

BARRIER CONCEPT



INTRODUCTION:-

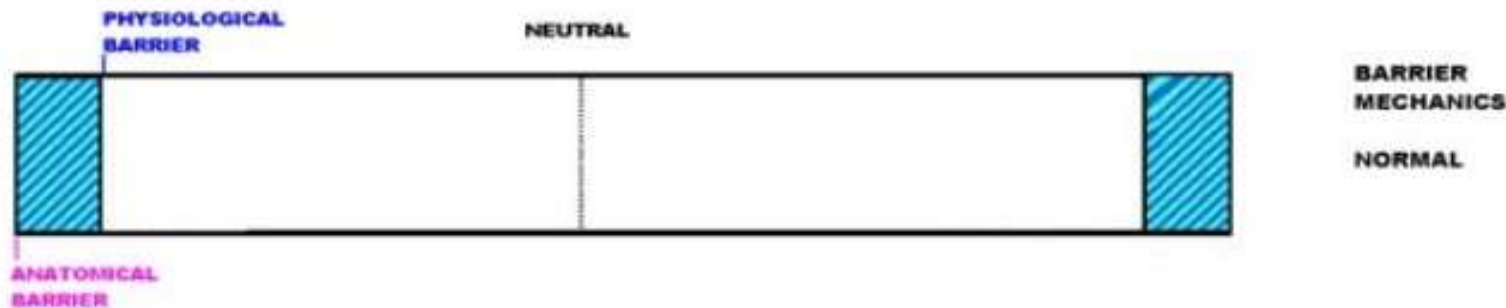
- Barrier define the limit of motion .
- The barrier concept describes the motion in a joint or in tissue in one plane.
- A neutral point exists along with barriers.
- The presence of somatic dysfunction will alter normal barriers and produce a pathological neutral point.



TYPES OF BARRIERS-

There are different types of barriers present in our body. these are as follows-

- Neutral point(point of maximal ease)
- Physiological barriers(Active motion)
- Anatomical barrier(passive motion)



SOMATIC DYSFUNCTION

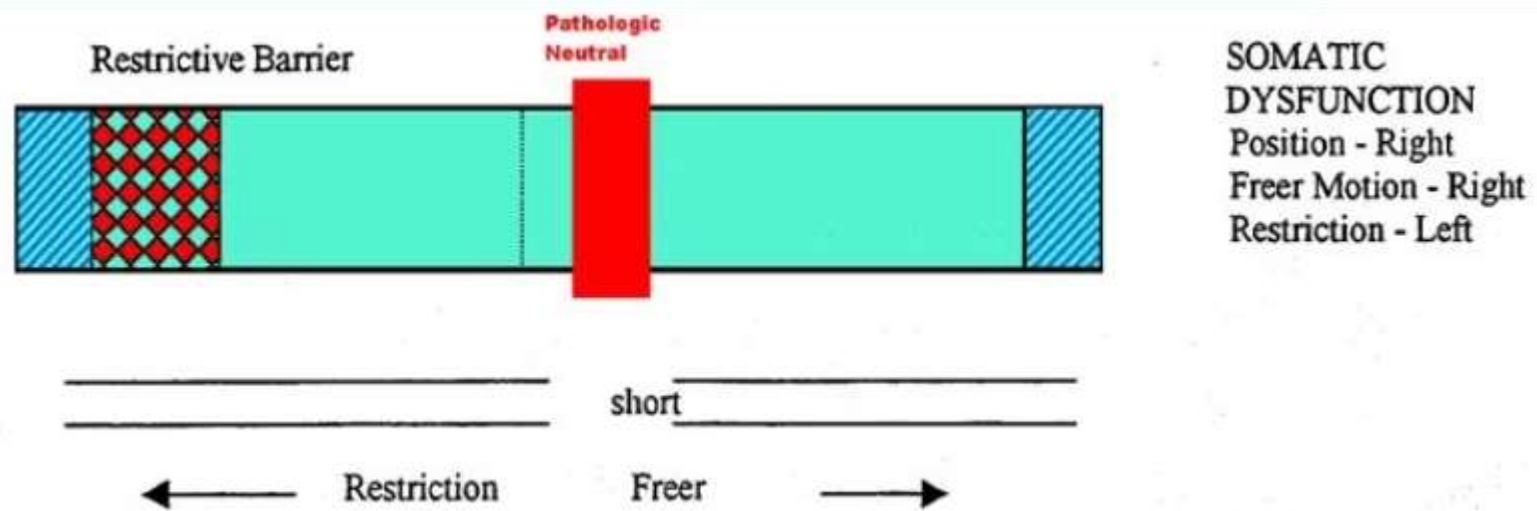
Restrictive barrier-change in range of motion

Pathologic neutral now formed-a new point of ease(in the presence of somatic dysfunction)

Direct- technique engages the restrictive (pathologic) barrier.

