Prosthetics and orthotics

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Orthopaedics
- prosthetics and orthotics

Prosthetics - replacement of part of body

Orthotics - replacement of loosened function of part of body

Epithetics - cosmetic covering of part of body

Orthopaedic shoes

Adjuvatics – devices for independence

Prosthetics

Replacement of part of body

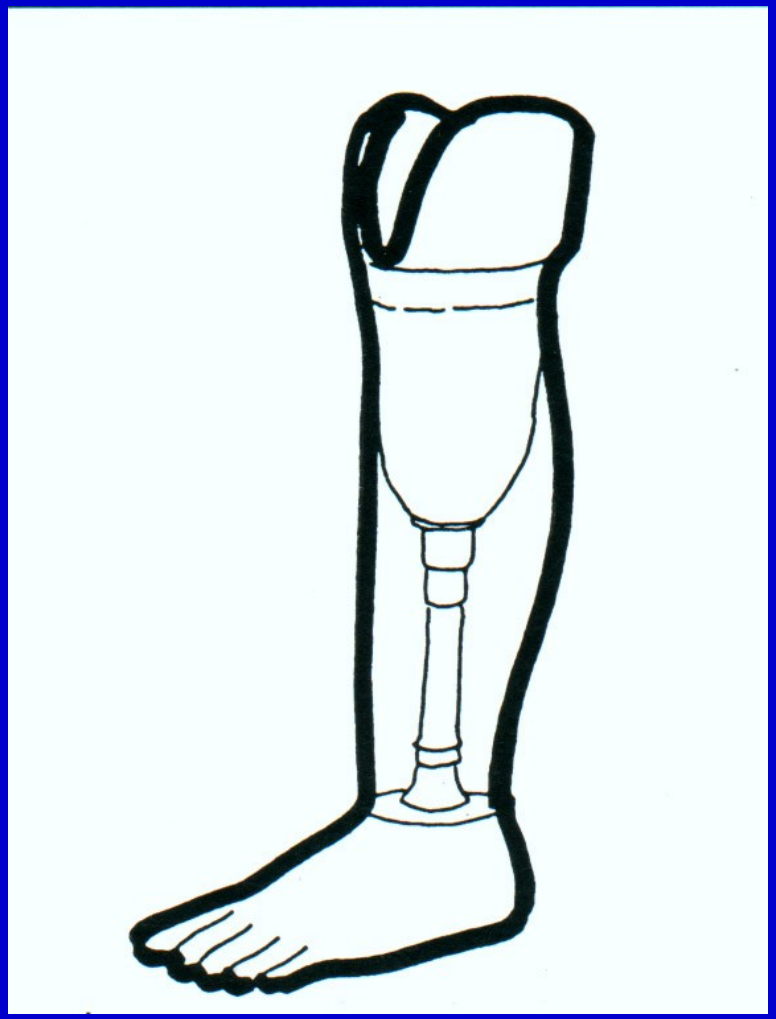
Above knee limb

Requirement for prosthetic limb

Static function
Dynamic function
Well controlled
Light
Durable
Esthetic

Bandage of the stump

Prosthesis



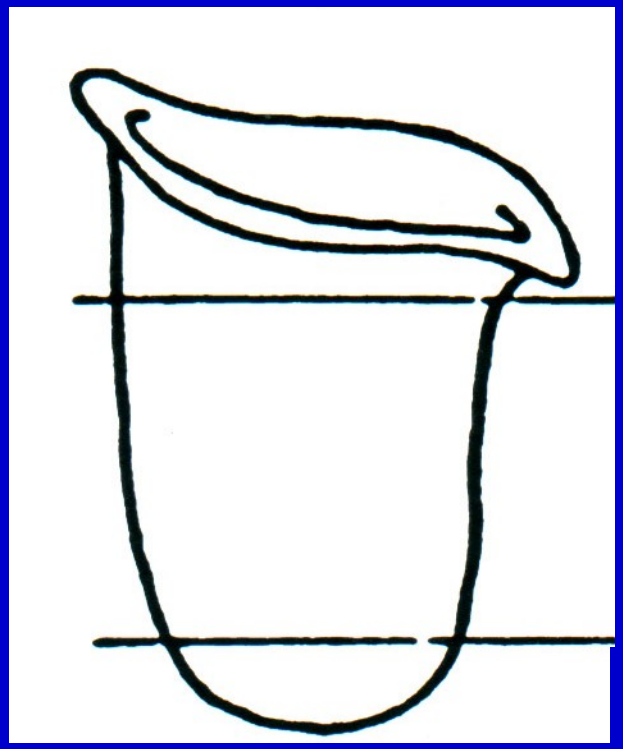
Stump bed- socket

Modular part

Adjuvans

Prosthetic limb

Stump bed- socket

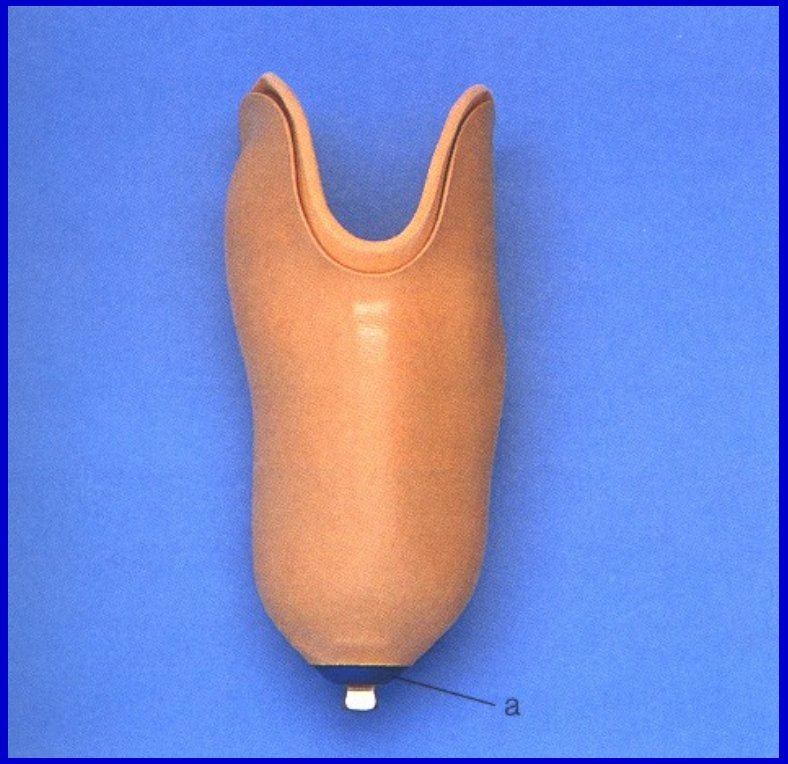


Scheme

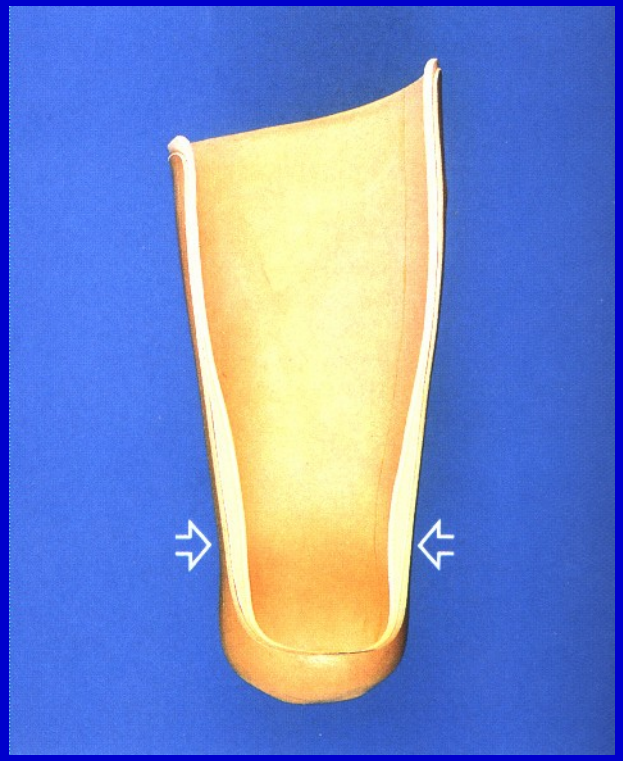
Ring

Walls

Bottom



Adjusments of stump bed



Soft padding
Good fitting
to avoid preassure sores
and skin irritation and aczema

