- Intestinal juice (1 L)
- 0.1 L/day: excreted in feces
- 1.5 L/day: excreted in urine
- Total fluid absorbed:
 - 8.3 L: absorbed by SI
 - 0.9 L: absorbed by LI

FOUR LAYERS OF SMALL INTESTINE

From deep to superficial

1.) MUCOSAL

- Epithelial layer
 - Absorptive cells digest & absorb nutrients
 - Goblet cells secrete mucus
 - Paneth cells secrete lysozyme
- tesale.co.uk • Lysozyme: bactericidal anz me, capable of pragocytosis
 - o Intestinal glasids (Orypt of Lieberkahn): long, straight tubular glands A paint of entergendocrine cells – S cells, CCK cells & K
 - cells
 - S cells secrete secretin
 - CCK cells secrete cholecystokinin
 - K cells secrete glucose-dependent insulinotropic peptide (GIP)
- Lamina propria
 - Contains MALT
 - Lymphatic nodules: present in distal ileum
 - Peyer's Patches (Aggregated lymphatic follicles): groups of lymphatic cells
 - Present in ileum
- Muscularis mucosae

2.) SUBMUCOSA

- Contains duodenal glands (Bruner's glands)
 - Secrete alkaline mucus
 - Helps neutralize gastric acid in chime

3.) MUSCULARIS

- Two layers of smooth muscle
 - Inner circular fibers (thicker)

Outer – longitudinal fibers (thinner)

4.) SEROSA

- Visceral peritoneum
- Completely surrounds the small intestine

SPECIAL STRUCTURES IN SMALL INTESTINE

1.) CIRCULAR FOLDS

- Plicae circularis
- Folds of mucosa and submucosa
- Enhance absorption by:
 - Increasing the surface area
 - Causing the chime to move in spiral motion

2.) VILLI

- "tufts of hair"
- Fingerlike projection of the mucosa

3.) MICROVILLI

- Lacteal (milky): a lymphatic capiller otesale.co.uk
 MICROVILLI
 Small fingerlike and finderlike and the absorptive Cells
- Eorms the hush border

LARGE INTESTINE

- Terminal portion of the GI tract
- Overall Functions:
 - Completion of absorption
 - Absorbs water, ions & vitamins
 - More absorption occurs in SI than LI
 - Production of certain vitamins
 - Convert protein to amino acids
 - Breakdown amino acid to produce B vitamin and vitamin K .
 - Formation of feces
 - Expulsion of feces from the body
 - Defecation
 - Emptying the rectum
 - Mechanical movements: haustral churning, peristalsis, mass peristalsis
 - Drive the contents of the colon into the rectum
- Level: ileocecal valve to anus