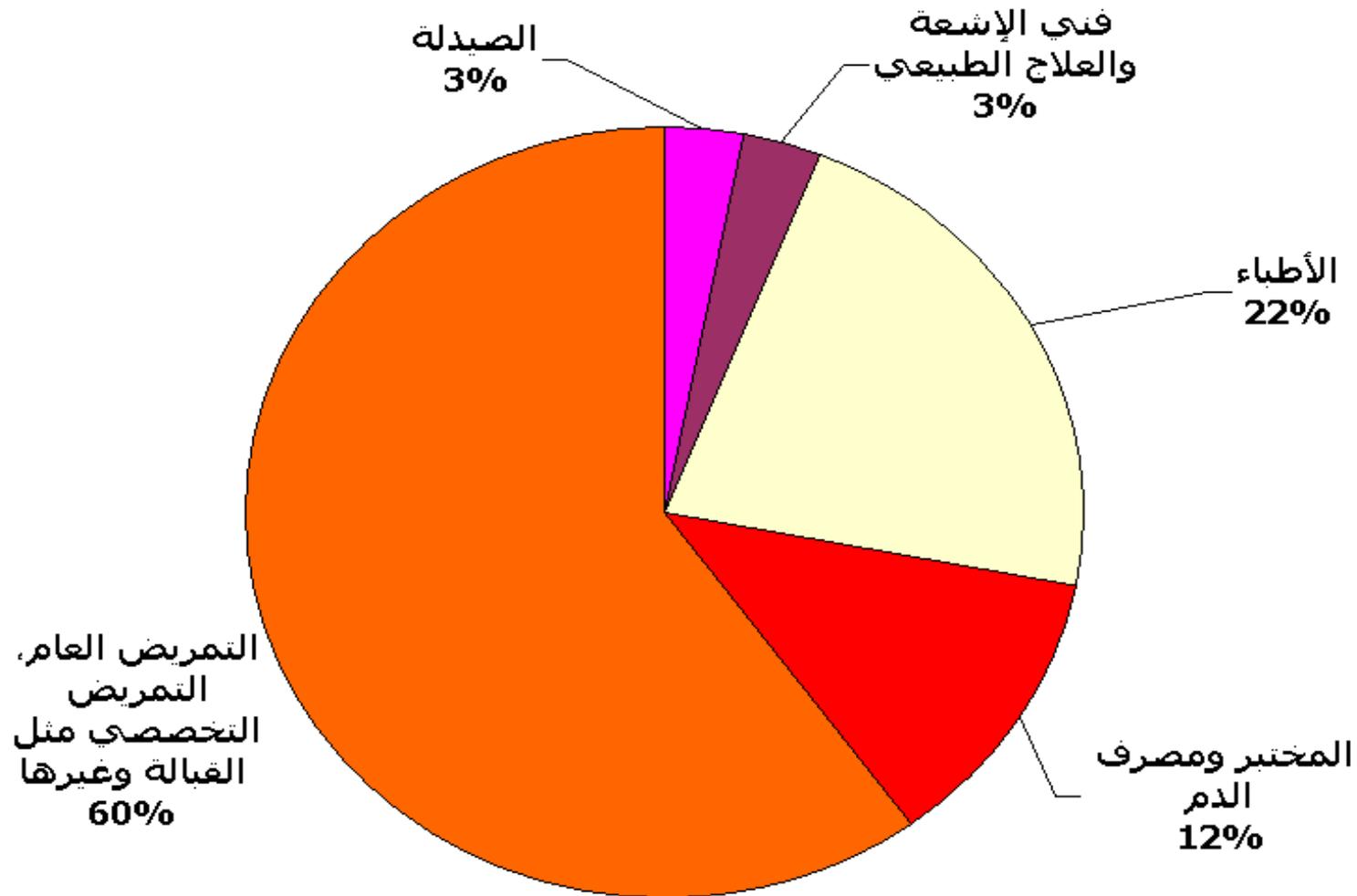


Infection Control

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شكل يوضح نسبة تقريبيه لتوزيع العدوى للمهن الطبية بالمستشفيات



Infection Control

Maintenance of high standards of infection control practice is the responsibility of all healthcare personnel

I.C. is one of the most important functions of a nurse can perform.

Definitions of some terms

Infection control refers to policies and procedures used to minimize the risk of spreading infections, especially in health care facilities.

