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Dear readers,

It is important for a magazine to know its readers well. For this purpose we would appreciate your comments and suggestions. It would greatly help us to improve. Please feel free to express your ideas about the magazine and its contents. You can also make suggestions as to what topic you would like us to cover.

In the months ahead, we would like to make Health Messenger more and more available to different contributors, and to our readers who would like to share their experiences with others through the magazine.

So please don’t hesitate to contact us. Write to us and we will answer you. This will allow us to develop a closer rapport with you.

Health Messenger is a learning and training tool. But as we can learn a lot from each other, it should also serve as a forum for the sharing of ideas and experiences.

Sincerely
Editor
Definition of fever:
It is the elevation of body temperature above normal (37°C or 98.4°F) as a result of various infectious and noninfectious organisms.

Mechanism of fever:
Certain white cells release a chemical, the endogenous pyrogen. This chemical acts on the hypothalamus gland in order to raise the temperature at a new set level instead of maintaining normal body temperature.

Fever production in response to an infection is a usual reaction and not the result of a disorder. But the physiological function of temperature raising is not completely clear. What we know is that it is a protective mechanism combating microbe invasion. There is good evidence that fever helps the immune system and hinders the growth of microorganisms, such as bacteria or virus.

How to measure fever?
Fever can be measured by a thermometer. A thermometer comes in two different scales, Centigrade (Celsius) degree or Fahrenheit degree.

How to take temperature?
a- in the mouth
b- in the armpit
c- in the rectum

Management of fever:
High fever can be dangerous especially in a young child. So, the following should be done to manage fever:

1. Uncover the person with fever completely. Small children should be undressed completely and left naked until the fever goes down.
2. Never keep the person with fever in clothing or in blankets.
3. Fresh air or a breeze will not harm a person with fever. On the contrary a fresh breeze might help to lower the fever.

4. Give Aspirin or Paracetamol. Aspirin can be given to those who have no gastric problem. One should be cautious when giving aspirin to a child suspected of having Dengue fever.

**Dangers of fever:**

High fever can be dangerous if it is not brought down quickly. It can give rise to fits (convulsions) or even permanent damage to brain such as paralysis, mental slowness, epilepsy.

When fever goes very high over 39°C (102°F) it must be lowered immediately.

1. Undress the person.
2. Keep him under the fan.
3. Pour cold water over him, or put cloths soaked in cool water on his chest and forehead.
4. Give plenty of water to drink.
5. Give painkillers such as analgesics.

**General care for a person with fever:**

Fluids: a person with fever sweats a lot. So, he must drink plenty of fluids such as water, tea,
Remittent fever

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Intermittent fever

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Intermittent fever

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Remittent fever
milk. If the person is too ill to drink, give fluid by gastric tube or intravenously.

Food: a person with fever needs food. He needs to take plenty of soft protein foods, especially if fever has lasted several days.

Mouth: if a sick person’s mouth is sore and there are crusts on his lips, wash with saline. Put half a level of teaspoonful of salt in a cup of water. Let him rinse his mouth several times a day. Fruit juices will also help to keep his mouth clean. To prevent or treat fever successfully, it is important to study the different fever patterns from the temperature record. There are three classical types of fever; continued, intermittent and remittent.

**Continuous fever:** when fever does not fluctuate more than 1 degree C (1.5 F) during 24 hours, but at no time reaches normal, it is described as continued. This type of fever can be observed in Typhoid fever.

**Intermittent fever:** in this type temperature swings for more than two degrees but does not reach normal, e.g. in case of fever with abscess.

**Remittent fever:** when the daily temperature touches normal before going up again.

This condition is seen in some cases of malaria.

Fever is often accompanied by other symptoms which can serve as clues when searching for causes of fever. These associated symptoms are:

- chills and/or rigors usually seen in cases of malaria, urinary tract infection,
- aches and pain in the body are seen in influenza,
- headaches in cases of meningitis,
- arthralgia common in cases of connective tissue disorders,
- coughs, in cases of chest infections.

![Graph showing continuous fever pattern](image)
There are some important vital signs which can give some clues to diagnosis.
These are the pulse, the blood pressure and the respiration.

**Pulse**

Pulse is the rhythmic throbbing of an artery caused by the contractions of the heart which can be felt with the finger.

To count the pulse, use a watch that counts seconds. Feel the pulse with ends of index, middle and ring fingers in one of the places where the arterial pulsation can be detected. Count the pulse for a full minute when the patient is at rest.

