

TraPCAf & Parkinson's Africa Virtual Support Group Series 2024



Session 5: [Exercise and Movement]

25th April 2024

Session leaders:

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Certified TOT for Parkinson's

From Newcastle. **For the world.**

Outline of session:

physical therapy management for:

- 1-Rigidity
- 2-Bradykinesia and akinesia
- 3-Tremors
- 4-postural instability / Fear of falling
- 5-FOG
- 6-Dysphagia
- 7- motor part of Speech
- 8- Writing
- 9-Automaticity of the movement
- 10-Respiration
- 11-Masked face and loss of gestures
- 12-Transfer
- 13-Gait
- 14-Turning
- 15-Constipation



When to start physiotherapy? And why you shouldn't wait until the problem occurs?

- It's a progressive , Non stoppable disease.

- So don't delay start today :

Delay disability

Optimize ability



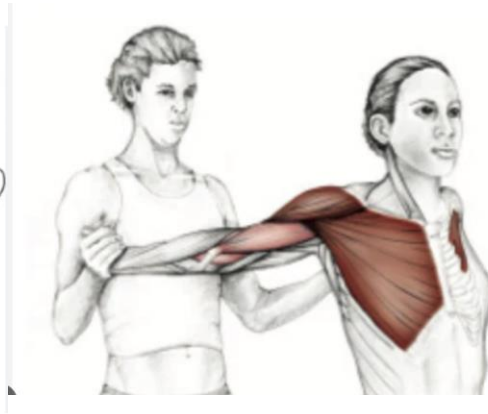
1-Rigidity and posture

- The **major** clinical sign
- Affect **all** the striated muscles
- The **trunk** more than the extremities
- The **proximal** more than the distal
- It **increase the energy expenditure** which increase the fatigue especially post exercise
- Lead to flexed posture of gorilla like attitude.

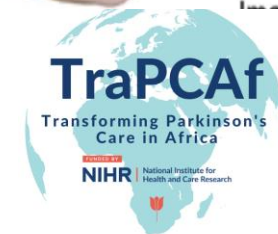


1-Rigidity and posture

- 1- Stretching
- 2-Bilateral Symmetrical
- technique
- 3-Hydrotherapy



Trunk Extension Exercise Progressions



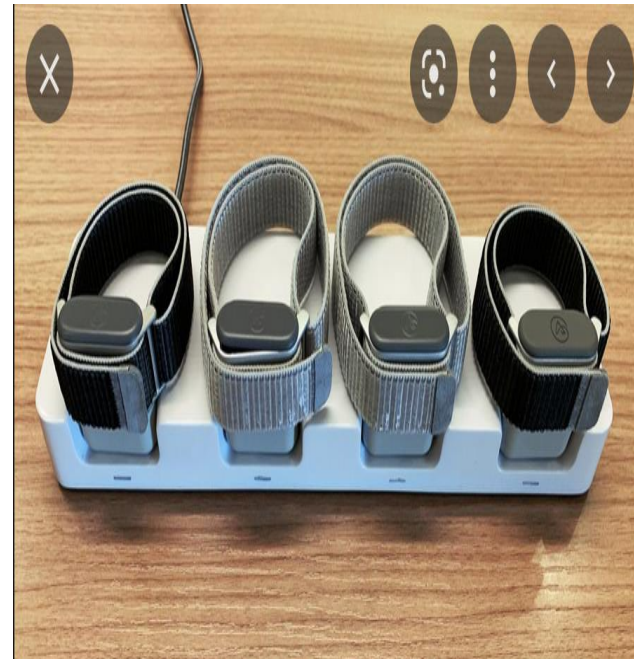
2-Bradykinethia (small Movements)

Divide complex tasks into simple ones

Enhance the movement to be large and big

3- Tremors

- Immobilization using weights
- Any method of relaxation as Hydrotherapy , Aromatherapy
- Tremor device.