Soft plastic bed

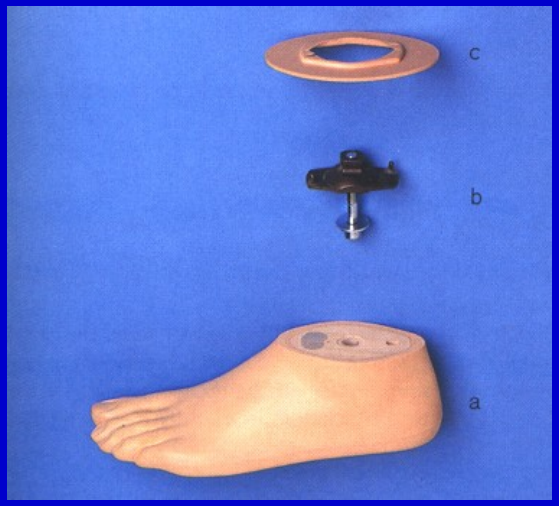
Stump bed- socket

The aim:
Weightbearing stump
Skin of good quality
Enough of soft tissues
Soft stump bed
Silicon sockets

Bellow knee prosthesis

Materials

Steel, titanium, wood
Plastic, PVC
epoxyd, rubber, polyester,
termoplast, carbon.



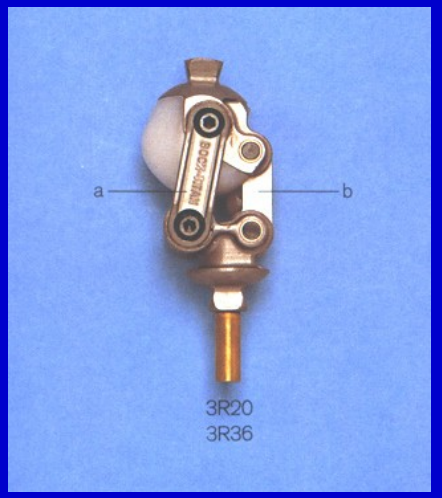
Modular parts

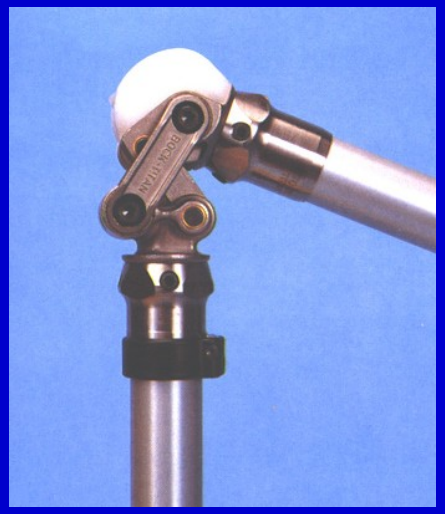
Adapter for dynamic walking

Joints

Hydraulic

Monocentric joint





Polycentric joint

Prosthesis

1. Immediate fitting
2. First prosthesis
3. Standard prosthesis

Immediate prosthesis

Prostheses of lower limb

Shoes

Bellow knee limbs

Above knee limbs

After disarticulation in knee joint

After disarticultion in hip joint

Bellow knee prosthesis

Prosthesis of the foot

Multiaxial movements
Simple lift off

Carbon prosthesis of the foot

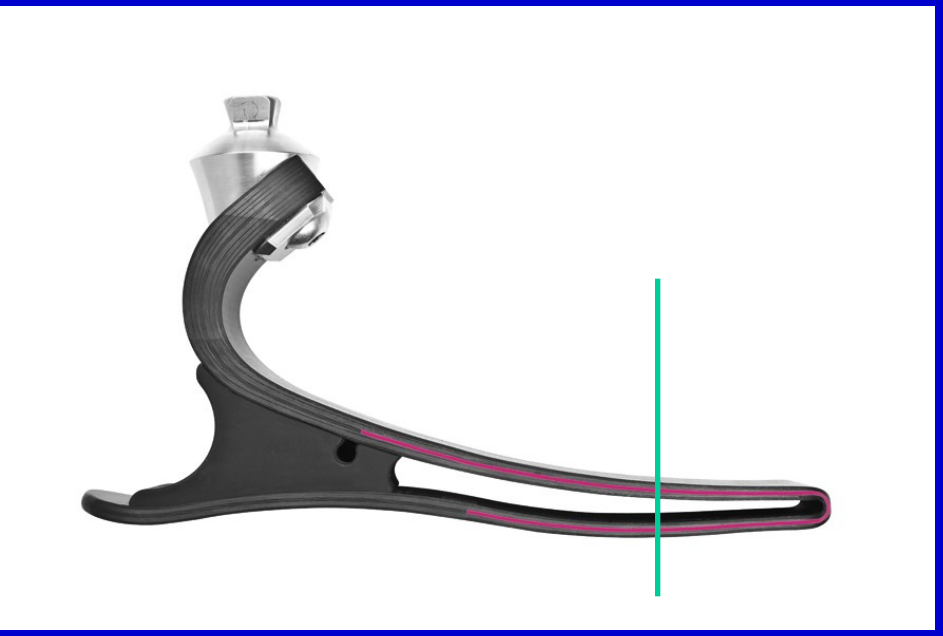
Carbon fiber

Dynamic forefoot

Soft heel

Multiaxial movements

Prosthesis of the foot



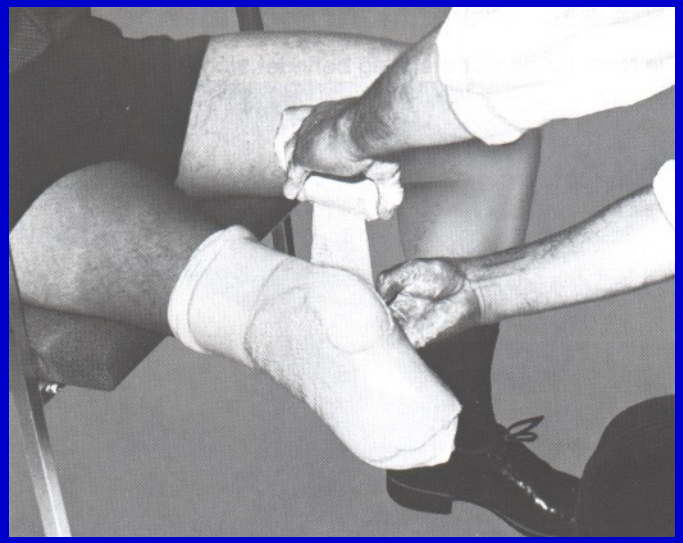
Multiflex Ankles
Flexfeet
Adjustable Heel Height Feet

Prosthesis after Pirogov amputation

Bellow knee limbs

Pediatric Limbs
Cosmetic Limbs
Sport Limbs
Swim Limbs
Conventional Sockets
Silicone Suction Sockets
Carbon Fiber Sockets
Thermo Plastic Sockets
Ultra Light Modular Setups