You can take the pulse at different levels.

**Wrist**

Feel the radial artery on the thumb and palm side where the artery runs along the inner side of the forearm bone.

**Groin**

At this level you can feel the femoral artery.

**Foot**

Dorsalis pedis artery that lies along the top of the foot is also a place where pulse rate can be taken.

Usually the pulse rate taken at the wrist joint is the most easiest and convenient method.

Three things are to be checked: the rate, the strength and the rhythm.

A **normal pulse** is regular and strong. It is faster for babies. It may be slower in elderly persons and some athletes: 50 to 60 beats per minute.

Pulse rate for people at rest:

- **Adults**..................60-80/min
- **Children**.................80-100/min
- **Babies**....................100-140/min

The pulse rate increases during stress, exercise and while taking alcohol. But a fast, weak pulse could indicate internal loss of blood or fluid (state of shock). In that case the heart has to work much faster to circulate a lower volume of blood in the body.

It increases also in cases of fever (usually 20 beats per minute for each one degree rise in celsius during fever) and hyperthyroidism.

A slow pulse rate is a sign of hypothyroidism and heart blockage. Combined with high fever it may be a sign of typhoid.

**Respiration**

Breathing is divided into three phases: breathing in (inhale), breathing out (exhale) and pause.
Counting the number of times the chest rises and falls

ib wâzqiv myâyeb n b oQa o mt t dâgytí m a w Gjciúi           
1 yg n fl

o mreft o u EfgÉf Éf
v w D———  14-18 ± rdp f
u av ;———  30 ± rdp f
u av i, f———  40 ± rdp f

12
The respiratory rate is checked by counting the number of times the chest rises and falls in one minute. The normal respiratory rate is:

- **Adult** …………………..14-18/min
- **Children** ………………….30/min
- **Babies** ……………………40/min

Respiration rate changes with exercise, nervousness, fever, cardiac and pulmonary problems.

When you observe the way a sick person breathes, check also the depth (deep or shallow) and difficulty.

The sound of the breaths may give some clues:
- A whistling sound and difficult breathing out means asthma.
- A gurgling sound and difficult breathing in an unconsciousness person may mean that something is stuck in the throat.
- Difficulty in breathing may be a sign of bronchitis.

In case of shallow breathing, think about the possibility of pneumonia.

**Blood Pressure**

Blood Pressure is the force of the heart’s contractions. It represents the pressure of the blood against the inner walls of the blood vessels. Its correct measurement is an important skill for health workers and midwives. It is a very useful tool for examination.

To take the blood pressure, you should first make sure that the person is relaxed. Recent exercise or nervousness can make pressure rise and give a false reading.

The instrument used is a blood pressure cuff with a gauge.

1. Ask the patient to sit down with either arm resting on a table.
2. Remove the clothing from his/her upper arm.
3. Fasten the cuff around the patient’s upper arm. Keep the lower edge of the cuff about one inch above the elbow.
4. Close the valve on the rubber bulb.
5. Pump the pressure up to move more than 200 millimeters of mercury.
6. Place the stethoscope over the inner side of the elbow.
7. Slowly deflate the cuff and listen carefully for the pulse. As the needle of the gauge slowly drops, take two readings;
   - First reading when you begin to hear the soft thumping of the pulse.
   - Second reading when the sound of the pulse begins to fade or disappear.

Always take note of both the top and bottom pressure readings.

The first one is the highest pressure in the artery (systolic or top pressure). It is reached when the heart contracts and forces the blood through the arteries. Normally it is around 110 to 120 mm.

The second one is the lowest pressure in the arteries (diastolic or bottom pressure). At this moment the heart relaxes between pulses. It is usually around 60 to 80 mm.

It is usually the bottom number that tells us the most about a patient’s health. If someone has a blood pressure of 135 /110, he has high blood pressure and should lose weight and get treatment.

Low blood pressure is not dangerous. But a sudden drop in blood pressure is a danger sign of blood loss and shock.
Flat bone

\[ t \pm kp \ z g \]

Long bone

\[ t \pm kp \ z g \]
The skeletal system

The body is built on a framework of bones called the skeleton.

We are born with as many as 300 bones. But later on during childhood, many of them join together. As a result, the number of bones of an adult is around 206. But there are exceptions and variations. For example, a person may have an extra-rib. And the number of small bones in the skull varies from person to person.

Bones

Bones are strong as iron and light as pine wood. They have a hard outside and a soft core named the bone marrow.

