10
Section IV - Procedures & Common Calls	11
Physical Wounds	11
Light Bleed	11
Medium Bleed	11
How to Perform an Amputation	11
Heavy bleeding / Severe bleeding	11
Internal Bleeding	12
Fractures & Dislocations	13
Sterilising	14
Gunshot Wounds/Stab Wounds	15

Section I - Medical Terminology

Doctors ABC

The doctor ABC is the guiding principle in first aid to protect yourself before attempting to help others, and then ascertaining that the patient is unresponsive, before trying to treat them.

D- Danger

Look around to see if anything could/will harm you or the patient.

R- Response

Go up to the casualty and make sure that they are alert,
And aware of what's happening.

If no response:

A- Airway

You will tilt the head around 30 degrees,
Assessing that the airways are clear if the airway is not clear,
you will remove the obstruction.

Two ways you can remove any obstruction

- Use a Suction Pump Device to forcefully remove any liquids that obstruct the throat, such as water or blood.
- Using the following method
 1. Stand behind the person who's choking.
 2. Place your arms around their waist and bend them forward.
 3. Clench 1 fist and place it right above their belly button.
 4. Put the other hand on your fist and pull sharply inwards and upwards.
 5. Repeat this movement up to 5 times

B- Breathing

You will move your head so the ear is about the mouth and nose,
While you're doing that you would be looking for chest rising,
And listen and feel for breathing.

If they are not breathing, you will Intubate them. This is where you will put a breathing tube into the patient and connect a tube balloon. This will act as their breathing source.

C- CPR

In cardiopulmonary resuscitation, you will interlock your hands,
Place them between the ribs, push down 2 centimetres, and back up.
You do this 30 times then give two breaths with the tube balloon.

Repeat this process until you physically can't do it anymore (After 2 minutes)

Bleeding

Bleeding is the process where the body gets deprived of blood cells. This regularly happens when a casualty receives an injury, destroying the blood vessels, externally or internally. There can be numerous types of bleeds, such as venous bleeding and arterial bleeding. Venous Bleeding (Deoxygenated blood) is much less severe than arterial bleeding (Oxygenated blood). There are different sizes of bleeding such as small bleeds, moderate bleeds and severe bleeds, check common calls to find what injuries provide the amount of bleeding.

When the body is born they are given a specific blood type through genetics, these blood types are; **O, A, B, and AB**. There is another sub-type known as RH positive or Negative. Some Blood Types are compatible with others. If a person is given the wrong blood type, it can cause clotting which can lead to severe medical problems.

Blood Type Compatibility chart.

Your Blood Type	A+	A-	B+	B-	AB+	AB-	O+	O-
A+								
A-								
B+								
B-								
AB+								
AB-								
O+								
O-								

Burns

Burns is a common type of injury, where the body cells of the human body get damaged, there are numerous types of burns, such as heat, friction and chemicals, There are 3 types of Burns, 4th-degree burns, 3rd-degree burns, 2nd-degree burns and 1st-degree burns, which show signals of how deep the burnt gone. With 1st-degree burns being the weakest and 4th degrees being the strongest.

Sterilisation

A process used on casualties wounds, stopping the wound from becoming infected, by using numerous methods, to destroy, remove them, or avoid the risk of harmful pathogens entering the damaged wound. There are numerous methods, such as Cauterising, Disinfecting, and Sanitising. Check Common Calls on how to perform these methods.

Anatomy

The Cardiovascular system is a system of veins and arteries that are connected to the heart; these blood vessels spread through the entire body. These can carry oxygenated and deoxygenated blood, to the various organs. This is here for knowledge such as if a certain wound is injured, what blood vessels are there, and such.

The venous system of the upper limb functions to drain deoxygenated blood from the hand, forearm and arm back towards the heart. Veins of the upper limb are divided into superficial and deep veins.

The main superficial veins of the upper limb include the cephalic and basilic veins. These veins originate from the dorsal venous plexus within the subcutaneous tissue of the hand.

Deep veins of the upper limb lie deep to the brachial fascia (deep fascia of the arm) and accompany the major arteries of the upper limb. As a result they usually have the same name as their arterial counterparts.