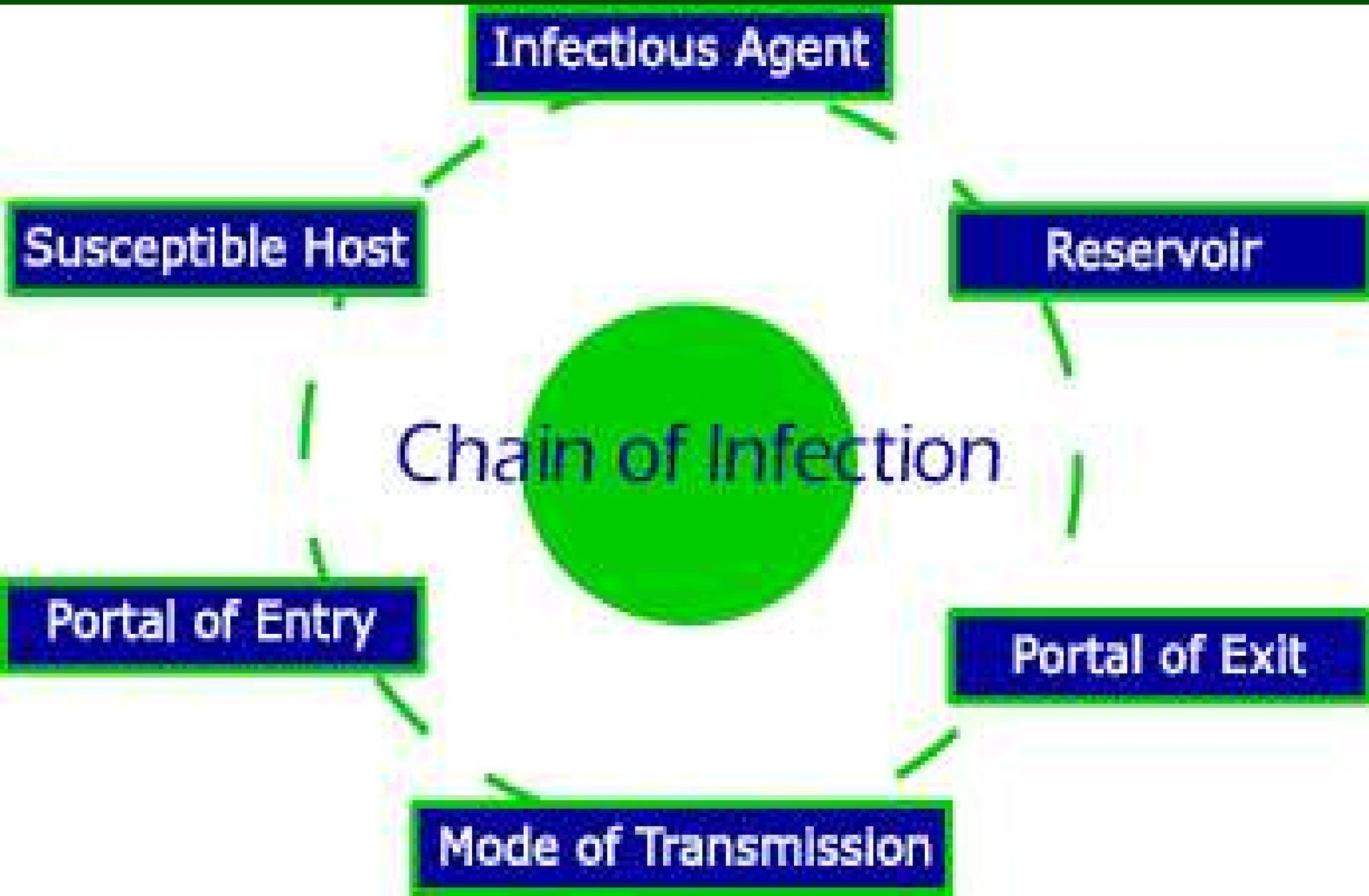
Infection

Infection is the invasion of the body by pathogens or microorganism capable of producing disease.