Each bone of the skeleton is an individual organ with several types of tissue. Bone tissue is the principal. But nervous, vascular, and cartilaginous tissues contribute to the structure and function of bone.

Living bone is not dry. It is a moist, changing tissue that is continually reabsorbed and re-formed.

Blood vessels run through the bones and alongside them. A fracture can result in severe blood loss, because of the damage to the surrounding tissues caused by the broken bone ends.

With ageing, bones become less and less flexible. Bones of older people become brittle. They can break more easily than the bones of a young person.

Different types of bones

Bones come in different shapes. The shape is usually related to its mechanical function.

- Long bone acts as a lever. e.g. bones of upper limb and lower limb.
- Short bone is generally a bridge between other bones. e.g. carpal and tarsal bones.
- Flat bone is a protective shell. e.g. sternum.
- Irregular bone are varied in shape and have surfaces for muscle attachment or articulation, e.g. the vertebrae.

Bone tissue

The human body contains more than 60% water. But the bone tissue contains only 20% water. As a result, bones are stronger and more durable than other tissues; for example, the skin.

The different functions of the skeleton

Support: It supports the body and gives it its basic shape. Without the bony skeleton, we would be a formless heap of flesh and organs.

Protection: It provides protection for the internal organs of the body. For example, the skull surrounds and protects the brain, the rib-cage protects the lungs, heart and other vital organs.

Movement: The bones are also important for movement. Muscles are attached to them by
The shoulder blade

1. Placement: 2D at X:1 Y:1 Z:1
   - Attachment: clavicle, scapula, and thoracic wall
   - Function: stabilization and rotation

2. Anatomy: 3D at X:2 Y:2 Z:2
   - Muscle origin: rhomboids, latissimus dorsi
   - Muscle insertion: humerus

3. Exercises: 2D at X:3 Y:3 Z:3
   - Shoulder press: full range of motion
   - Pull-ups: scapular retraction

4. Pathology: 3D at X:4 Y:4 Z:4
   - Impingement syndrome
   - Rotator cuff tear

5. Treatment: 2D at X:5 Y:5 Z:5
   - Physical therapy: stretches and strengthening exercises
   - Surgery: in severe cases

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The image shows a diagram of the shoulder blade, highlighting its placement, anatomy, exercises, pathology, and treatment. Each section provides a brief overview of the related aspects, with a focus on the shoulder blade's role in movement and potential issues.
bands of strong fibrous tissue called tendons. Many of the bones act as levers for the muscles, and allow us to move our entire body, or just one finger.

**Blood**: The bone marrow produces the red cells and some of the white cells of the blood. The process of blood cell formation is called hemopoiesis.

**Mineral Storage**: about 95% of the calcium and 90% of the phosphorus are located in the bones and the teeth. These minerals give firmness and strength to the bones. They are also important for other body functions. Calcium is needed for muscle contraction, and for the nutrition process.

The skeleton

The skeleton is divided into two parts.

1. **Axial skeleton**
   - It is the axis of the body, with the skull, vertebral column, breastbone or sternum and ribs.
   - The bones of the skull are very strong and can resist severe shocks. During foetal life and childhood the skull bones can move and overlap. It helps the head of the child to pass through the narrow birth canal of his mother.
   - The vertebral column has an S-shape. It is composed of 26 separate bones called the vertebrae.
   - The vertebrae are united by inter-vertebral disks to form a strong but flexible support for the neck and the trunk.
   - The sternum and the ribs form a cage to protect the heart and the lungs. There are usually 12 pairs of ribs.

2. **Appendicular skeleton**
   - It is mainly composed of the upper and lower limbs, and the pelvis and the shoulder blades.

**Summary**

- The skeleton is not an isolated unit.
- It works to assist other body systems. It is associated with the muscles, as it stores the calcium needed for muscular contraction. It also provides attachment for muscles.
- It serves the circulatory system by producing blood cells.
- The skeletal system supports and protects all of the systems of the body.