4-Balance and Falling

Different balance exercises
in both static and dynamic



4-Balance and Falling



5-FOG

Freezing is also known as motor block

- Most often affects the legs when walking, but it can also affect the arms and eyelids.
- **It typically causes hesitation when :**
 1. initiating walking & sudden inability to move feet turning
 2. walking through narrow passages – such as doors, with obstacles
 3. when patients are about to reach a target destination

5-FOG

1-Rocking exercise

2-Visual Cues (crossing Laser beam)or auditory

3-Avoid narrow pathways, small crowded rooms , Public transport , busy shopping centers (**Multi complex visual stimuli**)

simple isolated movement instead of **long complex**

Relaxation technique.



6-Dysphagia

Ask about :

Nutrition status and skipping meals

Long time during the meal time

Taking medications with thin fluids

The pathophysiology of the problem will indicate the Therapy

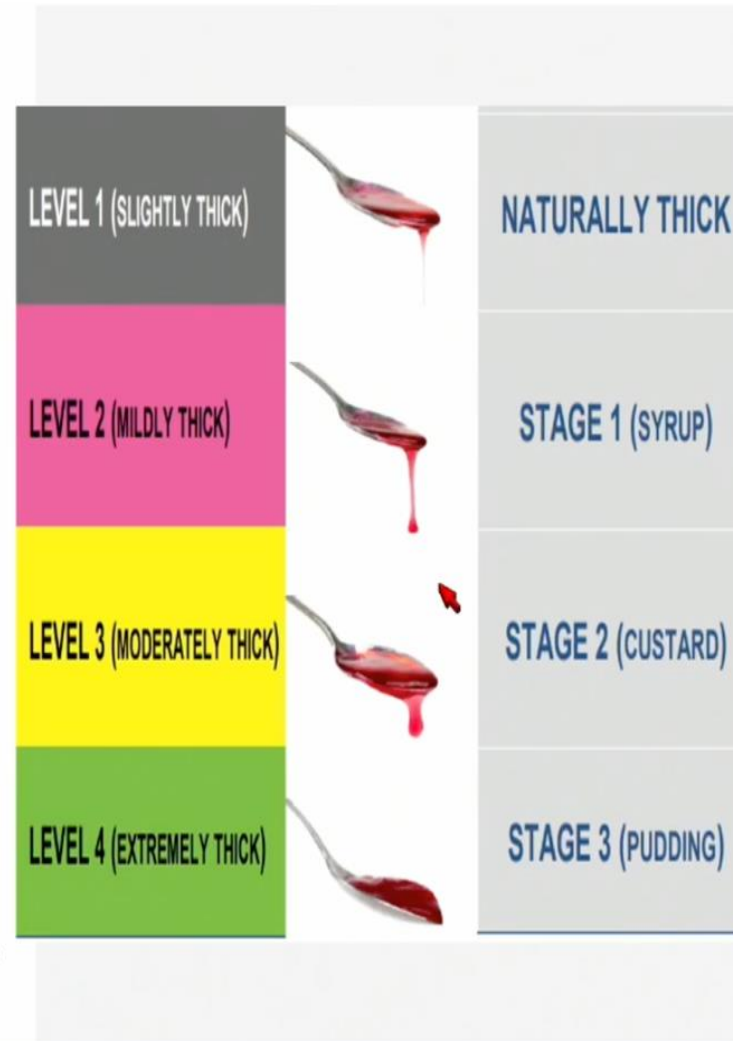
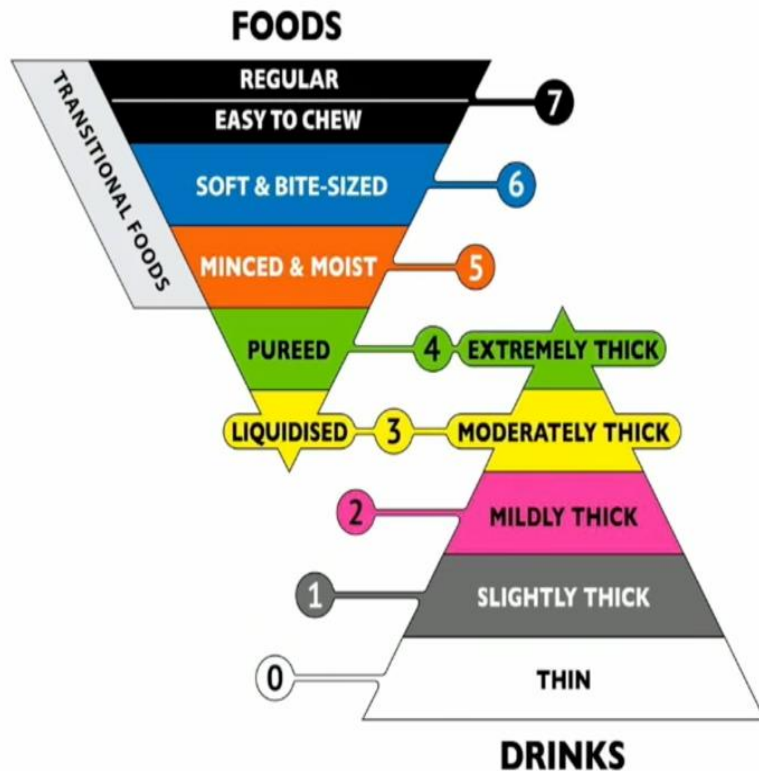
1-Masticatory muscles

