

SWALLOWABLE TECH: ADVANCING DISEASE MONITORING WITH INGESTIBLE SENSORS

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UEG Week Berlin 2025

Poster

IBD

October 6, 2025

A first-in-human trial of GISMO, a miniaturized ingestible sensor three times smaller than video capsules, successfully measured redox balance, pH, and temperature throughout the gastrointestinal tract in 15 healthy participants, demonstrating feasibility and safety with no adverse events.

KEY POINTS

- 66 GISMO sensors were administered to 15 healthy participants, with participants reporting ease of swallowing and willingness to ingest multiple capsules, and no device-related adverse events occurred
- GISMO is the first device capable of measuring in vivo redox balance in the human gut, providing high-resolution data every 20 seconds
- Data revealed consistent profiles from an oxidative environment in the stomach to a strongly reducing environment in the colon, with low inter- and intra-subject variability among healthy volunteers
- The study establishes a reliable baseline for future comparative studies in patient populations with conditions like IBD, gastrointestinal cancers, and IBS where redox imbalance may play a role

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