*Inside information: the skeleton’s 206 bones support muscles and organs weighing five times the mass of the bones themselves.*
The complete skeleton

A. Anterior

B. Posterior view
### Anatomical Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skull</td>
<td>ˈskul</td>
</tr>
<tr>
<td>Mandible</td>
<td>ˈmændɪbl</td>
</tr>
<tr>
<td>Clavicle</td>
<td>ˈklævɪkl</td>
</tr>
<tr>
<td>Scapula</td>
<td>ˈskæpʊlə</td>
</tr>
<tr>
<td>Costal cartilages</td>
<td>ˈkɒstəl ˈkɑːrtɪlɪdʒz</td>
</tr>
<tr>
<td>Humerus</td>
<td>ˈhjuːmərəs</td>
</tr>
<tr>
<td>Vertebral column</td>
<td>ˈvɜːrtebrəl ˈkələmn</td>
</tr>
<tr>
<td>Ulna</td>
<td>ˈəlnə</td>
</tr>
<tr>
<td>Radius</td>
<td>ˈrædəs</td>
</tr>
<tr>
<td>Sacrum</td>
<td>ˈsækrum</td>
</tr>
<tr>
<td>Coccyx</td>
<td>ˈkɒsɪks</td>
</tr>
<tr>
<td>Carpal bones</td>
<td>ˈkɑːrpəl ˈbɒnz</td>
</tr>
<tr>
<td>Metacarpal bones</td>
<td>ˈmeɪtəkærˈpɔl ˈbɔːnz</td>
</tr>
<tr>
<td>Femur</td>
<td>ˈfɛmər</td>
</tr>
<tr>
<td>Patella</td>
<td>ˈpeɪtələ</td>
</tr>
<tr>
<td>Tibia</td>
<td>ˈtɪbɪə</td>
</tr>
<tr>
<td>Fibula</td>
<td>ˈfɪbʊlə</td>
</tr>
<tr>
<td>Calcaneus</td>
<td>ˈkælməni</td>
</tr>
<tr>
<td>Tarsal bones</td>
<td>ˈtærsl ˈbɒnz</td>
</tr>
<tr>
<td>Metatarsal bones</td>
<td>ˈmeɪtərˈsɔl ˈbɔːnz</td>
</tr>
<tr>
<td>Phalanges</td>
<td>ˈfæleɪndʒz</td>
</tr>
<tr>
<td>Pelvic girdle</td>
<td>ˈpɛlvik ˈgɜrdl</td>
</tr>
</tbody>
</table>

**Diagram:**
- Cross-section of a bone
- Muscle attachment to bone
Fractures

A fracture is a broken or cracked bone. Generally, considerable force is required to break a bone. The elderly often have brittle bones and are easy to break with slight force. On the other hand, children’s bones can be bend slightly.

A bone can be fractured directly at the point where the force is applied. It can also be broken at some distance from the spot where a blow is received. In this case the force is transmitted along the bone or along an adjacent bone. For example, a fall on an outstretched hand may result in a fractured collar-bone.

Another form of fracture may happen. A powerful muscle contraction can pull pieces of bone away from the point where the muscle is attached. In the same way if a joint is twisted, a tendon can pull so hard on the point of attachment that it can fracture the bone to which it is attached.

There are two types of fracture:
1. Closed
2. Open

Both types of fractures may result in more serious complications.

1. Closed fracture

This is a fracture where the skin surface around the damaged bone is not broken.

2. Open Fracture

When a broken bone end penetrates the surface of the skin, the fracture is said to be “Open”.

Open fractures are serious as they can result in severe external blood loss in addition to risk of infection.

Complicated Fracture

Closed or open fractures are said to be complicated when there is an associated injury, e.g. blood vessels, nerves, or organs are damaged by the broken bone end.

General symptoms and signs

- The snap of the bone may have been heard or felt in the injured area.
- Pain at or near the area of the injury is increased by movement.
- Patient may find it difficult or impossible to move the part normally.
- Tenderness at the point of the fracture when gentle pressure is applied over the affected area.
- Swelling and subsequent bruising of the injured part. This may not be evident at first but will develop as the blood leaks into the tissues; it may mask the true nature of the injury.
- Deformity at the point of the fracture. This may be irregularity of the bone, shortening or rotation of the limb.
- Coarse bony crepitus may be heard upon examination.
- Symptoms and signs of shock.

General treatment

If possible temporarily immobilize and support a fractured limb before moving the injured person to safety.

Steady and support the injured limb by hand. Do Not move the injured part unnecessarily.

If bandages are applied it should not be tight because it can interfere with blood circulation.

Raise the injured part after immobilizing it to minimize the swelling discomfort.
Pain in the area of injury, swelling, tenderness...

Injured person is unconscious, keep in lateral position

Apply bandage

Injured person is unconscious, keep in lateral position

Person is conscious, place in sitting position

Vêmo w àaeoyg; z iit mhx hàpyg
Management for open fractures

If the bone is protruding from the wound, control the bleeding by applying pressure along the side of the bone.

