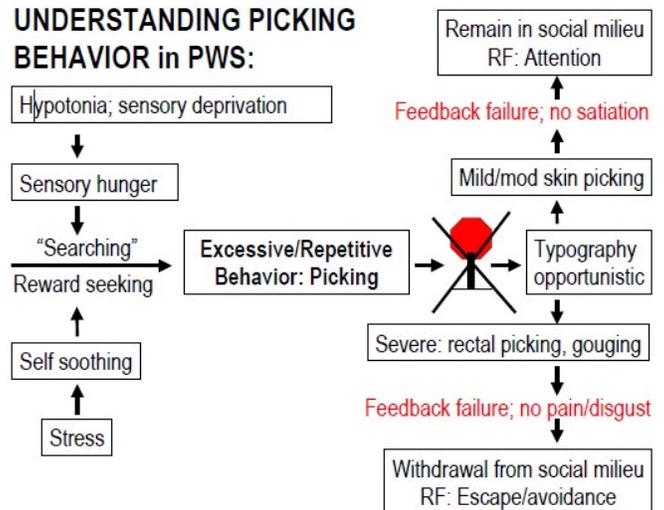


TREATMENT OF RECTAL PICKING BEHAVIOR in PWS with SENSORY STIMULATION

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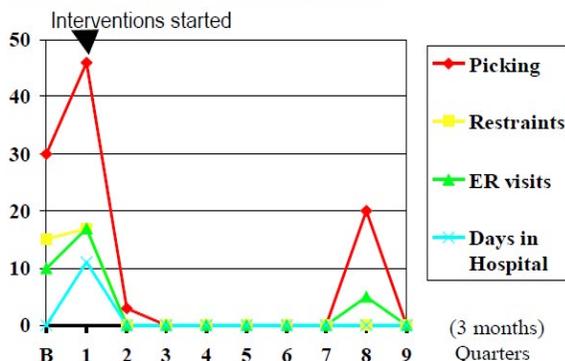
BACKGROUND: Skin-picking behavior occurs frequently in people with PWS; rectal (anal) picking is less common, more problematic, and may be associated with chronic stress. Skin picking is one of the many excessive and repetitive behaviors associated with PWS. The etiology of picking may relate to sensory deprivation and sensory “hunger” that precipitates searching behaviors, or it may be an attempt at self soothing that triggers neurochemical reward mechanisms. Once picking begins, the behavior persists because of diminished neurochemical inhibitory responses (GABA), lack of feedback mechanisms signaling pain or disgust, impaired behavioral response to satiation and extinction, and reinforcement through positive, negative and neurochemical factors. The authors report on the treatment of a young man with PWS who displayed rectal picking that was chronic (several months duration) and severe (recurrent bleeding with self-induced

UNDERSTANDING PICKING BEHAVIOR in PWS:



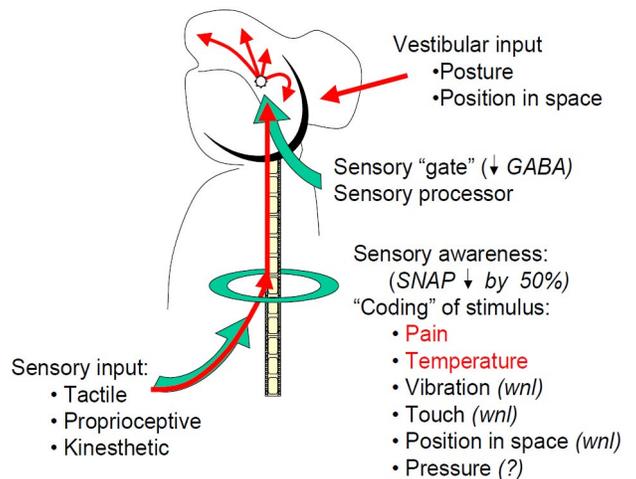
METHODS: A functional analysis of behavior identified the activities and time of day when rectal picking behavior occurred. Several methods of sensory stimulation were offered to the man, and he selected the use of a back roller. Treatment sessions of three to five minutes each were scheduled four times daily during times when rectal picking was most likely to occur. Staffing changes included 54 hrs of extra 1:1 staff initially, 40 hrs after 6 months, and discontinuation after 18 months. An increase in the density of scheduling of mutually selected activities required changes every 30 minutes initially, then every hour after 3 months,

Intervention Outcomes:



RESULTS: After one month of intervention, there was a clinically significant decrease in intensity and severity of rectal picking. After 1.5 months of intervention, episodes of self-induced rectal prolapse stopped. After 2 months of intervention, the frequency of rectal picking episodes was considerably reduced. Participation in community activities was gradually restored. Psychotropic medication was tapered and discontinued after 4 months. After two years the man abruptly refused the intervention, precipitating relapse. He resumed daily, severe rectal picking for one week at which point he consented to

DISCUSSION: The skin picking behavior associated with PWS can be understood as a habit disorder (mindless, self-soothing, repetitive action). When it is associated with self-injury, it is usually a manifestation of an impulse control disorder that worsens with stress. Faulty feedback mechanisms in PWS perpetuate behaviors such as rectal picking. In PWS pain is not a deterrent to picking because sensory neurons in the dorsal lateral spinal pathways conveying pain are diminished, and sensory nerve action potentials are decreased by 50%. Although picking elicits a profound, negative response from the caregiver, the individual with PWS rarely experiences disgust that might deter the behavior. A scheduled, non-contingent, sensory experience was an effective treatment



SENSORY PROCESSING in PWS

BIBLIOGRAPHY: 1) Brandt BR, Rosen I: Impaired peripheral somatosensory function in children with PWS. *Neuropediatrics*. 1998, 29(3):124-6; 2) Smith SA, Press B, Koenig KP & Kinnealy M: Effects of sensory integration intervention on self stimulating and self injurious behaviors. *American Journal of Occupational Therapy*. 2005, 59:418-425; 3) Priano L, Miscio G, Grungni G, Milano E, Baudo S, Selliti L, Picconi R, Mauro A. On the origin of sensory impairment and altered pain perception in PWS: a neurophysiological study. *Eur J Pain*. 2009, 13(8):829-35; 4) Joosten AV, Bundy AC, Einfeld SI: Intrinsic and extrinsic motivation for stereotypic and repetitive behavior. *J Autism Dev Disord*. 2009, 39(3):521-31.