King Saud University

Collage of Nursing

Medical-surgical Nursing

1. Obtaining a health history

Ask about chief complain:

* History of presence of muscle pain (onset, location, Aggravating and alleviating factors character) associated phenomena (redness, swelling of joint)
* any limitation to movement or inability to perform activity of daily living ,previous sport injury any loss of function with out pain

Ask About current health

* Are the patients activities of daily living affected
* Ask if he has noticed grating sounds when he move certain parts of his body
* Does he use ice, heat, or other remedies to treat the pain

Ask about past health

* The patient ever has gout ,arthritis, Tuberculosis, or cancer which may have bony metastases, osteoporosis
* If he has had a recent blunt or penetrating or trauma if so ,how did it happen
* Did he suffer knee and hip injury
* Use an assistive device such as walker , brace
* Watch him use the device to assess how he move

Ask About medication:

* Ask about what medication he regularly takes
* Many drugs can affect the musculoskeletal system such as \*corticosteroid can cause muscle weakness (myopathy), osteoporosis, pathologic fracture and \*anticoagulant can cause bleeding inside the joint

The only special equipment you will need is a tape measure

*Physical examination*

*Abnormal finding*

*Normal finding*

*Assessment*

1. Muscle

* Inspection

Inspect the muscle for size compare the muscle on one side of the body to the same muscle on the other side, for any discrepancies, measure muscle with tape.

Inspect the muscle and tendons for contractures

(Shortening)

Inspect the muscles for fasciculation and tremors; inspect any tremors of the hand, and arms by having the client hold out in front of the body

* Palpation:

Palpate muscle at rest to determine muscle tonicity (the normal condition of tension, or tone, of muscle at rest)

Palpate muscle while the client is *active* and *passive* movement

For flaccidity, Spasticity, and

Smoothness of movement

Equal size on both side of the body

No contractures

No fasciculation or tremor

Normally firm

Smooth coordinated

Movement

Muscle atrophy (decrease in size)

Muscle hypertrophy (an increase in size)

Malpostion of body part (foot fixed in dorsiflexion)

Presence of fasciculation

(lacking Tone)

Flaccidity (weakness or laxness) or Spasticity

(Sudden involuntary muscle contraction)

Test muscle

strength

Muscle activity:

Sternocleidomastoid:

Client turned the head to one side against the resistance of your hand, repeat with the other side

Trapezius :

Stand behind your patient back place your hand on his shoulder as you apply moderate pressure

Deltoid:

Biceps:

Triceps:

Firm jaw pressure against your hand

Client shrugs the shoulder against the resistance of your hand

Client hold arm up and resists while you try to push it down

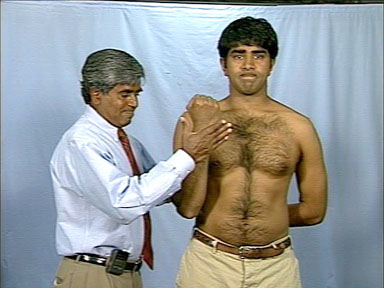
Client fully extends each arm and tries to flex it while you attempt to hold arm in extension

Client flex each arm and then tries to extend it against your attempt to keep arm in flexion









* Wrist and finger muscle :

* Grip strength :
* Hip muscle :

Hip abduction:

Hip adduction:

Hamstrings:

Quadriceps:

Client spread the fingers and resist as you attempt to push finger together

Client grasps your index and middle fingers while you trying to pull the

Client is supine, both

leg extended client

raises one leg at a time while you attempt to hold it down

Client is supine, both leg extended, place your hand on the lateral surface of each knee

Client is supine; place your hand between knees Client bring the legs together against your resistance

Client is supine both knee bent ,client resists while you attempt to straighten the legs

Client is supine, knee partially extended Client resists while you attempt to flex the knee





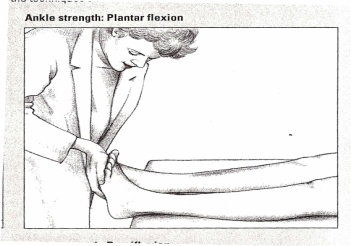
Muscles of ankle and feet

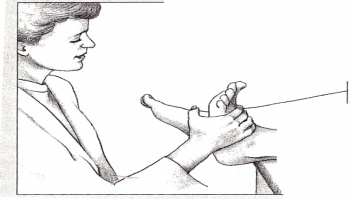
*Plantar flexion*:

Clients resist while you attempt to flex the foot

*Dorsiflexion:*

Client resist while you attempt to dorsiflex the foot





*II- Bones:*

*-Inspect the skeleton for normal structure and deformities*

No deformities and straight spin

***Examine for scoliosis in persons over age 12*** *(*occurs in adolescence into adulthood )

*Clients stand facing away from*

*the nurse and bend over touch*

*the toes*

*-Palpate the bones to*

*locate any areas of edema*

*or tenderness*

No tenderness or swelling

III- Joints:

-Inspect joint: for swelling

No swelling

-Palpate each joint : for

tenderness, swelling, and

smoothness of movement,

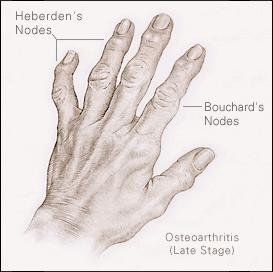
crepitating, and presence of nodule

Bony enlargement – degenerative joint disease (osteoarthritis)



Presence of tenderness or swelling indicate fracture, neoplasms or osteoporosis

One or more swollen joint



Presence of tenderness,

Swelling, crepitation, or nodules indicated of rheumatoid arthritis

-Joint range of motion Limited range of motion in one or more joint

Decreased range of motion – suggests arthritis / inflammation of the joints

Testing for carpal tunnel syndrome

*Two simple tests, tinels sign and phalens sign can confirm carpal tunnel syndrome*

|  |  |
| --- | --- |
| *tinels sign*  lightly percuss the transverse carpal ligament over the median nerve where the patient palm and wrist meet, if this action produce discomfort ,such as numbness and tingling shooting in to the palm and finger ,the patient has tingle sign and probably has carpal tunnel syndrome  Hand13c | *phalens sign*  if flexing the patient wrist for about 30 second cause pain or numbness in his hand or finger ,he has phalens sign, the more sever the carpal tunnel syndrome the more rapidly the syndrome develop  Hand13d |

The 6 P ~s of musculoskeletal injury

* *pain*

Ask the patient if he is having pain. If he is assess the location, Severity and quality of the pain as well as anything that seems to relive or worsen it

* *Paresthesia*

Assess for loss of sensation by touching the injured area with the tip of an open safety pin or the point of a paper clip. Then assess the same area on the unaffected side and compare abnormal sensation or loss of sensation indicator neurovascular involvement.

* Paralysis

Can the patient move the affected area? If he can't, or if

Movement cause severe pain and muscle spasm, he might have nerve or tendon damage.

* Pallor

Paleness, discoloration, and coolness on the injured side, may indicate neurovascular compromise from decrease blood supply to area.

* Pulse

Check all pulses distal to the injury site. If pulse is decrease or absent, blood supply to the area is reduced

* Polar: Coldness

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| --- | --- |
| Abnormal finding | Description |
| Rheumatoid arthritis  rahand | Is a chronic, systemic, inflammatory disease that attacks the joint and the surrounding tissue especially the hands ,hips, knee, and feet |
| osteoarthritis_ward_kneesOsteoarthritis | Is the chronic degeneration of joint cartilage caused by aging or trauma. |
| Gout | Urate crystals are deposited in joint, causing them to be red, swollen, and acutely painful. |
| Tendonitis    375-good-closeup-golfers | Is the inflammation of tendons and muscle attachment to bone |
| Bursitis  200-olecranon-bursitis | Involves the burse surrounding a joint and result from trauma or inflammatory joint disease |
| Osteoporosis | A decrease in bone mass |
| Herniated disk | Most herniation occur in the lumber spine |

*Nursing health assessment documentation format*

*Musculoskeletal System*

Instructions: Circle or fill in the blanks with actual physical assessment findings. WNL=Within Normal Limits for age. Mark items which require additional documentation with an asterisk (\*) and document in the Nurse’s Notes sections of the Daily Nurses Record.