Indirect-technique move toward pathologic neutral.





CONT.

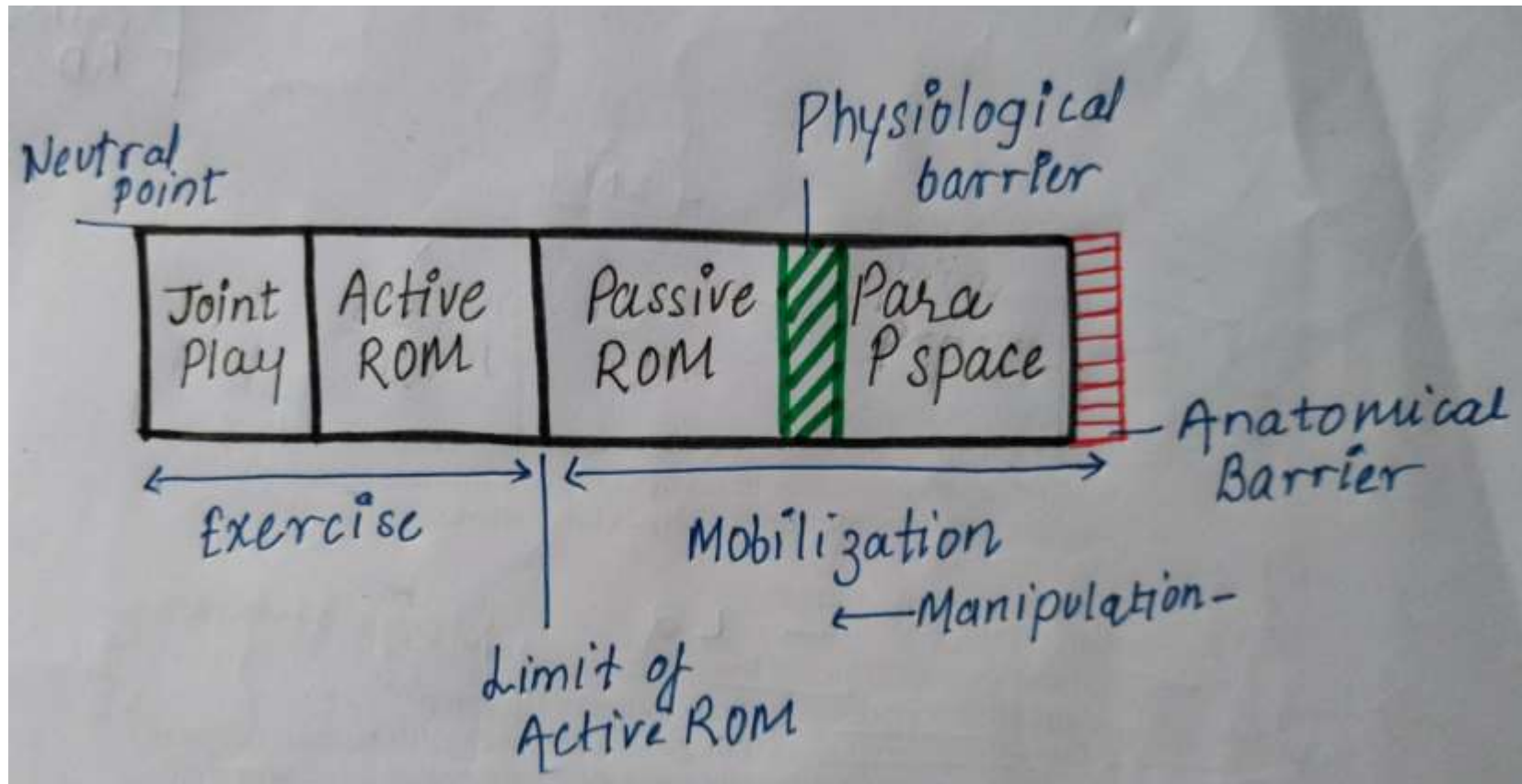
Describe the Range of motion or quality of tissue motion.