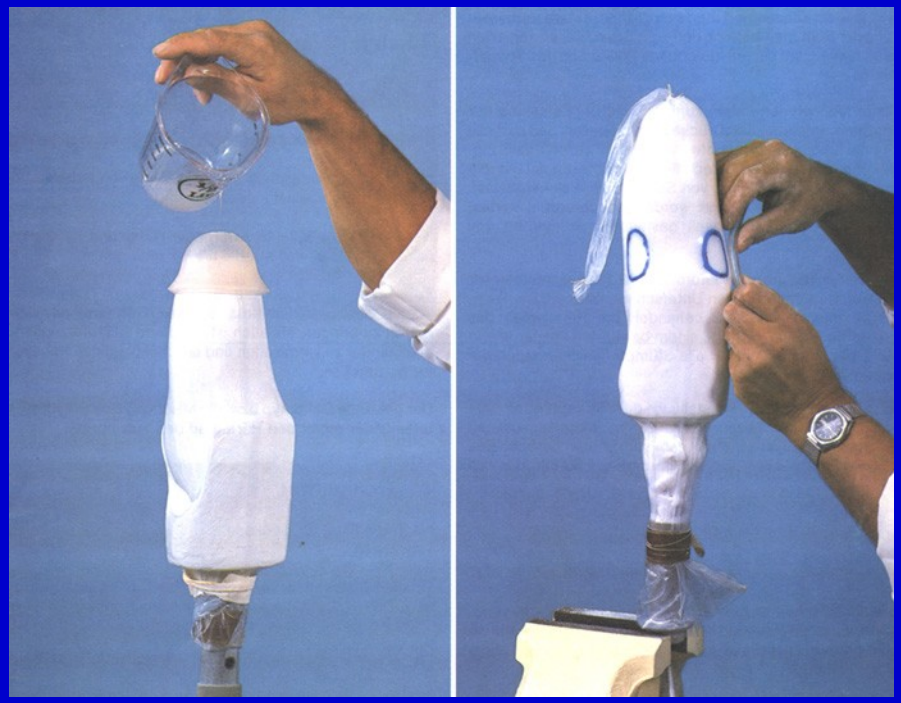
Processing



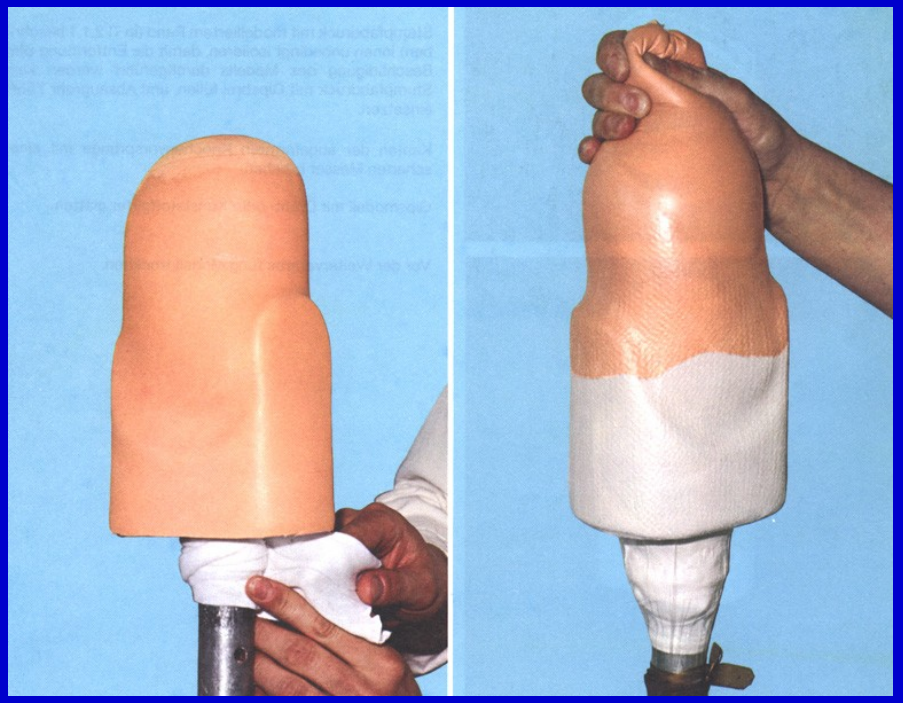
Plaster negative

Plaster positive

Processing



Prosthetic socket from silicon

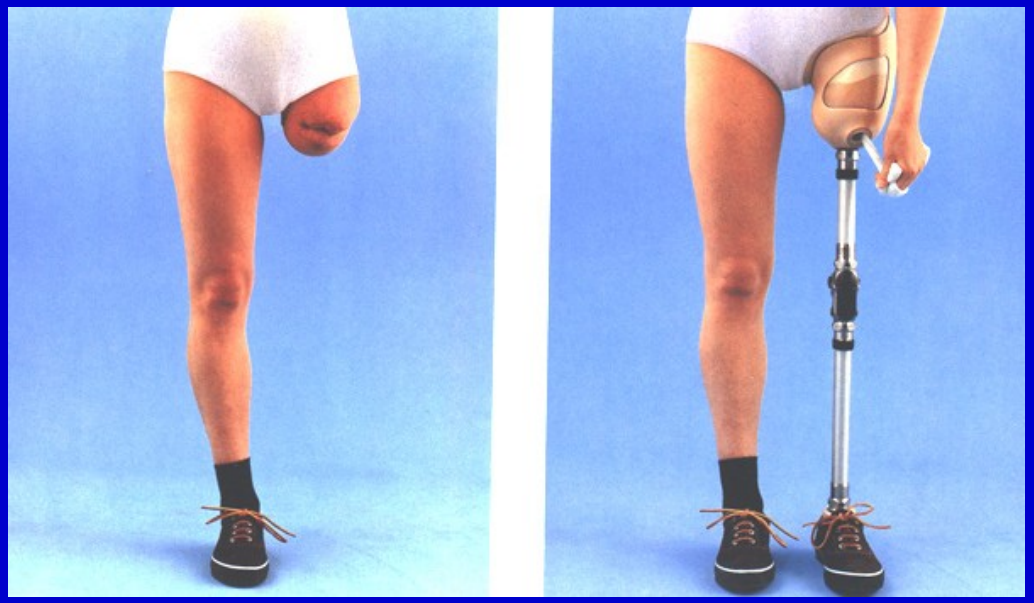


Prosthetic socket from thermoplast

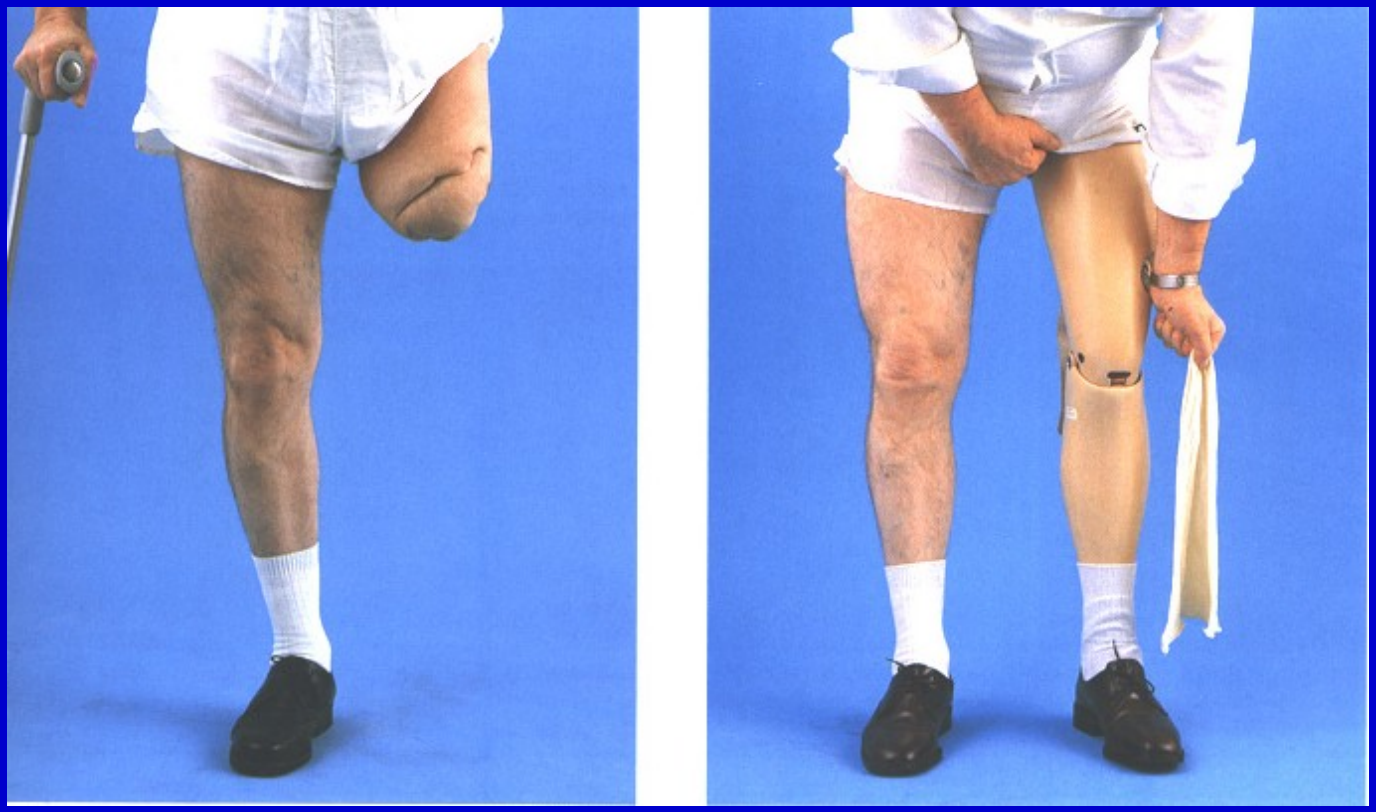
Bellow knee limb from thermoplast

Above knee limbs

Conventional AK Limbs
Pediatric Limbs
High Tech Sport Limbs
Suction Sockets
Silicone Suction Sockets
Hydraulic Knee Units
Polycentric Knee Units
Microprocessor Knee Systems