Classification	Superficial and deep veins
Veins of the arm and axilla	Superficial veins: Basilic vein, cephalic vein Deep veins: Brachial veins, axillary vein, subclavian vein
Veins of the forearm	Superficial veins: Basilic vein, cephalic vein Deep veins: Anterior and posterior interosseous veins, ulnar veins, radial veins
Veins of the hand	Superficial veins: Dorsal digital veins, palmar digital veins, dorsal venous network Deep veins: Superficial venous palmar arch, deep venous palmar arch, dorsal metacarpal veins, palmar metacarpal veins
Veins of the foot	Deep Veins: plantar veins, dorsal veins
Veins of the leg	Deep Veins: anterior tibial veins posterior tibial veins, fibular veins
Veins of the knee	Deep Veins: popliteal vein
Veins of the thigh	Deep Veins: femoral vein and its tributaries
Veins of the Lungs	Deep Veins: Vena Cava, pulmonary veins, capprallies, aorta

Baseline Vitals

The Baseline vitals are the assessment of the heart rate, body temperature, respirations, and blood pressure. Of a human body. It assesses the average signs of each form of vitals and informs you on how to check the vitals.

Heart Rate / Pulse

The Heart Rate is measured through pulses, which is a rhythmical throbbing of the arteries as blood is propelled through them, typically as felt in the wrists or neck. The Normal Vital signs for someone's heartbeat are around **60-100 beats per minute**.

To examine someone's heart rate, first, you must know the 4 key pulses, of where certain arteries lay. You will use two fingers and pre-patchers onto the spot and use a stopwatch until one minute passes. The two common places are the **Carotid Artery**, located underneath the jawbone on the neck, the other common spot is **Radial Artery** located on the wrists, Least Common spots are the **Femoral Artery** located at the thigh and the **Pedal Artery** located at the foot.

Tachycardia

tachycardia refers to a heart rate that's faster than average. Results may vary based on age and physical condition. But it refers to a heart rate of more than 100 beats per minute (BPM) is considered too fast. To slow down the heart rate, have the patient do deep breathing exercises by Giving the Patient Beta BloGivingsngs.

Bradycardia

Bradycardia refers to a heart rate that's slower than average. Results may vary based on age and physical condition. But it refers to a heart rate that's less than 50 beats per minute (BPM) is considered too slow. Slow heart rate can make the person brain dead, or be unable to be operated on if unconscious gives them CPR or 1 MG epinephrine.

Blood Pressure

Blood pressure is the pressure of blood pushing against the walls of your arteries. Arteries carry blood from your heart to other parts of your body. Blood pressure is measured in millimetres of mercury (mmHg) and is given as 2 figures: **systolic pressure**; the pressure when your heart pushes blood out. **Diastolic pressure is the** pressure when your heart rests between beats. For example, if your blood pressure is "140 over 90" or 140/90mmHg, it means you have a systolic pressure of 140mmHg and a diastolic pressure of 90mmHg. The normal vital signs of someone's Blood pressure are 120/80mmHg

Hypotension

Also known as Low blood pressure, is when the vessels of blood are below the 90/60 mmHg, the following symptoms of hypotension are the following; dizziness, feeling sick, and blurred vision. generally feeling weak, confused and in rare cases, fainting

Hypertension

Also known as High blood pressure is when the vessels of blood are above 140/90mmHg. The following symptoms of Hypertension are the following; nose bleeds, shortness of breath, blurred vision, and headaches.

Respiratory Rate

Respiration is the metabolic process of oxygen intake and carbon dioxide release. The normal vital signs of someone's respiratory rate are 12-20 breaths per minute. To get this measurement, have the patient sit down and try to relax. It's best to take their respiratory rate while sitting up in a chair or bed. Measure your breathing rate by counting the number of times your chest or abdomen rises over one minute.

Body Temperature

Body temperature is how hot or cold is your overall body temperature. Its measure is Degrees Celsius. Body temperature is normally checked with a thermometer, but if there isn't one, you'd touch the patient's chest and back. If they feel hotter than usual, they may have a high temperature.