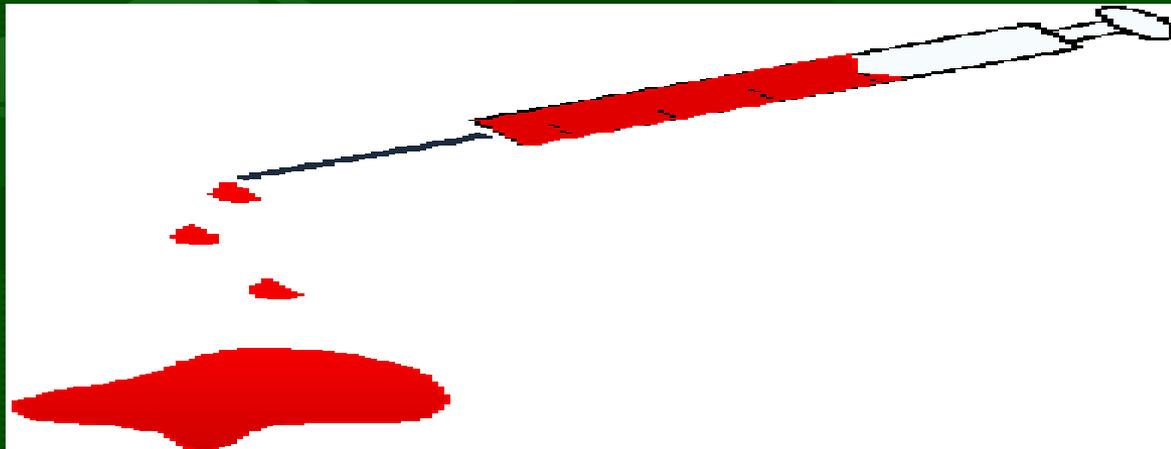


Pathogenic
Microorganism

Chain of infection



- **Infectious agent:** Any germ causing a disease (bacteria, virus, fungi, protozoa,etc)
- **Reservoir** such as (food, water, soil, animal, insect, and human.
- **Portal of exit** , after organism find a site in which to grow, they must find a portal of exit such as (mucous membrane, skin respiratory tract, gastrointestinal tract, and blood.



Mode of transmission

May be through

- 1- Direct contact such as (kissing, sexual contact, or closed contact)
- 2- Indirect contact as (sneezing, coughing, eating or drinking of contaminated food or water, insect, or animal bites).



Portal of entry

- Where the pathogen enter the body such as (eye, mouth, nose, breaks in the skin and urogenital opening).

Host

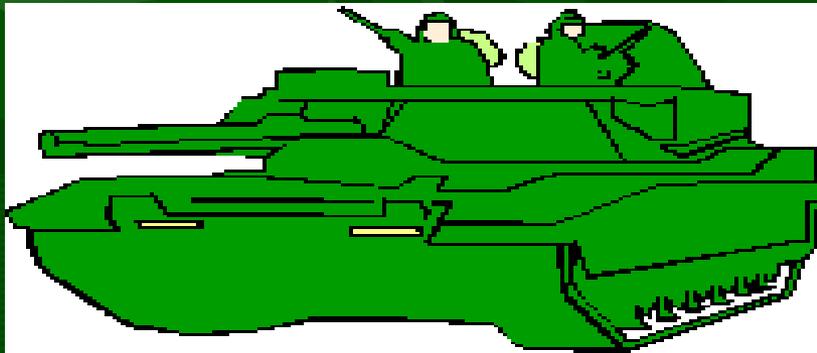
- Depends on the individual's degree of resistance to pathogens. Such as (some one not vaccinated, disorder in the immune system....etc)

What are the human body's defenses

- These defenses include both natural barriers and responses by the immune system.

Natural Barriers :- The human body has a number of natural barriers to protect itself from would-be germ invaders as Intact skin,

- mucous membranes and cilia lining the respiratory system. digestive secretions, including enzymes and bile.