Quality or endfeel of motion, is perceived as an anatomic or physiologic barrier is approached.

Used to describe osteopathic manipulative technique.



BARRIER CONCEPT



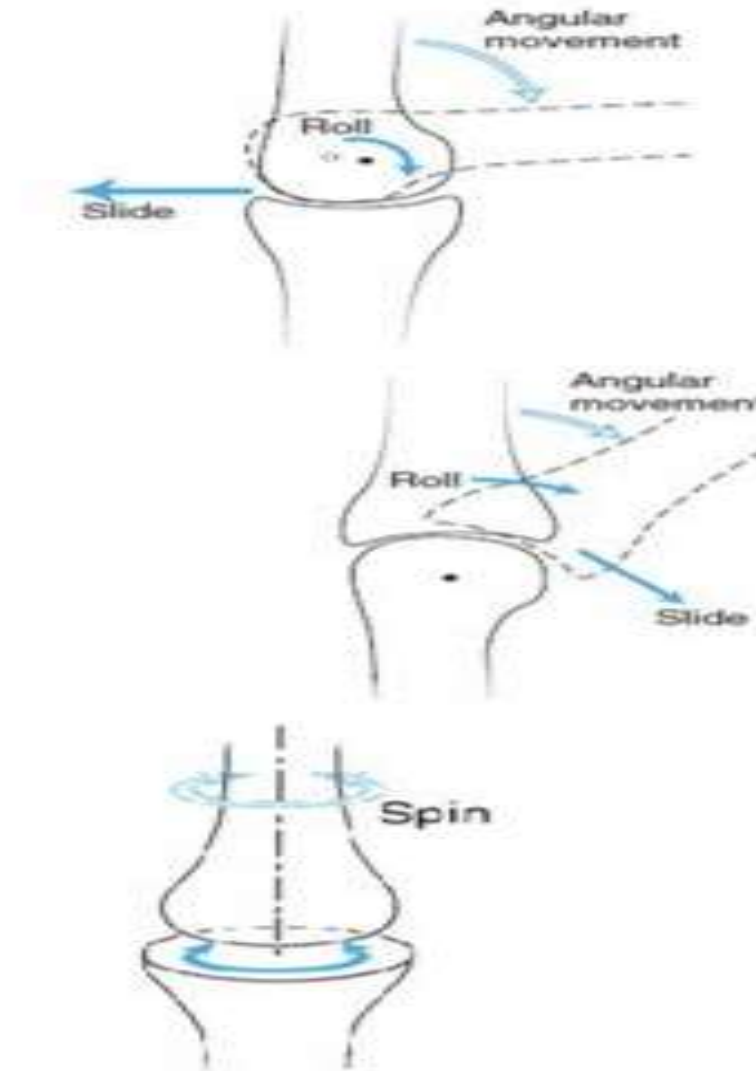
JOINT PLAY:-

- Joint play is also called Accessory movement.
- The motion that occur between the joint surfaces
- The distensibility or give in the joint capsule.
- It is necessary for normal joint functioning through the range of motion
- Joint play demonstrated passively but the can not performed actively.
- The movement include-



KINEMATICS OF JOINT PLAY MOVEMENT:-

1. Distraction
2. Sliding
3. Spinning of joint surface
4. Compression
5. Rolling



ACTIVE MOVEMENT:-

- Active movements (AROM) are “actively” performed by the patient’s voluntary muscles and have their own special value in that they combine tests of joint range, control, muscle power, and the patient’s to perform actively. Movement of an articulation between the physiological barrier limited to the range produced voluntarily by the patient.



PASSIVE MOTION:

- Passive movements (PROM) are primarily performed to determine the available anatomical ROM and end feel. The PROM may be within normal limits, hypermobile or hypomobile.
- Movement induced in an articulation by the operator.
- The movement between the physiological and anatomical barrier permit by soft tissue resiliency that the patient can not do voluntarily.



- With passive movement, the examiner puts the joint through its ROM while the patient is relaxed. These movements may also be referred to as anatomical movements. The end of passive movement is sometimes referred to as the anatomical barrier.



- the physiological barrier(active movement) occurs before the anatomical barrier(passive movement) so that passive movement is always slightly greater than active movement.