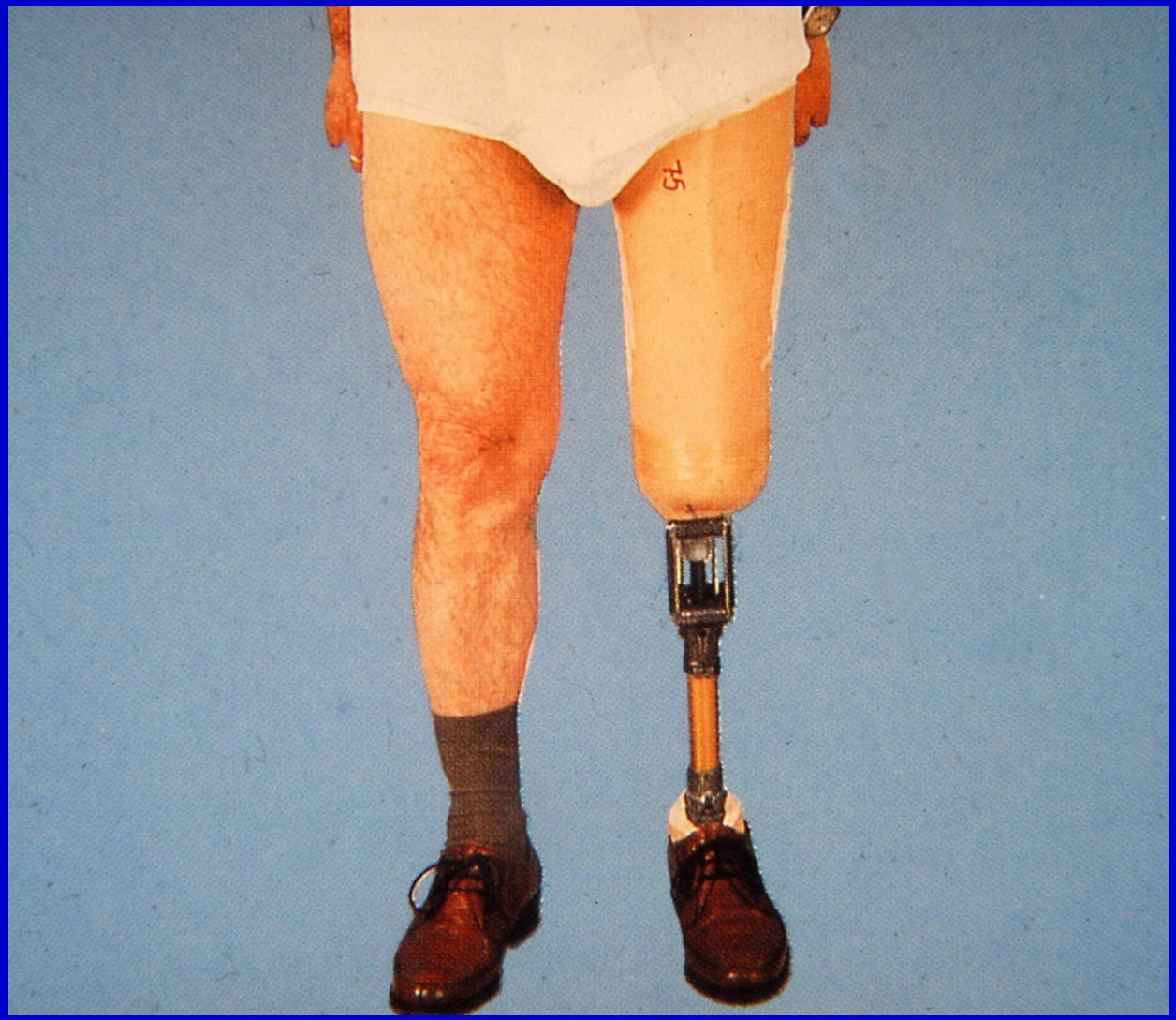


Modular above knee limb



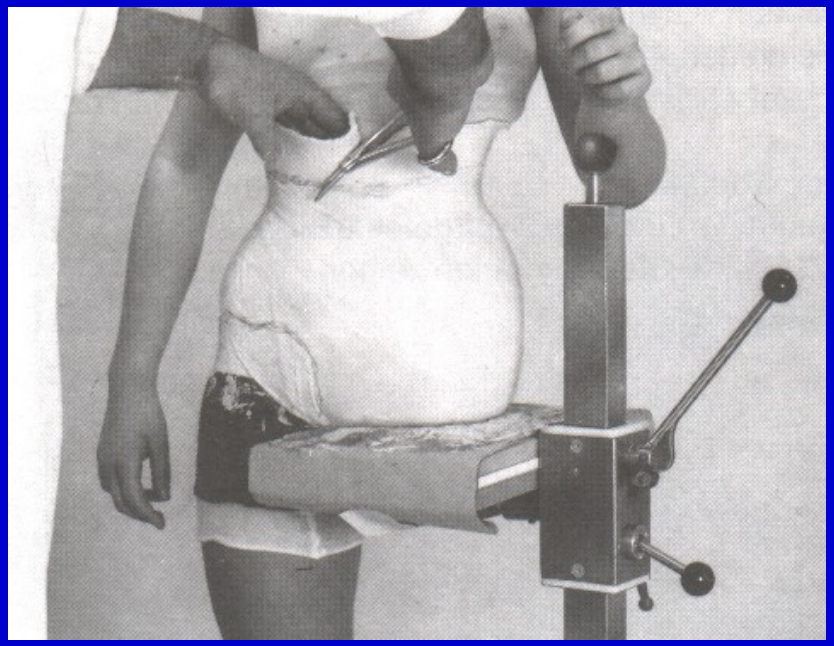
Placement of the stump into the socket

Modern above knee prosthesis



Prosthesis in knee disarticulation

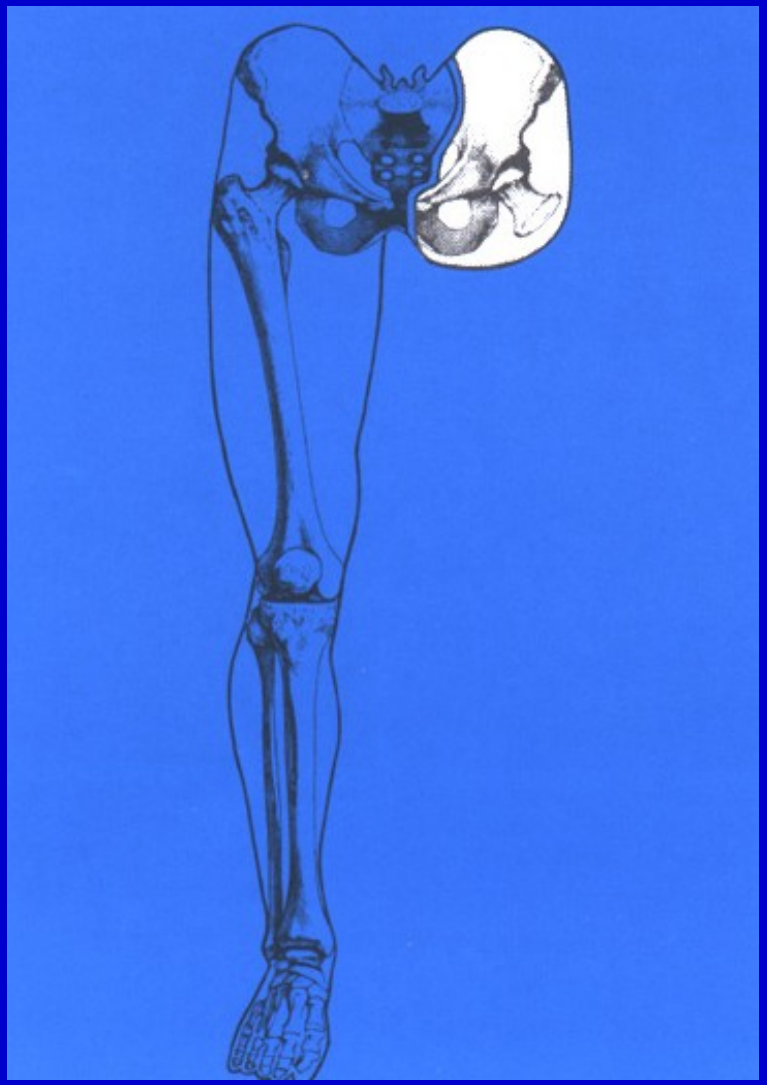
Processing



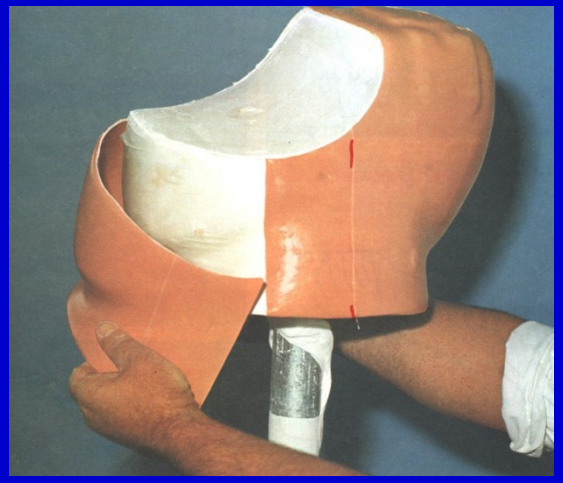
Plaster negative

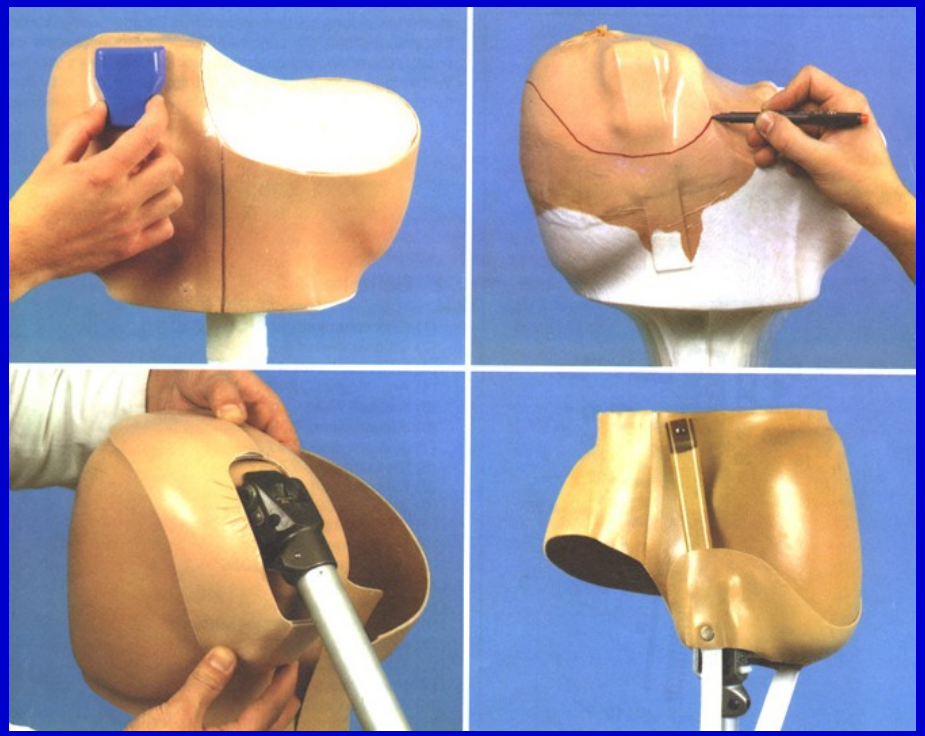
Plaster positive

Processing