Gently put a piece of gauze over the protruding bone.

Place a ring pad of cotton wool around the wound. Build up padding around the bone until it is high enough to prevent pressure on the protruding bone.

Secure dressings and pads with a bandage applied diagonally.

Elevate the injured part if possible.

If there is no bone protruding from the wound, control bleeding by squeezing the sides of the wound over the fracture. Place a dressing over the wound and pads of cotton wool around the edge of the wound.

Skull Fractures

It may result in damage or trauma to the brain and the victim may lose consciousness. Symptoms of any other injury may be masked. Therefore, all head injuries should be regarded as serious, even if there is no sign of wound.

Signs

- Obvious signs of head injury.
- Blood and/or fluid may discharge from the ears or the nose.

Management

If the patient is conscious:
- Place in a half-sitting position with the head and shoulders supported.
- If there is any discharge from the ears, incline the head towards the injured side. Cover the ear with sterile dressing but do not plug it.
- Refer the patient to a hospital as soon as possible.

If the patient is unconscious:
- Check the breathing rate, pulse.
- If breathing and heart beat stop, resuscitation should be started immediately.

Lower Jaw Fractures

This is usually the result of direct force: for example, a direct blow to the jaw.

Signs

Pain in the area of injury, swelling, tenderness, difficulty in speaking, feeling of nausea, difficulty in swallowing, irregularity of teeth may be seen.

Management

- Clear the air way.
- If the injured person is conscious, place in sitting position and apply bandages as shown in picture.
- If the injured person is unconscious, keep in lateral position to clear the air way.
Tell the injured person not to move.

Move the person very delicately onto a rigid stretcher.

Support the limb of the injured side with a sling.
Rib fractures
Rib fractures usually result from a heavy fall on the chest, a direct blow, or from being crushed. The fracture may be complicated by a sucking wound. In this case, air is sucked in the chest cavity through the wound, and the lung on the affected side cannot take air in.

If there are multiple fractures of the chest it may result in paradoxical breathing. This is the reversal movement of chest cage when breathing on the injured side. It may provoke asphyxia.

Signs
- Pain in the area of the wound, increased by breathing or coughing.
- Possible signs of internal bleeding, indicating damage to internal organs.

Management
- Immediately treat any sucking wound by covering the open wound with the palm of your hand and with a sterile dressing as soon as possible.

Spine Injuries
Spine fractures are always classed as serious injuries. It necessitates the utmost care in handling because it may be complicated by damage to the spinal cord. It may cause paralysis or even death.

Possible injuries include spinal fractures, displaced inter-vertebral disc, strains and sprains. Fracture may cause nerve injury.

Signs
- The patient may complain of severe pain in the back and may feel cut in half.
- The patient may have no control over his limbs.
- Irregularity may be felt on gentle examination.

Management
- Tell the injured person not to move.
- Steady the head.
- Place rolled clothing alongside the trunk to support the patient.
- Move the person very delicately onto a rigid stretcher in the position found and transfer to a hospital.

Fractured Neck
- Fold a newspaper to a width of about 10 cm (4 in.), wrapped it in a triangular bandage or insert it into a stocking. Place the collar at the front of the injured person’s neck.
- Make sure air passage is not obstructed.
Place the limb on the injured side across the chest.

Support the limb with padding in a sling.

Additional support put a broad bandage across the body.
Keep the person in a half-sitting position with head and shoulders supported, the body incline to the injured side.

- Support the limb of the injured side with a sling.

**Collar bone fractures**

Collar bone fractures due to a direct blow or shock is rare. It is usually caused by indirect force resulting from a fall on an outstretched hand.

**Signs**

- Pain in the area of injury increased by movement.
- The person is reluctant to move the limb on the injured side.
- Swelling or deformity may be seen or felt at the point of the fracture.

**Management**

- Gently place the limb on the injured side across the chest.
- Place padding between the limb and chest on the affected side.
- Support the limb with padding in a sling.
- For additional support put a broad bandage across the body.
- Refer the case to a hospital.

**Arm fractures**

Fractures can occur anywhere along the length of the upper arm, or the two forearm bones. The bones most frequently broken are at the wrist.

**Signs**

- Pain at the point of fracture increased by movement.
- Inability to move the affected part.
- Inability to bend the elbow.