PARAPHYAIOLOGICAL SPACE:-

- The paraphyaiological space, space between two barriers physiological and anatomical barriers.
- Motion beyond the elastic barrier of resistance up to the limit of anatomic integrity produced by Manipulation and accompanied by an audible release.





MANIPULATION:

- Manipulation always done in paraphysiological space.
- Passive joint movement for increasing joint mobility



MOBILISATION:-

- Mobilisation are passive, skill manual therapy technique applied joint and relative soft tissue at varying speed and amplitudes using physiologic and accessory motions for therapeutic purposes.

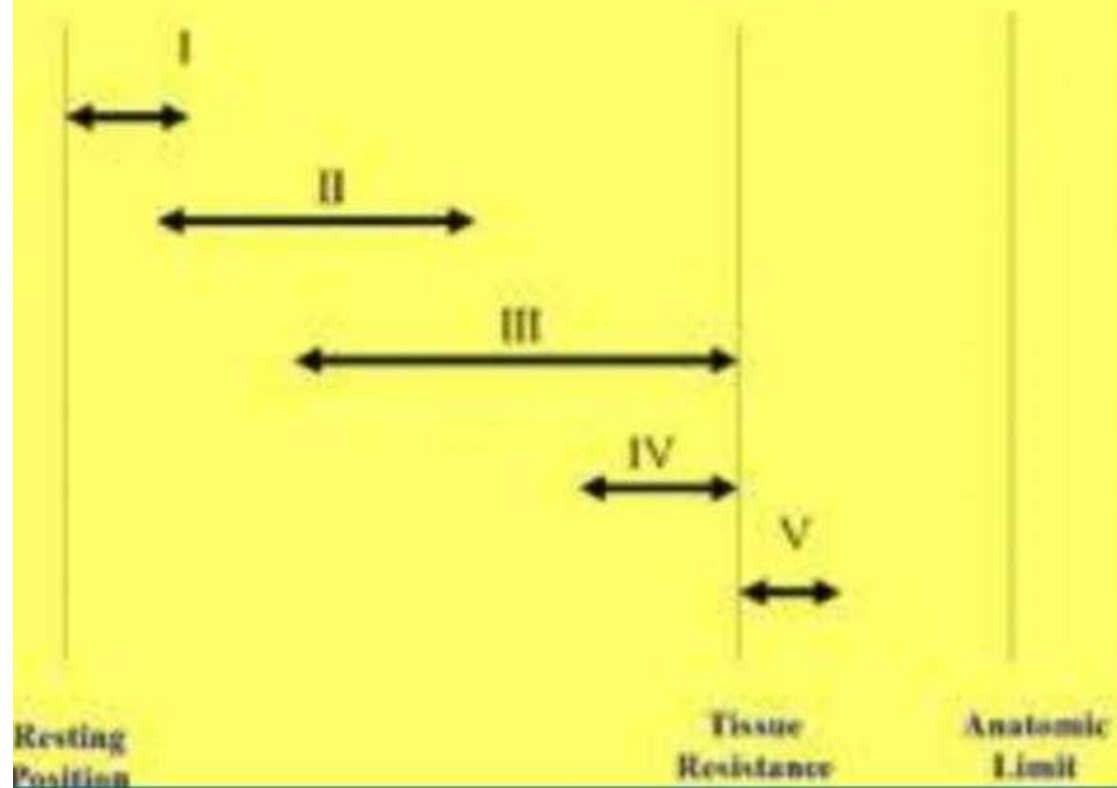


MAITLAND JOINT MOBILISATION GRADING SCALE:-

- Grade1-small amplitude Movement at the beginning of ROM
- Grade2-Large amplitude rhythmic oscillatory movement within mid range of motion
- Grade3-large amplitude rhythmic oscillatory movement upto point of limitations in ROM
- Grade4-small amplitude rhythmic oscillatory movement at the Vary end ROM(used to gain motion with in the joint)
- Grade5-Thrust in small amplitude quick thrust at the end of range accompanied by popping sound.

