

Neurogenic Bowel Dysfunction

What is Neurogenic Bowel Dysfunction?

Neurogenic Bowel Dysfunction (NBD) is a physically and socially debilitating bowel dysfunction stemming from injury or dysfunction of the central nervous system (brain and spinal cord). When the bowel is impaired to perform normal function as a result of damage to the nerve tissue innervating the colon and rectum, a failure to evacuate the bowel (fecal constipation) or failure to contain stool (fecal incontinence) results, called Neurogenic Bowel.



Key examples of patients who may be affected by NBD are individuals with spinal cord injury (SCI), brain injury, stroke, spina bifida, multiple sclerosis (MS), Parkinson's, Cerebral Palsy, and sacral nerve injuries.

Bowel Dysfunction Explained

NBD arises when damage to the central nervous system interrupts normal control of the bowel. This loss of control leads to limited motility (peristalsis), which causes increased colonic transit time resulting in constipation or fecal incontinence.¹ In addition, NBD also leads to complications such as increased numbers of urinary tract infections and rectal prolapse.^{2,3} The physical effects of NBD come with increases in healthcare utilization. For example, it has been reported that adults with NBD are more than twice as likely to be admitted to the hospital due to fecal impaction and constipation.⁴ If not managed properly, NBD can ultimately lead to surgical intervention (stoma) or need for permanent residential care.⁵

Clinical Challenges of NBD

Patients with NBD experience increased clinical complications including:

- ✓ Elevated risk of hospitalization and re-hospitalization⁶
- ✓ 2x higher hospitalization related to bowel challenges⁴
- ✓ Ongoing bowel management (constipation and/or fecal incontinence)⁶
- ✓ Recurrent urinary tract infections⁶
- ✓ Additional morbidity including hemorrhoids, pain, bleeding, nausea, and autonomic dysreflexia which all contribute to decreased quality of life⁶

Social & Mental Health Challenges of NBD

In addition to the physical challenges, NBD patients also experience social & mental health problems due to the loss of voluntary control of the bowel and fear of episodes of fecal incontinence. These problems include social anxiety, poor self-esteem and overall decreased quality of life.⁷ In fact, NBD was rated by patients themselves as significantly greater than other aspects of their disorders.⁸ Half of patients report that they spend more than 30 minutes going to the bathroom and the same proportion is dependent on a caregiver.⁸ Without treatment intervention, people with NBD suffer from reduced quality of life including loss of independence and control, feelings of embarrassment, anxiety and depression as well as social isolation and loss of sexual relationships.

- ✓ Declined physical independence and reliance on care giver⁶
- ✓ Most SCI patients rate bowel and bladder dysfunction as most significant life impact²
- ✓ Negative effects on self-esteem, personal relationships, and social life have all been reported
- ✓ Significant time spent on bowel management¹⁰
- ✓ Fear of bowel accidents is a common reason why patients do not engage in activities outside of home⁹

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