**Management**

- Support the injured limb across the chest.
- Place soft padding between the injured limb and the chest.
- Support the limb with padding in an arm sling.
- For additional support, secure the limb to the chest with a bandage applied over the sling.
- If the elbow cannot bend, secure the injured limb to the body with three bandages as shown in the picture.

**Hand and Finger Fractures**

These injuries are due to direct force. Sometimes the injuries may involve severe bleeding.

**Signs**

- The person is unable to use his/her fingers.
- Extensive swelling and bruising in the area of injury.

**Management**

- Control bleeding if present.
- Protect the injured hand in a fold of soft padding.
- Support the affected part in a sling.
- For additional support, secure the affected part with a bandage around the body.
Protect the injured hand in a fold of soft padding.

Place the person in a lying position with head and shoulders raised.
Pelvic Fractures

Direct injury may be caused by a fall or a shock on the pelvis. Indirect injury for example, may be caused by an impact on the knee, which force the head of the femur through the pelvis. This fracture may be complicated by injury to the bladder or urinary system.

Signs
- Pain and tenderness in the region of hips, increased by movement.
- Inability to walk.
- Inability to pass urine if the urinary system is damaged.

Management
- Place the person on the back with legs straight or knees in a bending position.
- Apply two broad bandages around the pelvis.
- Place soft padding in between the legs and tie the two legs before referring the case to a hospital.

Hip bone and Thigh-bone Fractures

This type of fractures result from falls and traffic accidents. In elderly people fracture may result from a minor fall.

The thigh bone is the longest in the body, and has a rich blood supply. A thigh bone fracture should always be regarded as serious, because in most cases, a large amount of blood is lost in the tissues. This may result in severe shock.

Signs
- Visible deformity in lower limb.
- Shortening of limb may be evident, caused by contraction of the muscles around the injury.

Management
- Place the person in a lying position.
- Support the body with bandages and splint as shown in pictures.

Knee-cap Fractures

This small bone lies in front of the knee joint, and is the attachment point for the large muscles of the leg.

It may be fractured by a direct blow or by muscular action, such as a missed kick.

Signs
- Pain and/or tenderness in the knee.
- Inability to bend the knee.
- Swelling followed by bruising.

Management
- Place the person in a lying position with head and shoulders raised.
- Raise the injured area with a long splint extending from the buttocks.
- Place padding under the knee for support.
- Wrap a bandage around the lower limb.

Leg fractures

Both the fibula and the shin bone may be broken.

The fibula is most commonly broken by the twisting of the ankle joint.
A long splint extending from the buttocks
Wrap a bandage around the lower limb
Control bleeding if present

Wrap the bandage in a figure-of-eight configuration

Wrap a bandage around the lower limb
Signs
- Swelling and apparent bruising.
- Deformity may be seen or felt along one or two bones.

Management
- Lay the patient down and carefully steady and support the limb by hand.
- Place bandage in position under the knees and feet.
- Place soft padding between the knees and ankles.
- Tie a bandage around the feet and ankles, and a broad one around the knees with knots on the uninjured side.
- If the journey to the hospital will be long or rough, place a splinter between the legs with adequate padding.

Foot fractures
They result from direct injuries, such as being run over, hit or crushed by objects.

Signs
- Pain and tenderness at the fracture point.
- Inability to move or walk on foot properly.
- Deformity may be evident, with swelling and bruising as well.

Management
- Let the person lie down.
- Remove the shoes.
- Control bleeding if present.
- Put a splint with padding under the foot.
- Wrap the bandage in a figure-of-eight configuration.
raw text
Naw Mu’s Case

Vaginal bleeding is a dangerous problem for women!

Naw Mu, a lady about 25 years old, arrived at the clinic this afternoon, accompanied by her mother.

MidWife: Please sit down. How may I help you? What’s wrong?

Mother: She is my daughter Naw Mu, she is 25 years old and married. She has missed her period for 3 months, and since this morning she has been bleeding from vagina. From my experience bleeding from vagina shows that there is a problem.

MW: You are right. Let me fill the MCH card, is it the first visit to our clinic? Tell me your daughter’s Name, Age, Address and her last menstrual period. How much did she bleed? Is it associated with pain around the pubic area?

Sorry! I am asking too many questions! Please answer one at a time. Did she have any other disease or complaint before apart from bleeding?

Mother: Her last period was on 12-3-99. She married one year ago. The amount is not much, just spotting only. She says that she feels dull pain in the lower part of her belly and some discomfort in her back.

