Mobility, Assistive Devices and Immobility

Canes, walkers and crutches, transfers and safe handling, casts, traction, halo, amputation care and the hazards of bed rest for the NCLEX

WALKING AIDS AT A GLANCE

AID	FIT	SEQUENCE	STAIRS
Cane	Held on the strong side (opposite the weak leg); handle at the wrist or greater trochanter; elbow bent about 20–30°	Cane and weak leg forward together, then the strong leg steps past	Up: strong leg first. Down: cane and weak leg first
Walker	Handles at hip level (about the wrist crease with the arm hanging); elbows slightly bent	Move the walker, all tips down; step with the weak leg, then the strong leg; stay inside the frame	Not on stairs unless a therapist has trained the client
Axillary crutches	Pad about 2–3 finger widths (1–2 in) below the armpit; handgrip so the elbow bends 15–30°	Crutches ahead, weight on the hands, then the strong leg swings through	Up: strong leg, then crutches and weak leg. Down: crutches and weak leg, then strong leg

EXAM TIP Stairs with any aid: up with the good, down with the bad. The nurse guards on the weak side, and below the client on stairs, with a gait belt.

SAFETY Weight goes on the hands, never the armpit pads. Numbness or tingling of the hand, or weak wrist extension, means pressure on the nerves in the axilla (radial nerve most often): recheck fit and technique and report it.

CRUTCH GAITS AND WEIGHT-BEARING ORDERS

ORDER OR GAIT	WHAT IT MEANS
Non-weight-bearing	The injured leg stays off the floor
Toe-touch (touch-down)	Toes rest on the floor for balance only; no weight goes through the leg
Partial weight-bearing	A set amount of weight, as ordered
Weight-bearing as tolerated	As much as is comfortable; a flat foot taking full weight under a lesser order needs correcting
Three-point gait	One leg cannot bear weight: both crutches and the injured leg move together, then the strong leg
Two-point and four-point gaits	Both legs bear some weight: each crutch moves with the opposite leg (two-point together, four-point one at a time)
Swing-to and swing-through	Both crutches forward, then both legs swing to or past them; needs strong arms

TRANSFERS AND SAFE PATIENT HANDLING

- Bed at its lowest height, brakes locked, footrests out of the way, nonskid shoes, gait belt over clothing
- Wheelchair on the client's strong side, angled to the bed; the client pivots toward the strong side
- Never let the client put their arms around the nurse's neck; never lift a client manually
- Can bear weight on at least one leg and follow directions: stand-pivot with a gait belt
- Strong arms and sitting balance but cannot stand (paraplegia, leg amputation, weak legs): sliding transfer board with brakes locked and the armrest removed
- Cannot bear weight, cannot follow directions, or very heavy: mechanical lift, slide sheets and enough staff

HAZARDS OF IMMOBILITY

SYSTEM	WHAT BED REST CAUSES	WHAT THE NURSE DOES
Cardiovascular	Venous pooling, clots, orthostatic hypotension	Leg exercises, early walking, prophylaxis as ordered; sit, then dangle, then stand
Respiratory	Weak breathing muscles, poor cough, atelectasis, pneumonia	Turn, cough and deep breathe; incentive spirometer; get up
Skin	Pressure injury	Reposition, pad bony areas, inspect skin at each turn
Musculoskeletal	Strength loss about 20% a week; contractures after a few days; foot drop; bone loss	Range of motion from the start, positioning, early mobility
Gastrointestinal	Slow peristalsis, constipation, impaction	Fluids, fiber, activity; fracture pan for hip or spine injuries
Urinary	Stasis, retention, infection, stones	Fluids, regular voiding, bladder scan if retention suspected
Mind	Depression, anxiety, isolation	Routine, contact, involvement in care

EXAM TIP Walking and leg exercises prevent the most dangerous complication of bed rest: a clot that travels to the lungs.