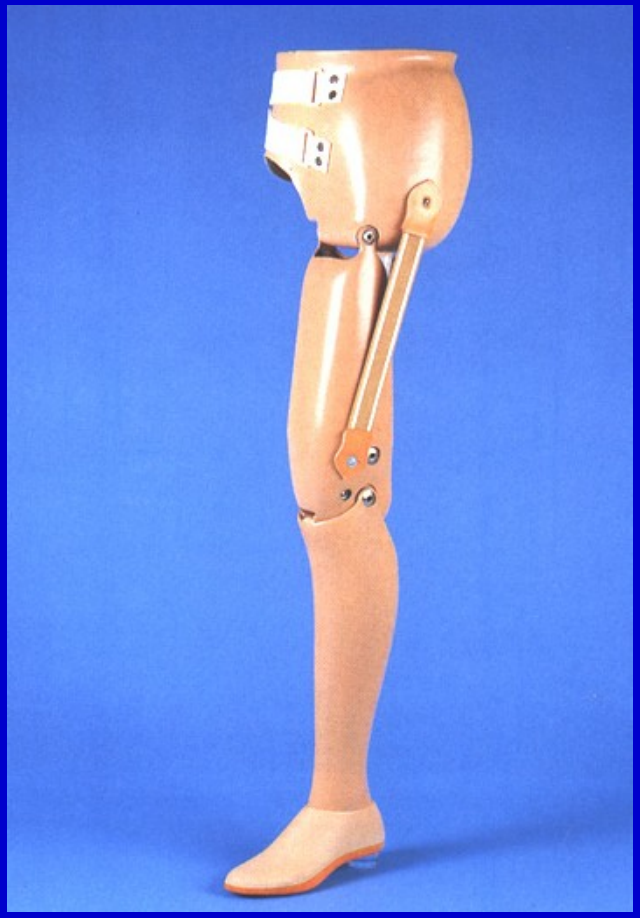


Disarticulation in hip joint





Pelvic ring



Prosthesis after disarticulation in hip joint
Rigid pelvic ring

Flexible pelvic ring

Rigid pelvic ring

Physiotherapy with prosthetic limb

Standing

Proprioception

Balance

Coordination of movements

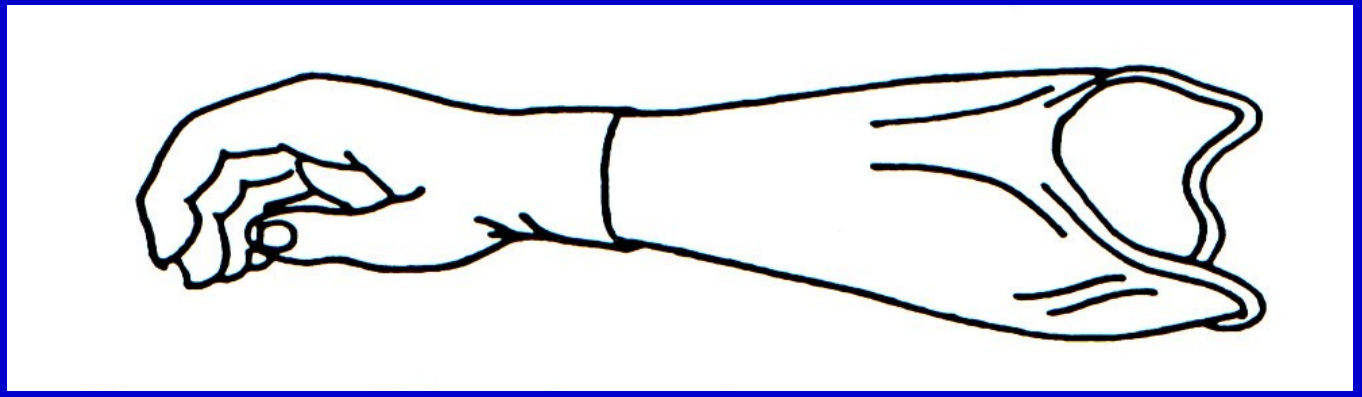
Gait

Prosthesis of upper extremity

Cosmetic

Mechanical hand

Bioelectric