History taking of the case and examination

The MW checks the Pulse, the Blood Pressure and the Respiratory rate.

MW: Please come and lie down on this examination bed.

Let me check the color of your eyelids (by putting the index finger on the lower eyelid of the patient). This roughly shows the condition of your bleeding: if you are anemic the lids are pale. At present the color of your lids are red, so it is OK as the amount of bleeding is not heavy.

Your BP is 110/70mmHg, Pulse70/min, Respiratory rate 18/min.

Diagnosis

The MW performed a vaginal examination. It is performed with strict aseptic technique to prevent infection.

The findings are:
- The uterus size coincides with a 12 weeks pregnancy (at the level of pubic bone). It corresponds to the date of her last menstrual period.
- The os* (the opening of the cervix) is closed.
- The cervix is firmed.
- The gloved finger is red with blood, but without tissue and no smell.

From these findings it can be concluded that there is a risk of abortion (threatened abortion). The patient has to take a complete rest.

MW: If there is more bleeding with pain please return to the clinic as soon as possible. You should stop all activity for a while and take
If vaginal bleeding occurs during the first 5 months of pregnancy, it can be either:

1. Abortion
2. Hydatiform mole
3. Ectopic pregnancy

1. Abortion
There are four types of abortions:
   a. Threatened abortion
   b. Inevitable abortion
   c. Incomplete abortion
   d. Missed abortion

a. Threatened abortion
It is the case of Naw Mu. The signs are amenorrhea*, pain in the lower part of the abdomen, the opening of the cervix* is closed and blood spots on the gloved finger are detected without odor.

b. Inevitable abortion
In this case the woman may feel pain with heavy bleeding. Evacuation may be needed by curettage. This method is the clearing of tissue inside the uterus and it should be done at a hospital.

c. Incomplete abortion
The symptoms are similar to the other cases but the bleeding is heavy with clots.

On vaginal examination, the cervical os* is opened but without the expulsion of fetal or placental tissue.

This case has to be referred to hospital for curettage.

If the spontaneous expulsion of all fetal and placental tissue from the uterine cavity occurs before 20 weeks of gestation, the abortion is known as complete abortion.

d. Missed Abortion
It is defined as a non-viable pregnancy retained in utero. If such pregnancy is retained for more than 2-3 weeks, maternal hypofibrinogenemia (the amount of fibrinogen which helps blood clotting) may ensue.
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## Summary Table

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<thead>
<tr>
<th>Diagnosis</th>
<th>Threatened Abortion</th>
<th>Inevitable Abortion</th>
<th>Incomplete Abortion</th>
<th>Missed Abortion</th>
</tr>
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<tbody>
<tr>
<td>Signs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cramps in lower quadrant with pain on both sides</td>
<td>+/-</td>
<td>++</td>
<td>+++</td>
<td>+/-</td>
</tr>
<tr>
<td>Symptoms of pregnancy</td>
<td>+</td>
<td>+</td>
<td>+/-</td>
<td>usually</td>
</tr>
<tr>
<td>Amenorrhea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Vaginal bleeding</td>
<td>Spotting</td>
<td>Heavy</td>
<td>Heavy with clots</td>
<td>+/- and tissue</td>
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### Physical examination

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<thead>
<tr>
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<th>Usually not</th>
<th>Usually</th>
<th>Yes</th>
<th>+/-</th>
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<tr>
<td>Cervix(cx) open</td>
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<tr>
<td>Blood from cx</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>+/-</td>
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<tr>
<td>Tissue from the os</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>+/-</td>
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<td>Uterus soft</td>
<td>Yes</td>
<td>Yes</td>
<td>+/-</td>
<td>+/-</td>
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<tr>
<td>Uterus tender</td>
<td>Often</td>
<td>Yes</td>
<td>Yes</td>
<td>Usually not</td>
</tr>
<tr>
<td>Abdomen tender</td>
<td>+/-</td>
<td>Usually</td>
<td>Usually</td>
<td>Usually not</td>
</tr>
<tr>
<td>Laboratory tests</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
<td>Usually negative, often positive previously</td>
</tr>
<tr>
<td>Pregnancy test</td>
<td>+/-</td>
<td>+/-</td>
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### Treatment (T)

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<tr>
<td>Observation of patient, Bed rest, (T) of Infection, counseling, support.</td>
<td>Evacuation of the uterine contents, counseling, support.</td>
<td>Evacuation of the uterine contents, counseling, support.</td>
<td>Evacuation of the uterine contents, counseling, support.</td>
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+ indicates signs may present
- indicates signs may not present
Location of ectopic pregnancies

- Ovarian: 0.5%
- Cervical: 1%%
- Interstitial (cornual): 2%-4%
- Tubal: 95%-97%
- Abdominal: 0.03%

**Location of Ectopic Pregnancies**

- O;mt dyjify u 6eaq miciift d g zg u kif.
2. Hydatidiform mole

The cause is likely to be due to abnormal gametogenesis (the development of the male and female sex cells) and abnormal fertilization.