Section III - Tools & Equipment

Syringes

Intravenous Fluids (IV)

Intravenous Fluids or IV for short is the equipment of a plastic bag with a cannula tethered to the end, which has the job of storing and injecting liquids into the vein, to treat electrolyte imbalances in the body and deal with dehydration. It can also be used to dose certain medicines into the body (such as propofol), and it's used to contain blood bags.

How to Apply an IV

- Decide the type of IV fluid you need.
- Determine the amount of fluid you need and how quickly. This is based on many factors, including your weight, age and medical conditions.
- Disinfect (clean) the skin where the IV will go, usually on the inside of the elbow or top of the hand.
- Tie a tourniquet around the patient's arm to make blood fill the veins / pulsate.
- Examine the veins to find the exact insertion site. (Use the anatomy section)
- Slide a sterile needle into the vein, which may pinch. The needle will have a small plastic tube at the other end.
- Remove the tourniquet.
- Place a small plastic attachment onto the tube.
- Test the tube to make sure a little bit of fluid can go in.
- Tape the IV needle to their arm so that it stays in place.
- Attach the small tube to a longer tube, and then attach it to a bag of fluids.
- Hang the bag from a hook on a tall stand (called an IV stand).
- Turn on a machine that will pump the fluid into the IV line.
- Check your IV line regularly and monitor the amount of fluid entering your body
- Once done, remove the needle from the body and apply a plaster

Medical Dressings

Sticking Plaster

Is a small medical dressing, use this for small wounds, such as cuts, or injections.

Field Dressing

Field Dressing is the most common medical dressing used to help compress blood vessels and establish a sterile covering. The dressing is lined with a gauze pad, and gauze tails, allowing it to be tied around the arm and chest.

Shell Dressing

Shell Dressings consist of a gauze pad attached to a bandage for wrapping around a wound, and a safety pin to secure it once used. The pad is wrapped in a waterproof cover and sealed inside a loosely sewn cotton cover.

Suturing Kit

stitches (sutures) are used to close wounds or surgical incisions, typically inside the body. This is a major part of surgeries, and there are numerous methods to suture wounds.

Thread & Needle

- The needle should be inserted perpendicular to the skin
- 'Bites' should be equal in both distance and depth on both sides of the wound i.e. enter and exit at the same level in the tissues
- Use the curve of the needle to pass the suture through the skin
- Rotation of the wrist allows the needle to pass in an atraumatic fashion
- Avoid pushing or pulling the suture through the skin in a straight line
- Minimise handling of the wound edges
- Use toothed forceps to hook the skin and avoid pinching/crushing the tissues
- Wounds should be closed with minimal tension, to reduce the tension of the skin closure in deep wounds
- Suturing has 2 patterns, criss-cross and webbing. But both sutures should have five throws.

Use Thread & Needle on bigger Sutures

Prolene Line

Prolene sutures are used in cardiac and vascular surgery. It is used on both small vessels such as coronary artery bypasses and large vessels including the aorta. It is used in obstetrical practice, during caesarean sections to suture the rectus sheath of the abdominal wall because it is non-absorbable and provides the sheath with the due strength it deserves (rectus sheath is composed of various tendon extensions and muscle fibres and maintains the strength of the abdominal wall; if it becomes weak the abdominal contents start herniating out) it stays there forever and is also often seen during repeat caesarean section as that of the previous section. To use the prolene line you use a similar method with thread & needle, but use a zig-zag pattern, and close it off with a loop.

Surgical instruments

Scalpel

Scalpel Blades #10, 15, 20, 21, 22, 23 and 24 are all curved and said to have a "belly." They are all used for making incisions. The sharpest area on these blades is the apex of the curve at the belly. This is the spot on the blade which is used for making the incision. Since #15 is the smallest of these belly blades, it is often used for small animal surgery where short, precise incisions are required. It could also be used to remove skin lesions, perform an organ biopsy or in fine neurological applications. Larger blades like the #22 and #23 are designed for making bigger incisions like those required for a thoracotomy or a laparotomy.

A #11 blade is a triangular blade with a sharp point, also called a stabbing blade. This scalpel is used for making stab-style incisions and short, precision cuts. Often these cuts are made in shallow or recessed areas. For example, it could be used for inserting chest tubes or drains or for cutting a blood vessel where you need to insert a catheter.