2-Dry mouth

3- Initiation problem

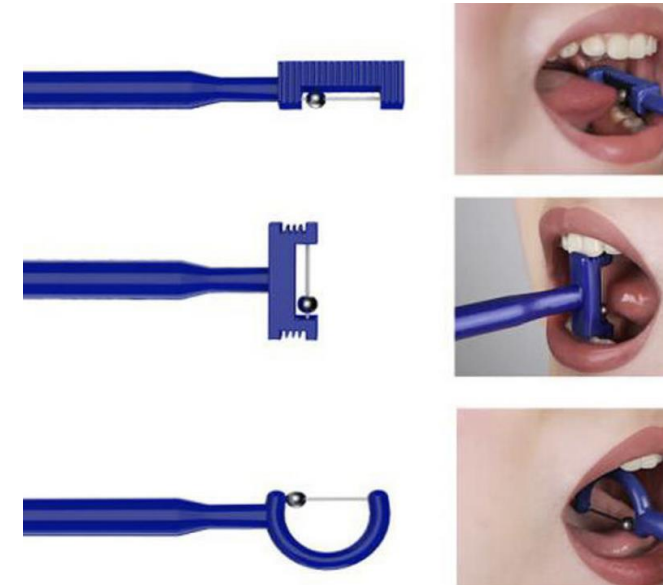
4- Distractions

6-Dysphagia



6-Dysphagia list of advice for your patient

- 1-Adjust the head position (chin in)
- 2-Reduce Bolus volume
- 3-Increase the consistency and viscosity (bolus transport increase when viscosity increase this compensate the delay in the pharyngeal swallow)
- 4Take medications with high viscosity liquids to avoid choking



6-Dysphagia



Figure (30): The banana-orange-apple-bagel for session eleven

6-Dysphagia

1-Mendelson maneuver:

1-Take deep breath and hold at the end of the inspiration

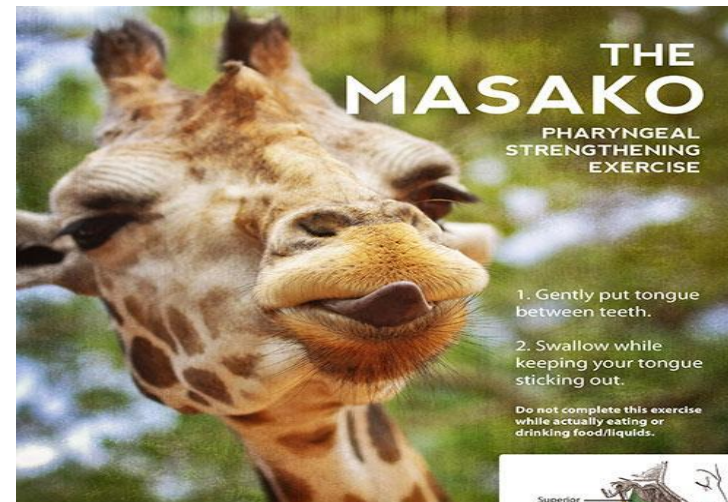
2-passive movement to laryngeal wall side to side

3-Tapping on laryngeal wall

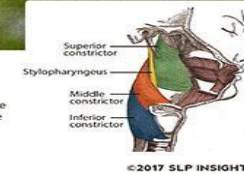
4-Tapping under jaw

5-Cheeks tapping

2-Masako maneuver



A 1996 study by researchers Jerilyn Logemann and Masako Fujii of 10 young, healthy individuals under fluoroscopy showed increased posterior pharyngeal wall movement while performing the Masako maneuver. Dr. Logemann has written that anchoring the front of tongue causes the glossopharyngeal portion of the superior constrictor muscle to use more force in contracting. Strengthening the pharyngeal constrictors aids in the speed and efficiency of sending food through the pharynx during the swallow via increased pharyngeal pressure.



Drooling or sialorrhea

1-Chewing gum or hard candy , lemon slices or ice cubes.(motor or tactile cues for swallowing)

2-External cues by program to improve the frequency of swallowing by emitted a **beeping sound** at a regular intervals for 30 mins each day


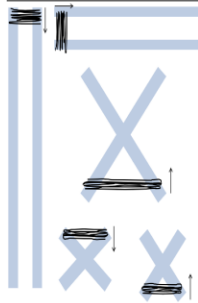
3-Teach the patient the cognitive movement strategies

(before speaking first collect and swallow your saliva)

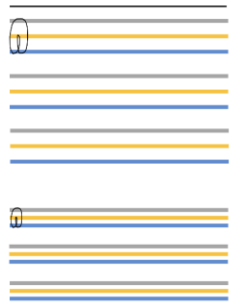
(before standing up close the mouth collect and swallow your saliva)

7-Micrographia

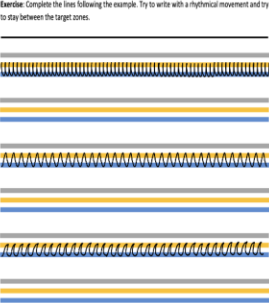
Week 1
Day 4
Exercise: Make balls and foot up and down movements between the blue areas, as in the example.

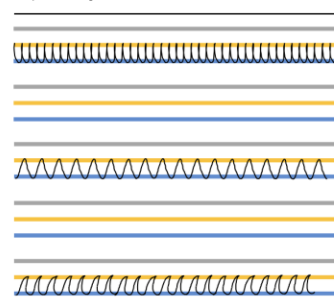
Week 1
Day 1
Exercise: Complete the lines following the example. Try to write with a rhythmic movement and try to stay between the target zones.



Week 2
Day 1
Exercise: Complete the lines following the example. Try to write with a rhythmic movement and try to stay between the target zones.

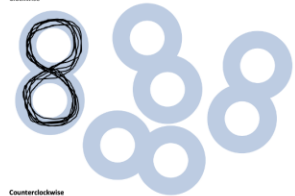


Week 3
Day 1
Exercise: Complete the lines following the example. Try to write with a rhythmic movement and try to stay between the target zones.




Day 5
Exercise: Make the same continuous movements within the blue zones without stopping, as in the example.