Cosmetic prosthesis

Prosthesis of upper extremity

Above & Below Elbow Prostheses
Passive Limbs
Functional Limbs
State-of-the-art Myoelectrics
Bionic Hands and Digits
Custom Gloves
Partial Hand Prostheses
Cosmetic Restorations
Hands & Fingers
Feet & Toes

Cosmetic prosthesis

Cosmetic prosthesis of the hand

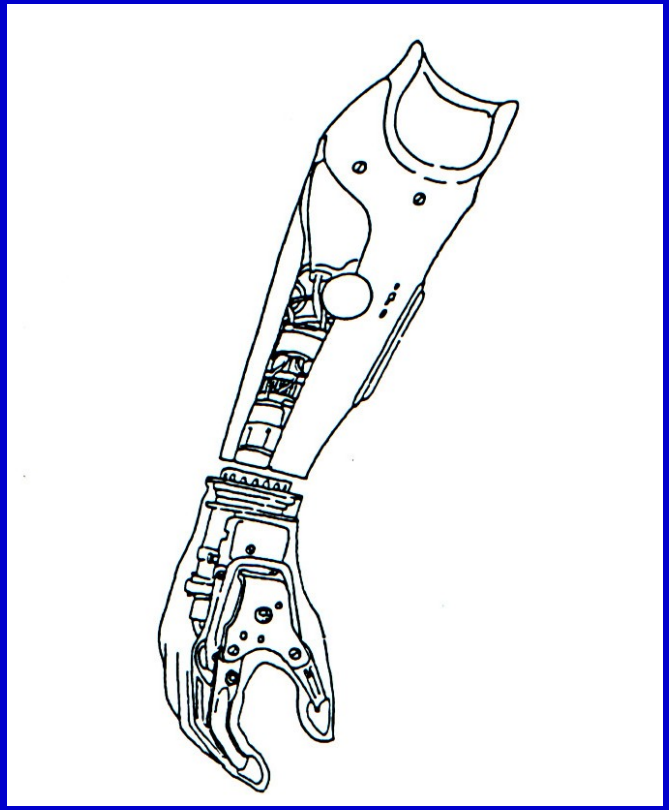
Prosthesis with dynamic arm

Bioelectric prosthesis

Power:

Movements of the body

Muscle contractions at the stump



Myoelectric prosthesis

Orthesis

Stabilisation

Correction of malalignment

To correct asymetry

Orthesis of the knee joint

Orthesis

Pasive

Lumbar orthesis

Active

Orthesis of the knee

Orthesis of the trunk

Jewett ortthesis

Cheneau orthesis

Collars

Soft collar

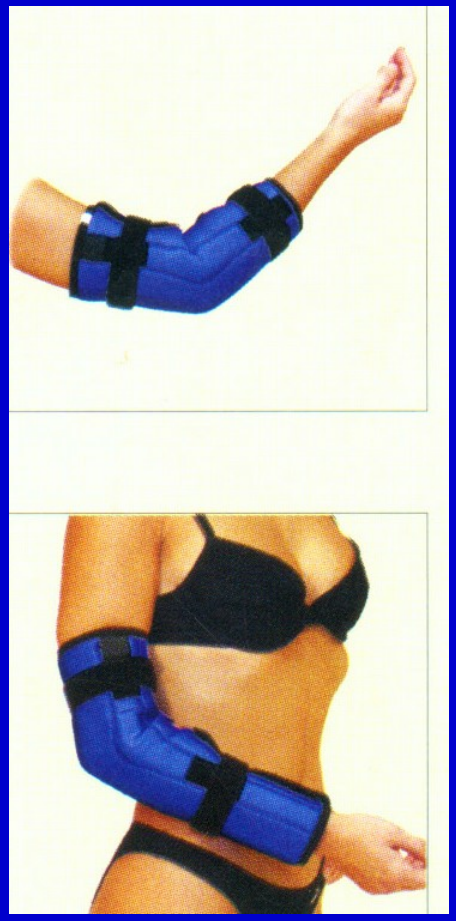
Philadelphia collar

Orthesis of lower extremity

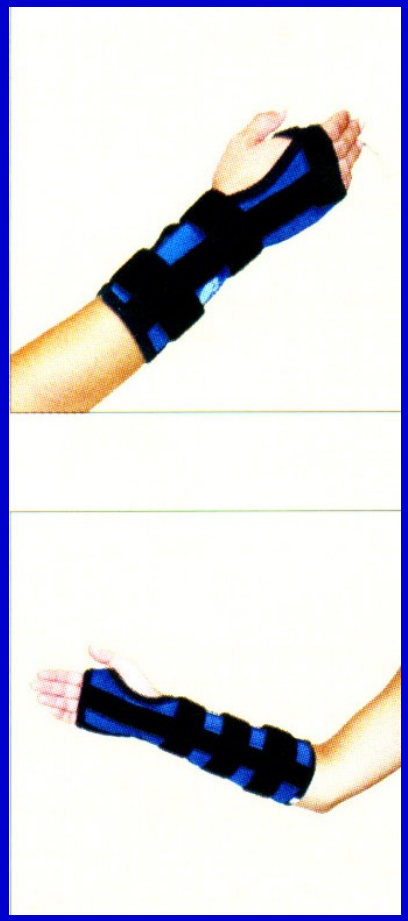
Rigid

Active

Orthesis of upper extremity



Elbow orthesis



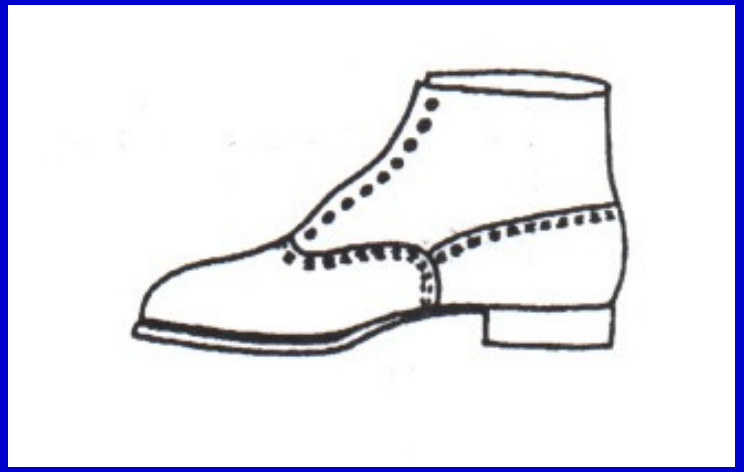
Orthesis of the wrist joint

Orthesis of the hip joint

Orthopaedic shoes

Functions of ortopaedic shoes

1. Correction of malalignment
2. Immobilisation
3. Aleviation of pain



Orthopaedic shoe

Types of orthopaedic shoes