The #12 blade is curved and is frequently used for removing sutures. It can be used to hook something that's on a stalk.

Scissors

Surgical Scissors

Surgical scissors are created for use in surgical and medical procedures that include cutting human tissue and bandages. Surgical scissors are different from other scissors in that they are extremely sharp and made of stainless steel that can be sterilised.

In surgery, surgical scissors may be used to trim away dead skin or dissect tissue. Outside of surgery, they can also serve as a tool for preparing bandages or sutures.

Trauma Scissors

Trauma scissors are powerful utility shears that are generally used to cut through tough man-made materials. Many of these trauma scissors tout the ability to cut through metal.

Mayo Scissors

Mayo scissors are a type of surgical scissors that are frequently used for cutting thick tissues like fascia. Mayo scissors have a semi-blunt end, which makes them a bit different from most surgical scissors and are used in different types of surgery including podiatry and veterinary surgeries. The straight-blade mayo scissors variety can cut tissues near the surface of a wound and is also used for cutting sutures. These are sometimes referred to as "suture scissors."

Surgical Forceps

Surgical Forceps, are surgical instruments used to grasp, retract and stabilise tissue within the body, Forceps are regularly used to remove foreign objects found inside the body.

Tenaculum

Tenaculums are specialised forceps, used to extract bullets from inside, wounds, you'd carefully insert deep into the wound and grasp the bullet

Surgical Tweezers

Surgical Tweezers are specialised pincers, used to extract smaller foreign objects inside the bullets, such as fragmented bullets.

Miscellaneous

Flashlight

An Electric torch is used to light up, to check the insides of wounds.

Clamps

A Clamp, is a brace that holds the open wound together, allowing for surgical instruments to enter better, and keeping the wound stable

Alcohol burner

An alcohol burner is used to sterilise equipment and cauterise wounds.

Tourniquets

Tourniquet's job is to apply on blood vessels, to stop the circulation of blood flow, it's used to populate veins for IVs and to deal with severe injuries, where you apply it 2-4 inches above the wound

Section IV - Procedures & Common Calls

Physical Wounds

Procedures & Common Calls, is how to treat the most common injuries you find in Warship RP. It will tell what the injury is and a small guide on how you'll treat the injuries, there are 4 types of injuries, light bleeds, medium bleeds, severe bleeding and internal bleeding.

Light Bleed

This is where it's a small cut that doesn't need a lot of medical attention.

What you would do is clean the wound, making sure you're preventing the wound, from getting infected. Once the wound is sterilised you would just apply plaster and send them on their way.

Medium Bleed

This is a type of wound that will need stitches. The wound will not stop unless they see medical attention. You would sterilise the wound and clean it preventing germs from getting in the wound, and Apply stitches to close the wound.

Bandage the wound and allow the wound to heal.

When the cut or lacerations are on the minor arteries, and veins it will take 20 minutes for the person to bleed out.

Heavy bleeding / Severe bleeding

This is a type of wound that is life-threatening to the casualty.

You would need to apply a tourniquet to stop the blood flow.

Get them to the surgery table where it would be necessary to amputate the limb.

Cover the wound in a bandage after the surgery.

When the cut or lacerations are on the major arteries, it will only take 2 to 3 minutes for the injured to bleed out. The person will have about 15 to 20 seconds before their heart completely stops.

How to Perform an Amputation

- Bring them to the Operating Room
- Apply a Tourniquet over the amputated part
- Place a mask over their face, and does them with 8.8mg of chloroform/
- Give them an IV drip of their blood bag, and give them a constant supply of blood
- Locate the safest place to cut off the limb, by seeing where the healthy tissue is, and the nearest healthy joint
- Once located and marked, grab a bone saw, and begin to cut the down, at the mark position
- Sterilise the wound
- Use a hot thread, and close of any damaged blood vessel
- Using pieces off not damaged skin, take it from the patient's amputated limb, and graft the skin to the amputated limbs
- Apply a gauze sponge, and finish it off with a Shell Dressing
- Remove the Tourniquet

Internal Bleeding

Rapid with extreme pain, shock, and fainting. Or, it can be slow and "silent" with few symptoms until the total loss of blood is extreme. With that said, the symptoms don't always reflect the amount of bleeding and its severity. Large amounts of blood may be lost following an abdominal or kidney injury before symptoms appear. By contrast, even small amounts of bleeding in parts of the brain can cause major symptoms and even death.