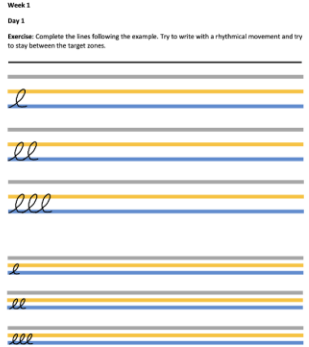
Clockwise




Counterclockwise



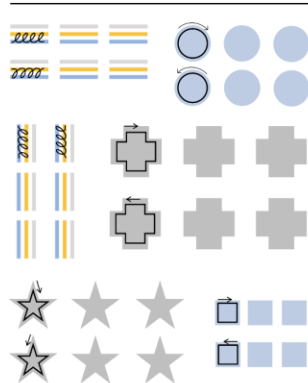
Week 1
Day 1
Exercise: Complete the lines following the example. Try to write with a rhythmic movement and try to stay between the target zones.



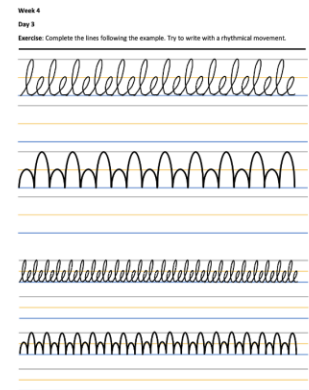
Day 2
Exercise: Trace the example letter first and then complete the lines following the example. Try to write the pattern with a rhythmic movement. The letters are examples; you are free to write them as you were taught.



Week 2
Day 1
Exercise: Draw the following forms in the indicated direction. Stay within the foreseen area.



Week 4
Day 3
Exercise: Complete the lines following the example. Try to write with a rhythmic movement.



8-Variability of speech

1. Fatigue
2. Saliva
3. Posture
4. Medical side effects
5. Stage of disease
6. Time of day
7. Conversation topic / partner / space
8. **Motor part of speech**

**1-Lee silverman-Voice treatment
(Think loud – speak loud –think shout)**

Task and goals should be simple

Multiple repetitions

Take a deep breath , be loud and slow down

Oral light system

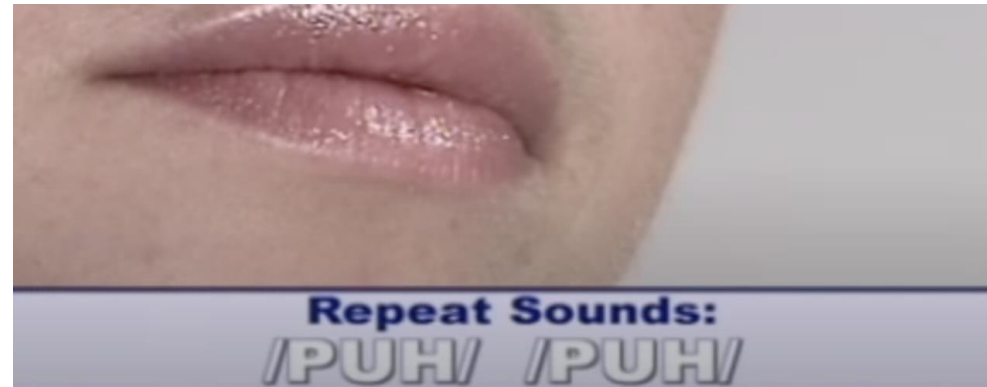
Consists of 4 Domains: (Tongue / lips / Cheeks)

1-Assisted Movement

2-Resisted Movement

3-Range of Motion

4-Neuromuscular control (Precision and Accuracy of articulated sound)



9- Automaticity of the movement

Dual task increase the cognitive load

Distraction will increase the automatization

Increase task integration and consolidation of the movement

set- shifting ability, attention switching.