Responses by immune system

- The immune system is greatest body's defense.
- Once invaded by a germ the immune system can produce a variety of antibodies to respond to the germ



Prevention and control of infection

- *Breaking the Chain of Infection*

Link	Intervention
Infectious or Causative Agent	Accurate and rapid identification of micro-organisms Early recognition of sign and symptoms of infection

Reservoirs

- Employee health examination and screenings
- Environmental cleansing including floors, walls, exam tables and beds
- Disinfection/Sterilization of equipment and instruments
- Proper Hygiene - bathing and hand washing
- Clean gowns, linens and towels
- Clean wound dressings

Portal of exit

- Hand washing
- Use of Personal Protective Equipment such as gloves, gowns, facemask



Cont. portal of exit



Cont. portal of exit

- Clean dressings over wounds
- Control of excretions and secretions
- Covering the mouth and nose when coughing or sneezing
- Proper waste disposal
- Standard Precautions



Method or Mode of Transmission

- Hand washing
- Rooms with air flow control
- Safe Food handling
- Isolation
- Transmission-based precautions

- Sterilization of equipment and supplies
- Medical and Surgical Asepsis
- Use of personal protective equipment such as gloves, gowns, facemask.
- Proper disposal of contaminated objects

Portal of Entry

- Aseptic technique
- Sterile technique or Surgical Asepsis
- Catheter Care
- Wound care
- Proper Disposal of needles or sharps
- Maintaining skin integrity
- Standard Precautions

Susceptible Host

- Treatment of Disease
- Recognition of clients at risk
- Immunization
- Exercise
- Proper Nutrition

Asepsis

- Asepsis is defined as a condition in which pathogens are absent or controlled. Aseptic practices break the chain of infection by preventing the transmission of pathogens. There are three levels of aseptic control.
- **Antisepsis or sanitation**
- **Disinfection**
- **Sterilization**

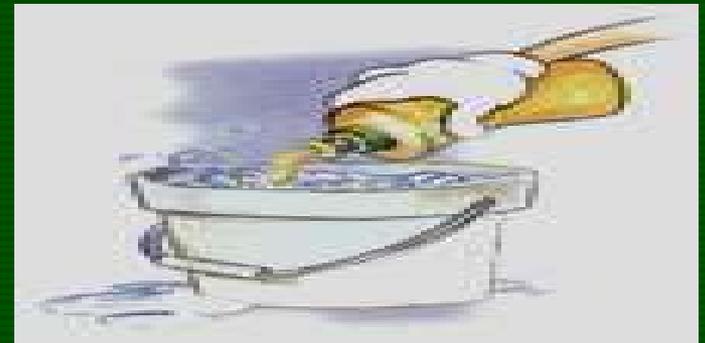
Antisepsis/Sanitation

This method of infection control includes using soap and water to wash the hands and body. the use of antiseptics such as alcohol, iodine and betadine to clean the skin for medical procedures, as these inhibit the growth of pathogenic microorganisms.

This level of asepsis may kill or inhibit some microbes but is generally not effective against viruses and spores

Disinfection

- Is the process of using chemical agents or boiling water to destroy or kill pathogenic microbes.
- These agents are not always effective against viruses and spores, but it may irritate or damage the skin so they are mainly used on surfaces , equipment and instruments.



Sterilization

- Is the only level of asepsis that kills all microbes both pathogenic and nonpathogenic.
- It is the method used by all health care facilities and includes the use of gas, chemicals, steam under pressure and radiation.
- Sterilization is mainly used on medical instruments and equipment, surgical dressings, gowns etc.

Medical asepsis

- Wash hands frequently, especially before handling foods, before eating, after going to the toilet, before and after each client contact, and after removing gloves
- Keep soiled items and equipment from touching the clothing
- Do not place soiled bed linen or any other items onto the floor
- Move equipment away from you when brushing, dusting, or scrubbing articles

Cont. medical asepsis

- Dispose of soiled or used items directly into appropriate containers
- Avoid touching your eyes, face, nose or mouth.
- Follow guidelines for isolation techniques

Surgical Asepsis

known as Sterile Technique requires specific procedures which render an area free from all microorganisms including spores.

Basic principles of Surgical Asepsis include:

- Only a sterile object can touch another sterile object
- Open sterile packages so that the first edge of the wrapper is directed away from the worker to avoid the possibility of a sterile wrapper touching unsterile clothing

Cont. surgical Asepsis

- Hold sterile objects above the level of the waist
- Avoid talking, coughing, sneezing, or reaching over a sterile field or object
- Never walk away from or turn your back on a sterile field
- All items brought to enter normally sterile body cavities, should be sterile
- Consider an object contaminated if you have any doubt as to its sterility



Hands That Heal



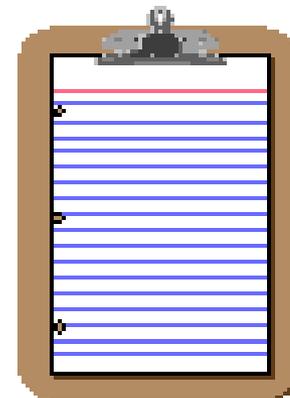
Hands That Kill

Which hands are yours?

