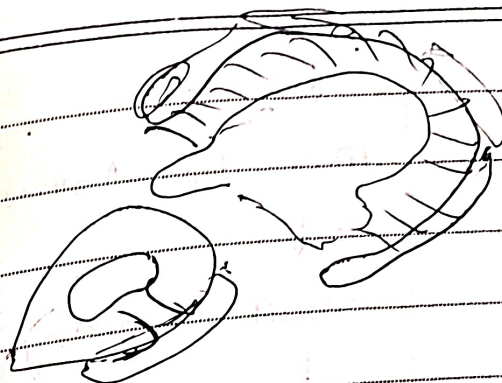


# Movement of Small Intestine.

## ① Mixing movements.

Segmental or contraction  
pendular movements



## ② Propulsive movements

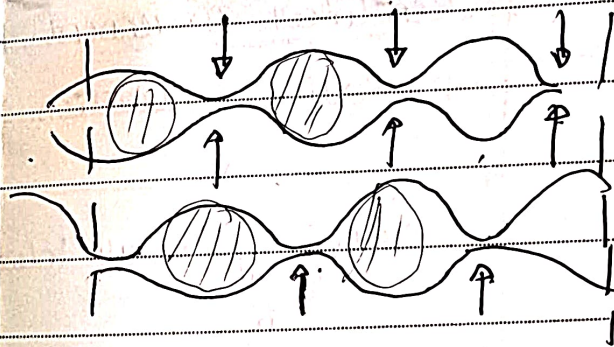
Peristalsis  
Peristaltic rush.



## ③ Migratory motor complex

## ④ movements of villi.

Segmental or Contraction



→ Contraction occurs at regular intervals.

↓  
segment of Intestine between contracted part is relaxed.

↓  
alternate segment of contraction or relaxation

↓  
then contracted segments will be replaced by relaxed segments.

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Moves chyme forward & backward.



result in mixing of chyme.



Increase contact time of chyme with mucosa.



aid in both digestion & absorption.

Pendular movement:

periodic contraction & relaxation of longitudinal muscle



Sections of small intestine shorten & lengthen



Chyme is moved back & forward.



resembles movements of pendulum of clock.



helps in absorption & digestion

Propulsive movements.

food moves in aboral direction.

1. Peristalsis. ✓

• reflex response.

Stimulus: stretch of gut wall by chyme.

when food enters: → part of intestine behind chyme contracts and part in front relaxes (loop of intestine).

So wave of contraction & relaxation moves in aboral direction. moves the chyme forward.

Mechanism → Local stretch releases serotonin → stimulate myenteric plexus at point of stimulation → release acetylcholine - contraction behind chyme. in front - Nitric oxide & vasoactive intestinal peptide. my plexus will relax. ↓ repleve relaxation.

External factors

Restraints can affect peristalsis

Parasympathetic stimulation → stimulate peristalsis

Sympathetic stimulation inhibit peristalsis

## Peristaltic Rush:

- power peristaltic contraction.
- Occurs when intestinal mucosa is irritated.

Begins in duodenum & sweeps entire length of small intestine.

Helps clear contents of small intestine into caecum.

Initiated by both myenteric plexus & extrinsic nervous system (ANS).

## Migratory Motor Complex (MMC)

Occurs during inter-digestive period (fasting)

also a peristaltic wave → strong propulsive contraction.

begins in <sup>stomach</sup> ~~oesophagus~~ and covers entire length of SI.

function: Removal of residual food & dead cells.

inhibits migration of colonic bacteria to intestine.

Rate - 5 cm/min

Occur every 60-90 min

Abolished with entry of food

Housekeepers of small intestine.

### Movements of villi

- consists of alternate shortening and elongation of villi.
- Caused by contraction & relaxation of smooth muscle.
- caused by villikin hormone.

Function: Helps in clearing lymph into lymphatic system

increase absorption area.

- increase mucosal lymph flow.