Practical example of DT

- Press letter T while walking
- counting backwards
- Object's between hands

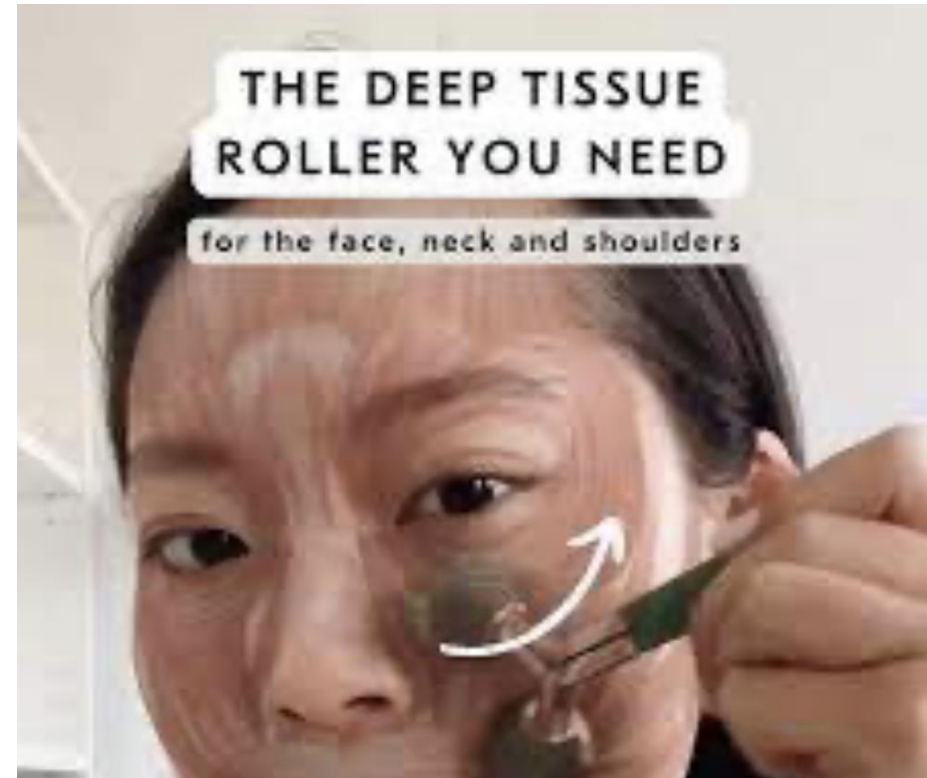


10-Respiration

1. **Stretching**
2. **PNF Bilateral symmetrical technique.**
3. **Deep respiratory exercise : Diaphragmatic.**
4. **Minimize the lying down position enhance the sitting as gravity aids movement of diaphragm**

11-Masked face (Entropy)

Soft tissue mobilization for the face



12-Transfer

Patients were found to have marked difficulties to perform functional tasks which consist of movement
Subcomponents **can't (link UP)**



Rolling



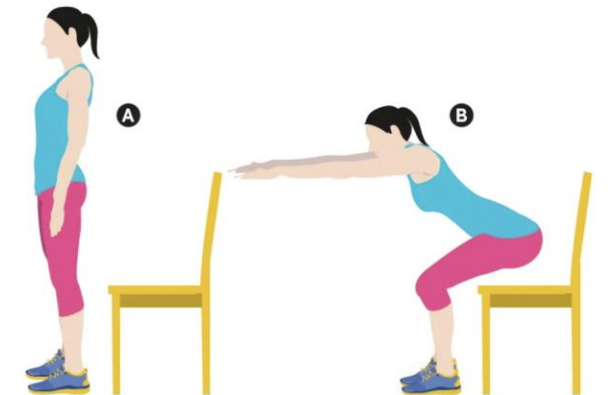
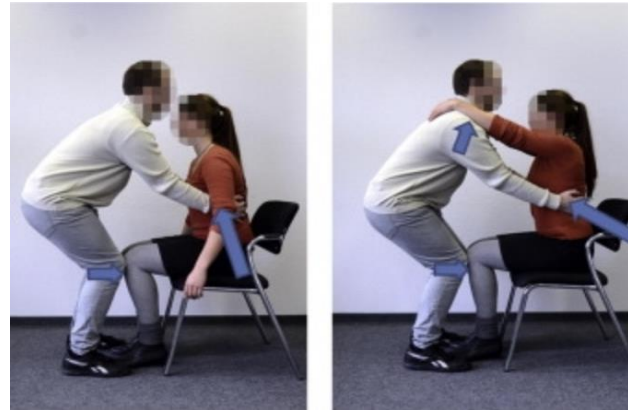
Lying to sitting



