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Hydrogel injection for intestinal lengthening

Stanford scientists have developed a novel approach to help patients with short bowel syndrome by using intestinal lengthening. The solution involves injecting a degradable hydrogel into the intestinal wall to narrow the lumen and enable the confinement of a coiled spring. Currently, no devices are available for deploying inside the intestine to achieve this and existing methods necessitate surgical procedures to anchor the intestinal expanding device. However, as an injectable hydrogel, the solution facilitates endoscopic delivery of the coiled spring into the gastrointestinal tract. While the hydrogel solution enables strategically deploying devices within the gastrointestinal lumen for a transient duration, this approach may also be employed for drugs intended for a particular section of the gastrointestinal tract, anchoring the device near the area of interest instead of opting for systemic delivery.

Applications

- Minimally-invasive method for anchoring intestinal lengthening device (short bowel syndrome)
- Targeted drug delivery in the gastrointestinal tract

Advantages

- Lower need for surgical intervention
- Lower costs required for device placement
- Quicker recovery time

Patents

- Published Application: 20240366501

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