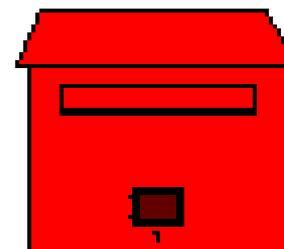
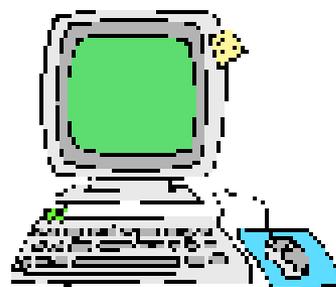
Why Don't Staff Wash their Hands

(Compliance estimated less than 50%)

**Remember: everything you touch
has been touched by someone else**



**Thanks for washing
your hands**

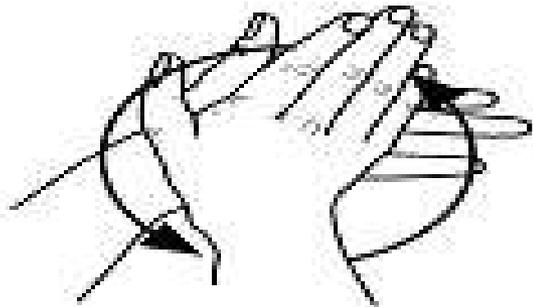


Hand Hygiene Techniques

1. Routine hand wash 10-15 seconds
2. Aseptic procedures 1 minute
3. Surgical wash 3-5 minutes
4. Alcohol hand rub

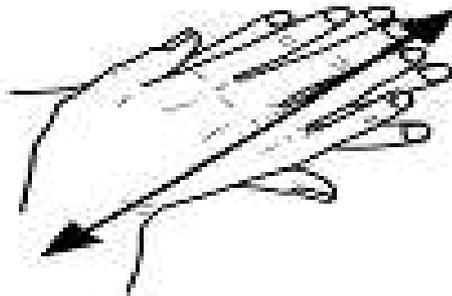


Routine Hand Wash



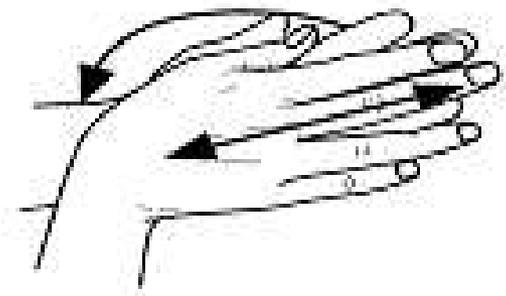
Procedure 1

Wet hands and wrists. Apply soap.



Procedure 2

Right palm over left, left over right.



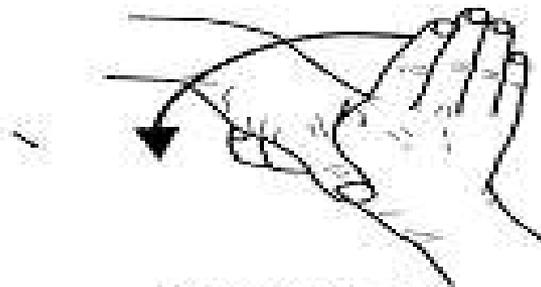
Procedure 3

Palm to palm, fingers interlaced.



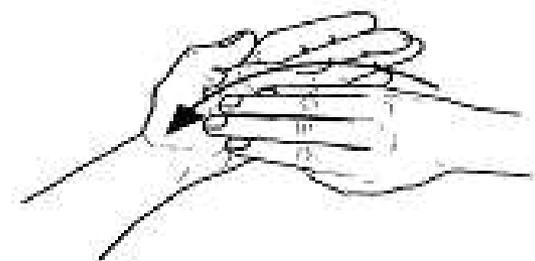
Procedure 4

Back fingers to opposing fingers interlaced.



Procedure 5

Rotational rubbing of right thumb clasped in left palm and vice versa.



Procedure 6

Rotational rubbing backwards and forward: fingers and hand in left hand.



Thank
You



And good luck