It is characterized by vesicular swelling of placental villi and usually absence of an intact fetus.

**Signs and Symptoms**
- uterine bleeding usually seen in 6-16 weeks of gestation (the time from fertilization to birth)
- toxemia (a condition resulting from metabolic disturbances) of pregnancy
- hyperemesis (vomiting)
- size of uterus is too big compared to a normal pregnancy and the date of the last period missed period
- uterus is soft and fetus is not felt with palpation parts
- spontaneous expulsion of grapelike vesicular tissue from the uterus

The patient should be referred to a hospital.

3. Ectopic pregnancy

**Definition:**
An ectopic pregnancy is defined as any pregnancy that results from the implantation of an embryo outside the uterus.

It can be implanted in the fallopian tubes or in the abdominal cavity.

**Diagnosis**

The usual signs are:
- amenorrhea
- lower quadrant abdominal pain
- spotting

When the pregnancy is ruptured an acute abdominal pain and shock are often encountered. Slight rise of temperature may be found.

**Management**
- If signs of ectopic pregnancy are detected, refer the case to hospital as soon as possible.
Ten Questions

1. To prevent or treat fever successfully, the study of the different fever patterns and associated symptoms are essential points to consider:
   a. True
   b. False

2. High fever means temperature is:
   a. above 37°C (100°F)
   b. 40°C (104°F)
   c. 35°C (94.5°F)

3. A normal pulse rate in an healthy adults is ................................................................. /min.

4. What are the different levels where pulse can be taken?
   ........................................  ........................................  ........................................  ........................................  ........................................

5. The whistling sound and difficulty in breathing out means ........................................

6. There are different types of bones; they are,
   ........................................  ........................................  ........................................  ........................................  ........................................

7. In case of head injuries, blood and/or fluid may discharge from the..............................
   ........................................and ........................................

8. Swelling, tenderness, difficulty in speaking, feeling of nausea, difficulty in swallowing, irregularity of teeth may be seen in case of .................................................................

9. Shortening of limb may be evident in case of ............................................................ fracture.

10. In case of pregnancy, if the patient presents pain in lower part of belly and bleeding from vagina, you should think about.................................................................first.

You will find the answers in the next issue no. 7.
Women’s Education for Advancement and Empowerment (WEAVE) can give you all these for your public health education. We have health education materials on pregnancy, breast feeding, nutrition, family planning, hygiene and AIDS. The languages are Burmese, Karen and Shan.

The best thing is that they are free!

Please write, fax or email WEAVE for your order form.

WEAVE
PO Box 58
Chiangmai University
Chiangmai 50202
THAILAND

Tel 053-221 654
Fax 053-357 695
email weave@cm.ksc.co.th
TID: three times daily.

Crust: the dry covering of a skin sore or lesion.

Arthralgia: pain in a joint.

Throbbing: to beat with increased force or rapidity, as the heart under the influence of emotion or excitement.

Hyperthyroidism: overproduction of thyroid hormone by the thyroid gland.

Os: any opening of the body.

Cervix: a constricted part of an organ.

Amenorrhea: absence or abnormal stoppage of the menses.

Clot: a semisolid mass of blood.

Curettage: the removal of growths or other materials from the wall of a cavity.

Fibrinogen: a sterile fraction of normal human plasma which takes part in the clotting process of blood.

Placental villi: finger-like projections of the placental membrane.

Cartilage: a connective tissue, strong, elastic and flexible. Mostly found in the joints.

Hemopoiesis: the process of blood cell formation.

Tendon: a band of tough, fibrous and inelastic tissue. It serves to connect a muscle with a bone.

Tissue: a part of an organism consisting of a large number of cells having a similar function. Examples: the nerve tissue or the bone tissue.

Vascular: related to the vessels conveying the blood in the body.

Vertebrae: the bones composing the spinal column.