ORTHOSTATIC HYPOTENSION AND RANGE OF MOTION

- Orthostatic hypotension: systolic drop of 20 mm Hg or more, or diastolic 10 or more, within 3 minutes of sitting or standing
- First time up after bed rest: raise the head of the bed slowly, dangle the legs for a few minutes, then stand with help
- After a cervical cord injury: abdominal binder and compression stockings, raise in stages
- Range of motion: passive when the client cannot move, active-assisted or active when they can
- Move slowly and gently, hold each stretch and repeat as ordered; never force a joint past pain; both sides of the body

CASTS, SLINGS AND COMPARTMENT SYNDROME

SITUATION	ACTION
New cast, swelling	Elevate above the heart for the first 24–72 h; ice in a bag wrapped around the cast; move the fingers or toes
Wet plaster cast	Handle with the palms; rest on pillows, not a hard edge; plaster takes 2–3 days and fiberglass about 1 h before weight-bearing
Itching	Cool air from a hair dryer; nothing inside the cast; no powder, lotion or deodorant
Keeping it dry	Two layers of plastic or a waterproof shield; never submerge
Report	Too tight, numbness or tingling, burning, pale or blue digits, foul odor, drainage, a hot spot, cracks or soft spots
Arm sling	Elbow about 90°, hand and wrist slightly above the elbow, fingers visible, knot at the side of the neck

SAFETY Pain out of proportion that rises with passive stretch of the fingers or toes is compartment syndrome until proven otherwise: call the provider at once, loosen the dressing or prepare to split the cast, and keep the limb at heart level (raising it lowers perfusion). A pulse does not rule it out; pallor and pulselessness are late.

TRACTION, HALO AND HIP PRECAUTIONS

- Traction: weights hang freely, off the floor and bed; ropes in the pulley tracks; skeletal traction weights are never removed by the nurse
- Skin traction for a hip fracture: check the skin and neurovascular status under the straps; fracture pan; fluids and fiber
- Halo: keep the wrench taped to the vest; never lift, turn or pull by the frame or rods; clean pin sites as ordered; never adjust pins
- Halo: report a loose pin, pin pain or redness, fever, rash under the vest, or any new weakness or numbness
- After a posterior-approach hip replacement: no flexion past 90°, no crossing the legs, toes straight ahead; raised seat and toilet, reacher, pillow between the thighs
- After an anterior approach the surgeon's protocol differs: avoid stepping back with the leg turned out

AMPUTATION AND THE RESIDUAL LIMB

- Wash daily with mild soap and water, dry well, never soak; inspect every day, with a mirror for the back
- No lotion or powder under the socket; a clean prosthetic sock every day
- Elastic wrap rewrapped every 2–4 h with no creases, and the limb protector on whenever out of bed; no pillow under the residual limb
- Lie prone 3 or 4 times a day, about 20 min each, to stretch the hip muscles and prevent hip flexion contracture
- Phantom sensation and pain are real: assess and treat them like any other pain
- Report redness or streaks, warmth, new drainage, opening of the wound, dark skin, fever or pain not controlled

CONDITIONS THAT CHANGE MOBILITY

CONDITION	MOBILITY POINT
Stroke with hemiparesis	Cane on the strong side; wheelchair on the strong side; guard the weak side
Parkinson disease	Freezing and shuffling: step over a real or imagined line, walk to a count or music, lift the feet, turn in a wide arc
Rheumatoid arthritis	Warmth (shower, warm soak) on waking, then activity later; built-up handles, easy-open caps, reachers; protect small joints
Multiple sclerosis	Heat worsens weakness: plan activity for cool parts of the day; balance rest and activity
Hip fracture going home	Remove throw rugs and clutter, add grab bars and nonskid footwear, raised toilet seat
Thin or cachectic client lying on one side	Pad the outside of the knee: pressure on the peroneal nerve at the fibular head causes foot drop

OCCUPIED BED AND BARIATRIC CARE

- Raise the bed to working height; keep the far side rail up and roll the client toward it
- Hold linens away from the uniform; never shake them; soiled linen never on the floor
- Bottom sheet tight and wrinkle-free; top covers loose over the feet; inspect the skin while turning
- Finish with the bed low, brakes on and the call light in reach
- A heavy client: mechanical lift, friction-reducing slide sheets, bariatric equipment and enough staff, never a manual lift or delayed turning

Sources (12) are listed with links at erbasics.com/sheets/mobility-assistive-devices.html. For education and exam preparation only. Not medical advice; follow current guidelines and your institution's protocols. ER Basics is an independent study aid not affiliated with any certifying body.