Pt. Identification data

Name-------------- Age----- Sex----- occupation ----------- Marital status---------Tel/Address---------------------- Known Allergies---------------------------------

General Survey:

÷ Physical appearance ÷ WNL, abnormality--------------

÷ Body structure ÷ WNL, abnormality---------------

÷ Mobility ÷WNL, abnormality------------------------

÷ Behavior ÷ WNL, abnormality------------------------

Present musculoskeletal history:

Chief complaint: P------------------------------------------------- P -------------------------------------------------

Q------------------------------------------------ R------------------------------------------- R--------------------------

S------------------------------------------------ T------------------------------------------- T--------------------------

T------------------------------------------------ Associated symptoms --------------------------------------------

Medication ------------------------------------------------------------------------------------------------------------

Past musculoskeletal history----------------------------------------------------------------------------------------

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Family musculoskeletal history------------------------------------------------------------------------------------

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Physical examination

*Observe postural alignment:* erect stopped lordosis scoliosis

kyphosis scoliokyphosis

*Inspect all body extremities (including bones, muscle, joints):*

Symmetry a symmetry trauma discoloration boney enlargement

Previous surgery amputation prosthesis deformity joint swelling dislocation arthritis tonicity natural muscle contraction

Muscle weakness flaccid muscle hyper tonicity muscle strong

Fasciculation involuntary twitched muscle.

*Palpate all body extremities and spine (including bones, muscle, joints):*

Smoothness roughness bony land mark felt tenderness swelling /edema nodule lump mass lesion localized warmness

Localized coolness dislocation crepitus spasm muscle contracture

Cramp.

*Inspect muscle tone and strength for all extremities& body muscle:*

Full active ROM full active full resistance ROM full active some resistance ROM full passive ROM.

NURSES NOTES: ----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

NR. Name/Signature----------------Date-----

King Saud University Application of Health Assessment *student name--------------*

College of Nursing NURS 225 *student # ------------------*

Medical-surgical Dept. Performance checklist *Date ---------------------*

Musculoskeletal System

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Performance Checklist Activities | Competent | | Not competent | | Comment |
|  | Trail 1 | Trail  2 | Trail 1 | Trail  2 |  |
| 1.Muscle |  |  |  |  |  |
| *Inspection*   1. Inspect the muscle for size, bilaterally, compare |  |  |  |  |  |
| 1. Inspect the muscle and tendons for contractures (Shortening, shape   mal position) |  |  |  |  |  |
| 1. Inspect the muscles for fasciculation and tremors, involuntary movement.   - hold arms away of body &check for tremors |  |  |  |  |  |
| *Palpation:*   1. Palpate muscle at rest to determine muscle tonicity |  |  |  |  |  |
| 1. Palpate muscle while the client is active and passive for (flaccidity, Spasticity and smoothness of movement) |  |  |  |  |  |
| Test muscle strength (equal strength on each side or less than 20 % of the norm al strength ) :   * + Sternocleidomastoid   + Trapezius   + Deltoid:   + Biceps   + Triceps   + Wrist and finger muscle   + Grip strength   + Hip muscle   + Hip abduction   + Hip adduction   + Hamstrings   + Quadriceps   + Muscles of ankle and feet |  |  |  |  |  |
| 2. Bones |  |  |  |  |  |
| 1. Inspect the skeleton structure for deformities |  |  |  |  |  |
| 1. Examine for scoliosis( posterior), Kyphosis, Lordosis (lateral) |  |  |  |  |  |
| 1. Palpate the bones to locate any areas of edema or tenderness |  |  |  |  |  |
| 3.Joint |  |  |  |  |  |
| 1. Inspect joint for swelling bilaterally |  |  |  |  |  |
| 1. Palpate each joint for tenderness, swelling, and smoothness of movement, crepitation, and presence of nodule |  |  |  |  |  |
| 1. joint range of motion 2. Assess for carpel tunnel syndrome by:  * Tinels sign * Phalens sign |  |  |  |  |  |

*Instructor’s signature*

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|  |

Quick Quiz

True and False

1-Scoliosis only occurs in old age

a. True

b. False

2. Bony enlargement can be related to Rheumatoid arthritis

a. True

b. False

3-Limited range of motion indicated of inflammation:

a.True

b.False

4- Palpate muscle while the client is resistance for size:

a.True

b.False

5-Positivetinels and phalens signs can indicate carpal Tunnel syndrome:

a.True

b.False

6- Corticosteroid drug can cause bleeding inside the joint:

a.True

b.False