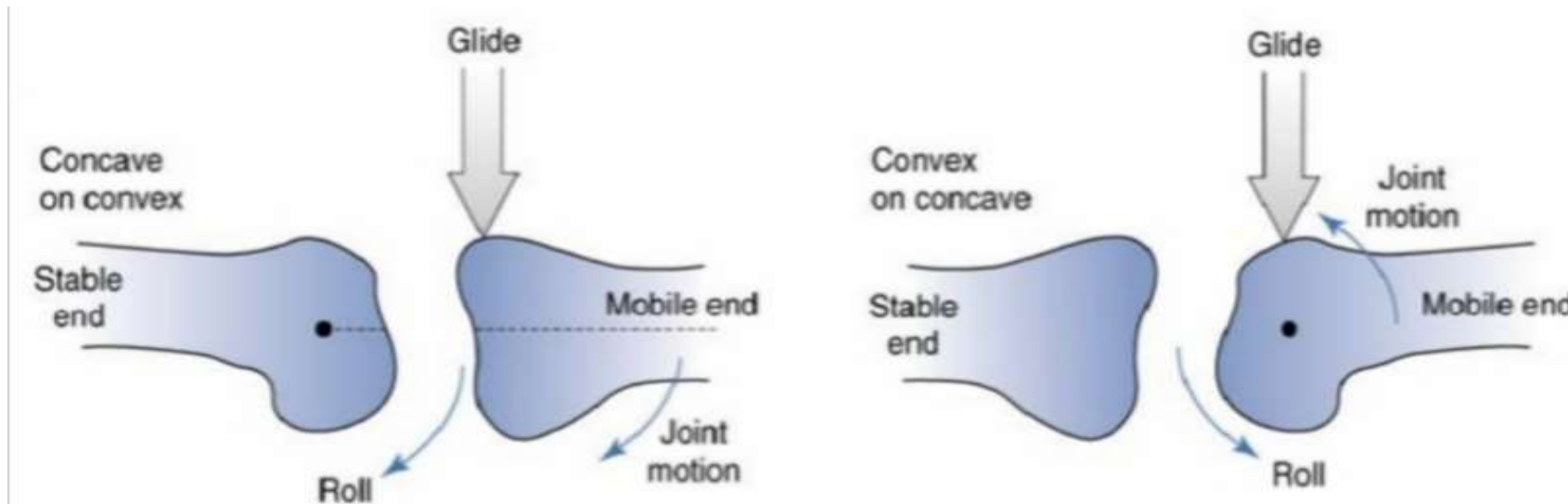


Maitland Grades



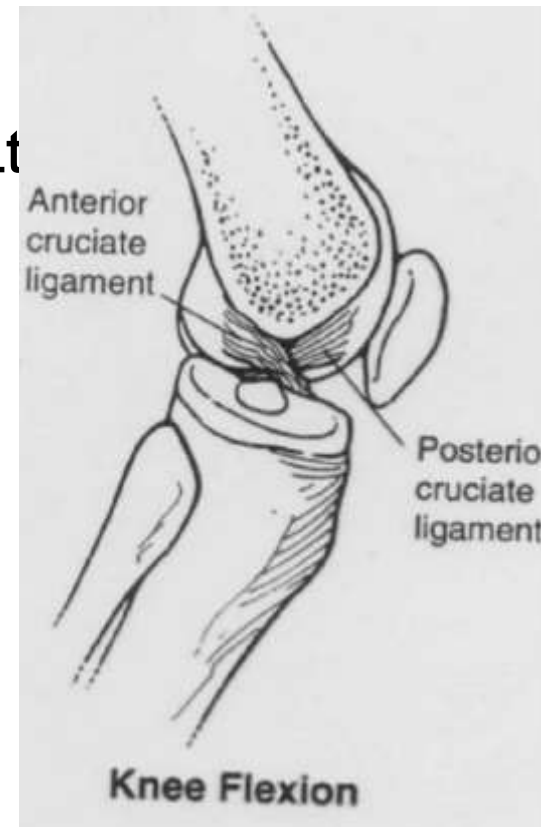
APPLICATION OF JOINT MOBILIZATION TECHNIQUE:-

- All joints mobilization follows the convex-concave rules.



LOOSE PACKED POSITION:

- The articulating surface are maximally separated.
- Joint will exhibit greatest amount of joint place.
- Position is used for both traction and joint mobilization.



■ Managing back pain In general practice- Is osteopathy the new paradigm?



■ Cervical Spine assessment using passive and active mobilization recorded through an optical motion capture.



REFERENCES:

- Kisner, C and Kolbey 2002, therapeutic exercise foundation and technique 4th edition, Philadelphia: FA Davis
- Orthopaedic physical assessment David J Magee, 6th edition
- <https://youtu.be/zqWbo4Bm77w>



■ Thank you