Sit-to-stand

Sit To Stand

- 1-scotting to the edge of the chair and assisted by the therapist
- 2-Forward trunk can be enhanced through reaching forward
- 3-Use a chair then independent method



Gait

1-High stepping and alternative dorsiflexion while holding on chair

2-Marching exercise



Marching



Gait

Placing obstacles to avoid shuffling gait



Gait training in an open environment outside the clinic

Different surfaces



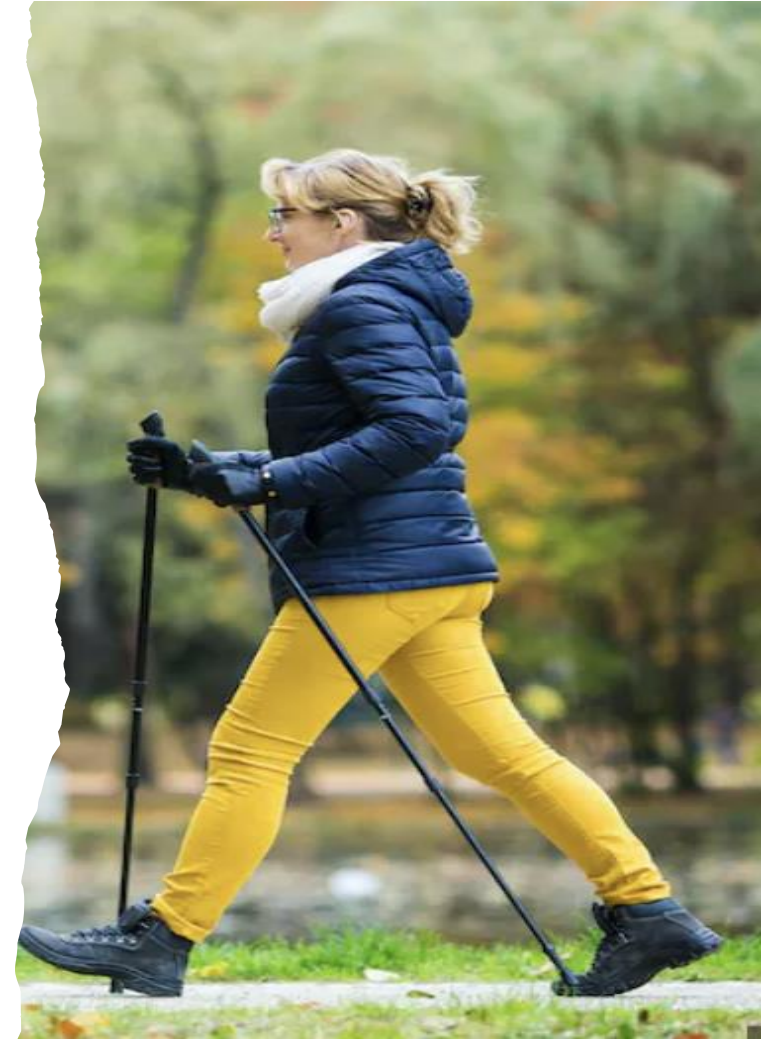
Weight transfer



Motivate reciprocal arm swing by:

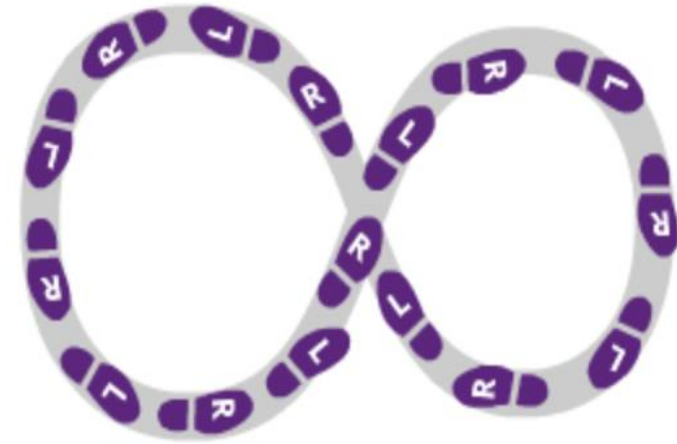


Brisk walking
Nordic walking



Turning

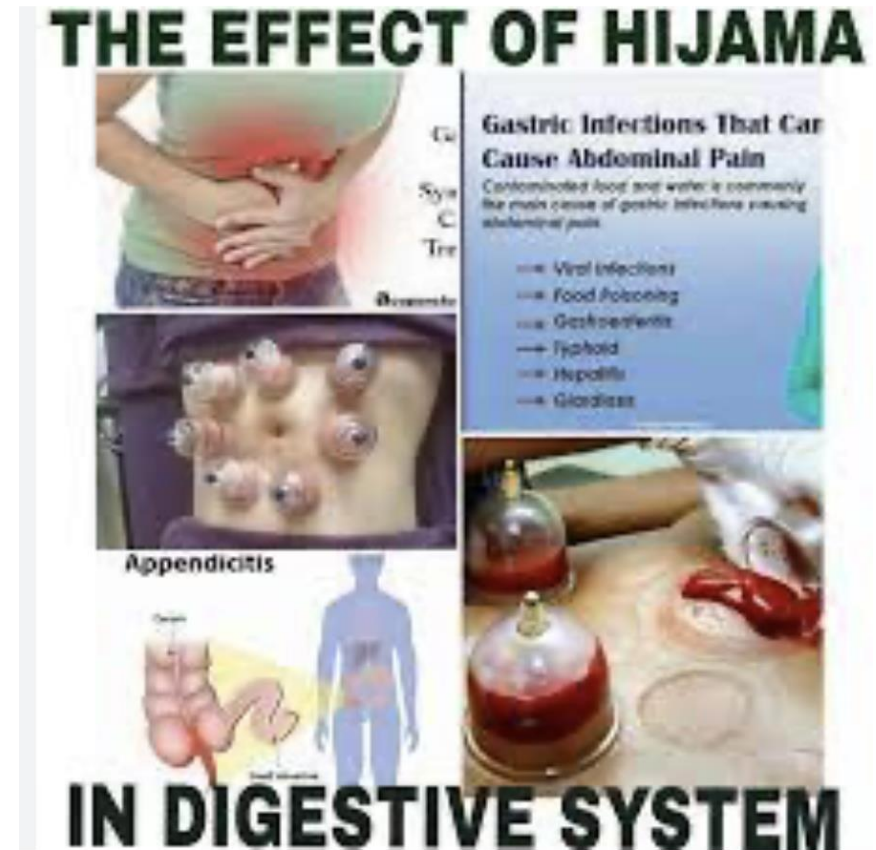
- 1-Facilitate turning by using two chairs in form of figure of eight
- 2-Turning in wide arc
- 3-Use the clock turn strategy



Constipation

Diet rich in fibers
Dry or wet Cupping

THE EFFECT OF HIJAMA



Gastric Infections That Can Cause Abdominal Pain
Contaminated food and water is commonly the main cause of gastric infections causing abdominal pain.

- Viral infections
- Food Poisoning
- Gastroenteritis
- Typhoid
- Hepatitis
- Giardiasis

Appendicitis

IN DIGESTIVE SYSTEM

Thank you!

For more information and resources visit: www.parkinsonsafrica.org

Get in touch if you have a query: tania@parkinsonsafrica.org

Please complete the post session questionnaire!

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