The causes of internal bleeding are as varied as the signs and symptoms. Some are caused by an external force, such as a blow to the body, while others occur within the body due to a disease or structural weakness. The symptoms of internal bleeding can vary from one case to the next.

How to Treat Internal bleeding.

- Have the patient lay down, and inject them with 40mg propofol saline solution through IV
- If the internal bleeding an organ, use a suction device use a #10 Scalpel and cut a small piece of skin and insert the vacuum, create a small puncture into the organ, and using a prolene line, seal the organ, as it sucks up blood, until its properly sutured
- Remove the suction device
- If its a blood vessel, use a #15 Scalpel, find the damaged blood vessel, and use a prolene line to seal the blood vessel.
- Sterilise the wound
- Suture the wound closed
- Give them regular field dressing around the wound.

Sterilising

Disinfecting

Disinfecting is the process of using Chemicals to take out harmful pathogens, it is not only used on wounds but can be used on objects and medical instruments. The Most common method of disinfecting is using alcohol, with 70% alcohol with saline solution, which is effective against numerous types of bacteria, though to use it on surfaces, and instruments 100% alcohol would be better.

Sanitising

Sanitising is a process using substances similar to disinfectants, which have the job to prevent pathogens from entering the body, it's more common to use it on objects such as gloves, or instruments, than disinfectants, but are less effective at destroying bacteria.

Cauterising

is the process to burn a wound with a heated instrument or caustic substance to stop bleeding or prevent infection. The used method of cauterising is to apply either 2l of alcohol or sulphur/gunpowder, and apply it inside the wound, once inside you use an alcohol burner and set the wound ablaze, and wait a while for the heat to stop any bleeding, and kill any bacteria, after 5 minutes, grab a dry towel and place it over the wound, smothering the flame until it dies.

Burns

How to treat 4th-degree burns

- flushing the affected region using water (only for chemical burns)
- putting a light blanket or sheet over them, particularly if they look cold from a decrease in blood pressure
- covering the region with a loose cloth or bandage
- if possible, raising the injured part of the body above the victim's heart
- If needed an amputation would be required

How to treat 3rd-degree burns

- Disinfect the wound, using alcohol
- Wipe the Wound off with Gauze
 - use (IV) fluids containing electrolytes
 - Apply Pain relief
 - Antibiotic ointments or creams
- Wet the wound off with water and apply a hydrogel dressing

How to treat 1st and 2nd-degree burns

- Disinfect the wound, using alcohol
- Wipe the Wound off with Gauze
- Wet the wound off with water and apply a hydrogel dressing
- For 2nd degree burns, apply a wrapping of regular bandages around the dressing
- For 1st degree burns wait 4-6 weeks for the wound to heal, and replace the dressings every week, for 2nd degree burns, wait 2-4 months for the wound to heal.

Gunshot Wounds/Stab Wounds

How to treat Gunshot Wounds

- Assess the wound and figure out how deep the bullet has become.
After assessing the wound, obtain anaesthetics, Ex: Propofol or Ketamine if necessary.
 - Once the patient is asleep, obtain sterilisers, and sterilise their wounds and your tools. Ex: Alcohol.
 - Once their wounds and your tools have been sterilised, place clamps onto the wound, then grab Tenaculum and place them into the wound.
 - Slowly and carefully follow the entry wound with your tenaculum until you feel the bullet.
 - Once you've found the bullet, grab it with your tenaculum and carefully remove it from the patient and set it aside.
 - Repeat if multiple bullets are inside the patient.
 - Once everything has been removed from the patient, grab a thread and needle and begin sewing up the wounds with a cross pattern, ending with a loop.
 - Once the wounds have been sewn shut, sterilise it once more before applying wraps onto it.
- Notes:
- If a patient comes in with 3 or more bullet wounds the patient is most likely untreatable, you may use judgement if they are treatable or not.
 - If a bullet has entered the patient's head, liver or heart, they are untreatable due to the fact they died as soon as the bullet entered.



End on Guid Book