

DEFECATION AND DEFECATION REFLEX

→ RESISTANCES FOR MOVEMENT OF FECES FROM SIGMOID TO RECTUM

→ WEAK FUNCTIONAL SPHINCTER

BETWEEN SIGMOID & RECTUM

→ SHARP ANGUULATION B/W SIGMOID & RECTUM.

→ ANAL SPHINCTERS :-

a) INTERNAL ANAL SPHINCTER →

- CIRCULAR SMOOTH MUSCLE
- LIES IMMEDIATELY INSIDE ANUS
- INVOLUNTARY CONTROL

b) EXTERNAL ANAL SPHINCTER →

- STRAITED VOLUNTARY MUSCLE
- CONTROLLED BY PUDENDAL N.
- VOLUNTARY, CONSCIOUS OR AT LEAST SUBCONSCIOUS CONTROL.

DEFECATION REFLEXES :-

INTRINSIC
REFLEX

(+)

PARASYMP.
DEFECATION
REFLEX

ENTERIC N.S.

SACRAL PARASYMP.
N.S.

→ EFFECTIVE
DEFECATION

INTRINSIC REFLEX :-

FECEES ENTERS RECTUM → DISTENTION OF RECTAL WALL



INITIATES AFFERENT SIGNALS → THROUGH MYENTERIC PLEXUS



INITIATES PERISTALSIS → DESCENDING COLON, SIGMOID, RECTUM



PERISTALTIC WAVES APPROACHES ANUS



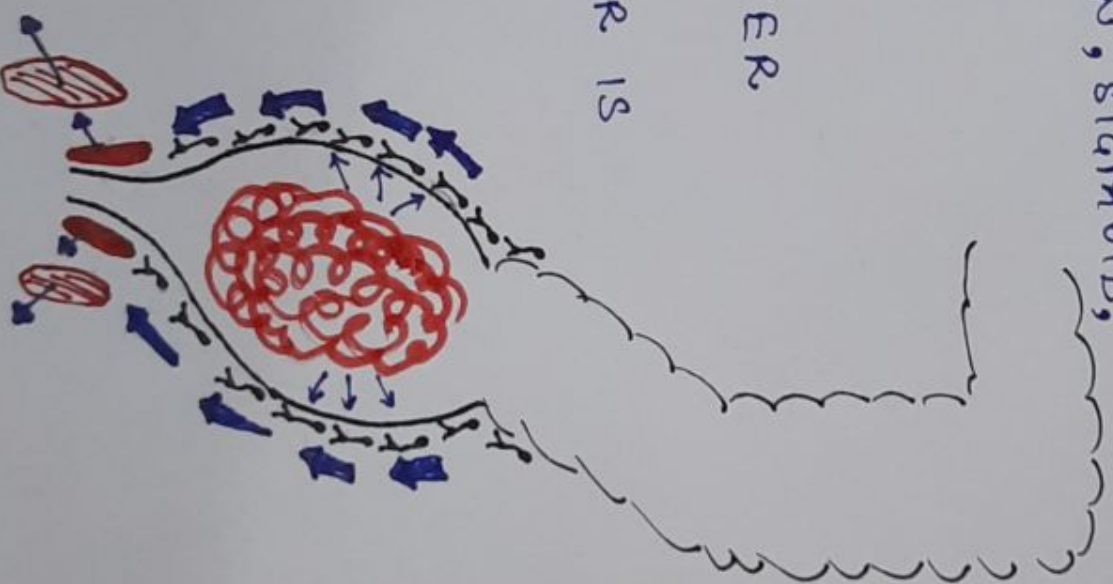
RELAXATION OF INTERNAL ANAL SPHINCTER



AT SAME TIME, IF EXTERNAL ANAL SPHINCTER IS VOLUNTARILY RELAXED



DEFECATION OCCURS



PARASYMPATHETIC DEFECCATION REFLEX :-

N. ENDINGS IN RECTUM STIMULATED



SIGNALS TRANSMITTED TO SPINAL CORD



REFLEX SIGNALS VIA PELVIC N. → DESCENDING COLON, SIGMOID RECTUM



RELAXATION OF INTERNAL ANAL SPHINCTER



AT SAME TIME, IF EXTERNAL ANAL SPHINCTER IS VOLUNTARILY RELAXED



DEFECCATION OCCURS

OTHER EFFECTS DURING DEFECCATION :-

- ✓ TAKING DEEP BREATH
- ✓ CLOSURE OF GLOTTIS
- ✓ CONTRACTION OF ABDOMINAL MUSCLE WALL
- ✓ PELVIC FLOOR RELAXES DOWNWARDS
- ✓ OUTWARD PULLING OF ANAL RING TO EVAGINATE FECES.