Adjusment of standard shoes

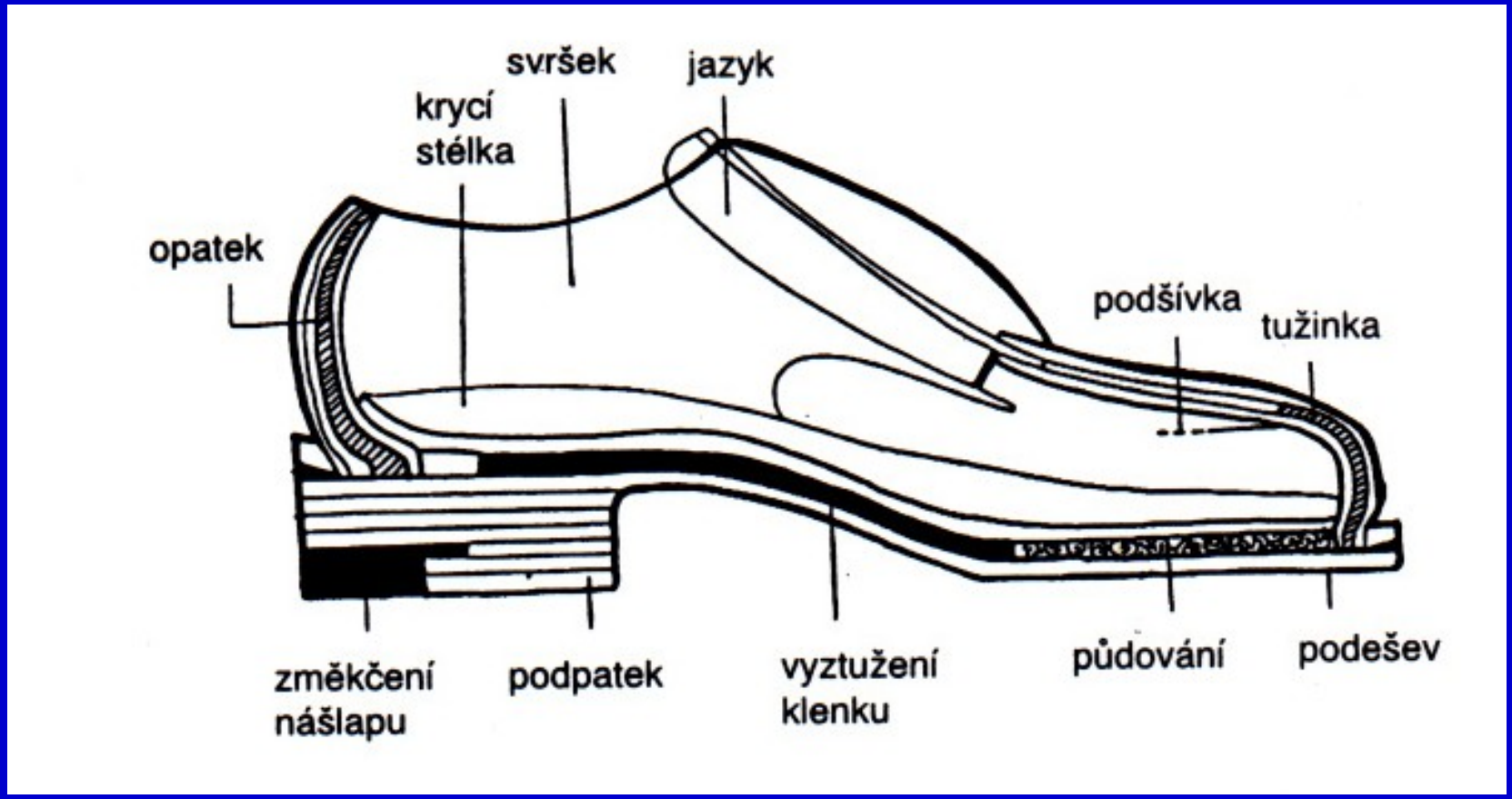
Professional shoes

Ortopaedic shoes

Diabetic shoes

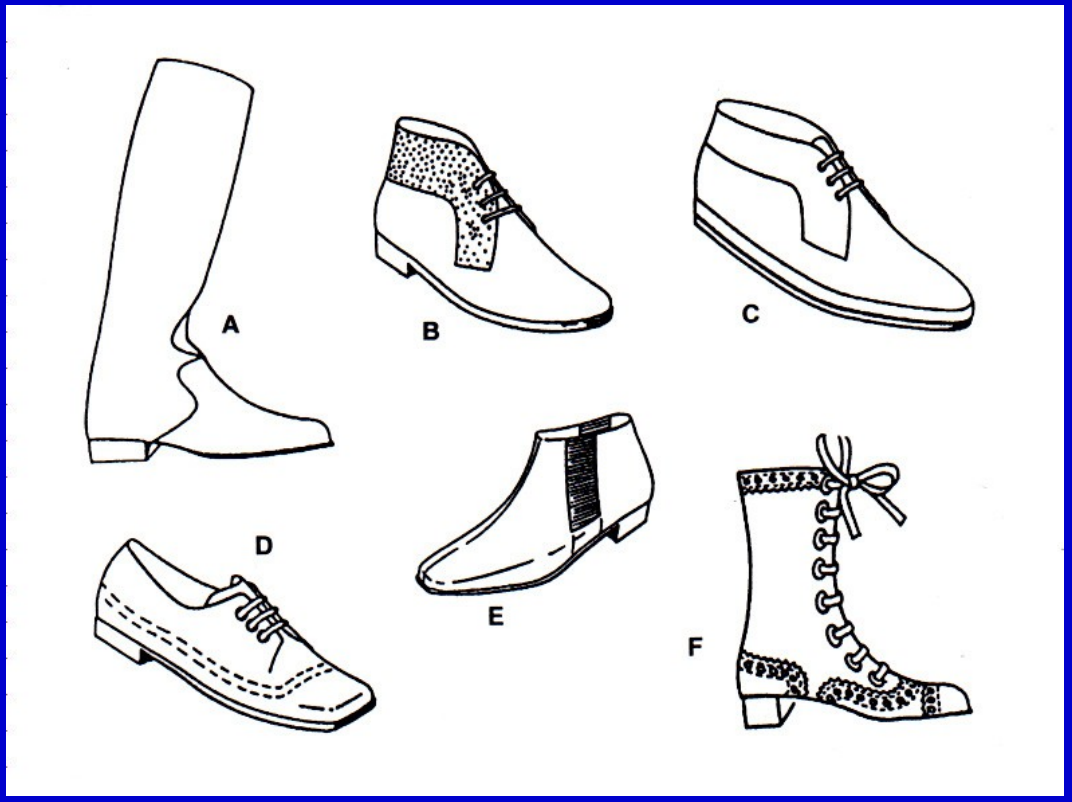
Diabetic shoes

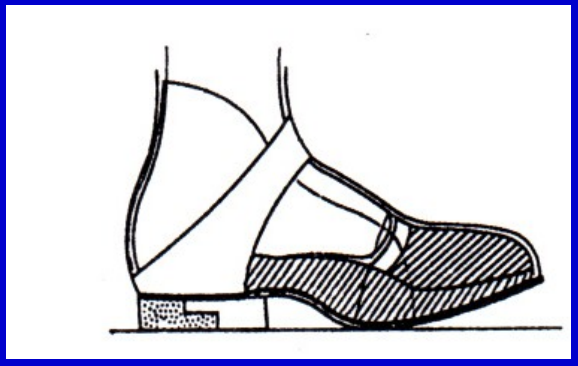
Parts of the shoe



Sheme

Types of the shoes





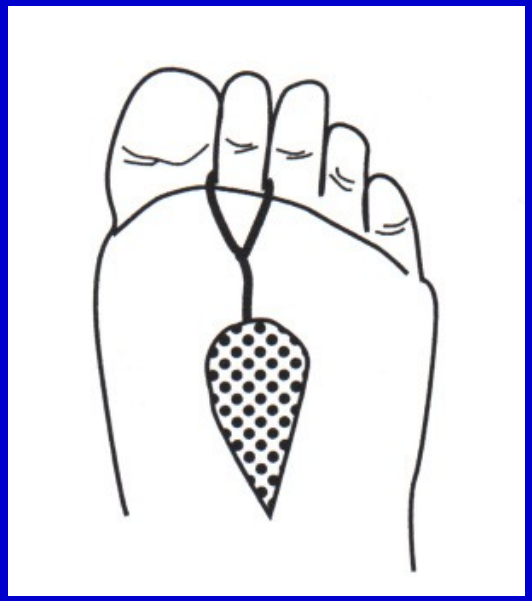
Shoe after amputation in the forefoot

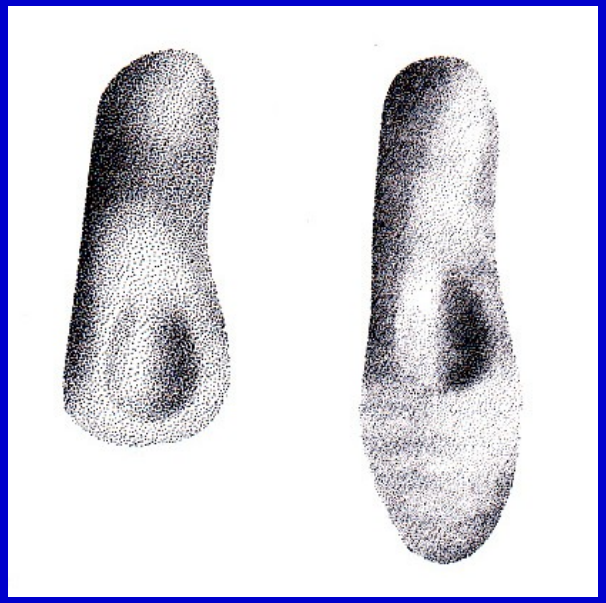
Principles of the shoes for kids

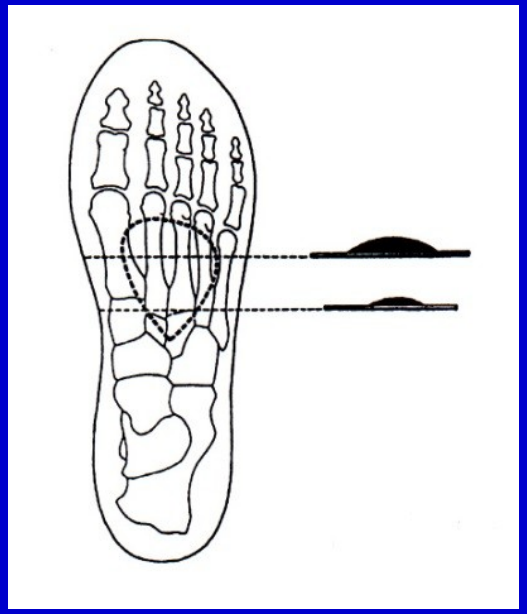
1. 1 cm longer than the foot
2. Wider parts for the forefoot
3. Flexible in the middle part
4. Firm heel

Children shoes

Paddings







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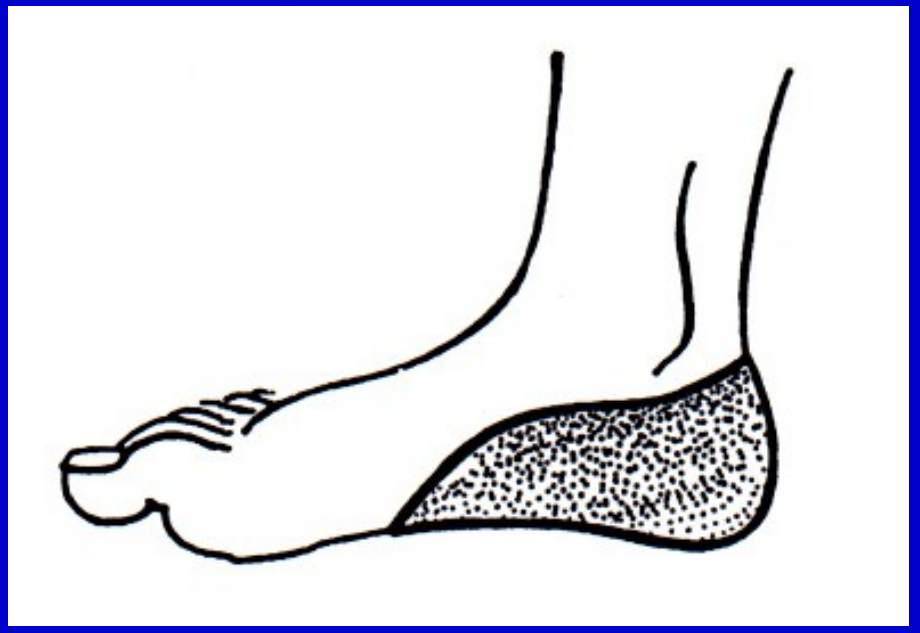

Corectors

Bunion

Calcaneal spurs

Adjuvatics

Crutches
Walkers
Toilet chairs