

PALLIATIVE PEARLS

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FREQUENTLY ASKED QUESTION:

“I have an order to administer a suppository via an intestinal ostomy. Is it ok to administer? Will it work?”

ANSWER:

It depends on where the stoma is located!

WHY DOES THE LOCATION OF A STOMA MATTER?

Ostomies include any surgically created opening between a hollow organ (i.e., the small or large intestine) and the skin, connected either directly through a stoma or with the use of a tube. Intestinal stomas allow for the exit of waste when the traditional route is compromised. Conditions that require surgery and formation of an intestinal stoma include, but are not limited to, cancer, ulcerative colitis, Crohn’s disease and traumatic injury. Stomas are temporary and eventually reversed for some persons, but permanent and require skin care, nutrition and fluid status management to avoid skin irritation, malnutrition and dehydration in others.^{1,2}

The intestines function to move waste along with some sections moving quicker than others. Due to the variability in transit time, the absorption of a medication administered via a stoma depends on:

- Where the stoma is located – Small intestines? Large intestines?
- The volume and type of output at that location that may not allow adequate time for absorption – the lower volume of waste in liquid state such as in the large intestines, the slower the transit time as described in more detail below.

INTESTINAL FUNCTION OVERVIEW

Medication, food and liquids taken by mouth, after processed by the upper gastrointestinal system, enter the upper portion of the small intestine (the **duodenum**) from the stomach. There they mix with bile, pancreatic digestive juices, and/or other juices secreted by the wall of the small intestine. They are then propelled into the second portion of the small intestine, the **jejunum**, where substances are broken down further. They then move into the final and longest portion of the small intestine — the **ileum** — where the remaining nutrients/substances are absorbed through the lining of the ileum's wall.³

What remains when substances reach the end of the ileum is a combination of water, electrolytes and waste products. As these remainders pass through the colon (large intestines), nearly all of the water is absorbed, leaving a usually soft but formed substance (stool). The sections of the colon begin with the **cecum** then up to the **ascending colon** (right side of the body), across the **transverse colon** and then

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down the **descending colon** (left side of body). Muscles in the wall of the colon separate the waste into small segments that are pushed into the lower colon (**sigmoid**) and then **rectum**. As the rectal walls are stretched, they signal the need for a bowel movement.³

INTESTINAL OSTOMY TYPES & POTENTIAL FOR MEDICATION ABSORPTION

An ostomy of the small intestines is an “ileostomy” while “colostomy” refers to the large intestines. The types of ostomies are further identified by the location of the stoma.

Jejunostomy (jejunum), ileostomy (ileum), cecostomy (cecum), ascending colostomy (ascending colon)

- **Consistency:** Liquid to pasty
- **Transit time:** Quick
- **Medication admin:** Unlikely to be systemically absorbed here

Transverse colostomy (located in the transverse colon)

- **Consistency:** Semi-solid (mushy)
- **Transit time:** Moderate (slowing down)
- **Medication admin:** Not an effective place to insert a suppository or other dosage form meant for systemic absorption that requires more than a few minutes of contact time with mucosa for absorption

Descending colostomy (descending colon) and sigmoid colostomy (sigmoid)

- **Consistency:** Resembles normal bowel movements
- **Transit time:** Markedly slowed down
- **Medication admin:** Ideal spot to insert suppositories or other meds meant for systemic absorption

MEDICATION NOTES

It's important to recognize that patients with ostomies have portions of their intestinal tract removed or bypassed and therefore may experience difficulty in absorbing and gaining maximum benefit from medications when taken orally or administered via stoma. The shorter the length of the remaining bowel, the greater the problem of absorption, particularly in the ileum.⁴

As described in the section above, patients with descending or sigmoid colostomies absorb medications via their stomas as well as those who do not have an ostomy and are getting medications administered rectally. Some medications however, like enteric-coated tablets and time-release products are developed for gradual absorption along the full length of the intestine (both small and large). This is especially concerning in persons with an ileostomy where medication administration is not optimal. In the event the ileostomy is chosen for giving medication, it's important to use more suitable immediate-release formulations such as solutions, suspensions and uncoated tablets.⁴

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For additional information on this topic, please review these references:

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