Self Injurious Behaviors

- A class of behaviors, often highly repetitive and rhythmic, that result in physical harm to the individual displaying the behavior
- Occur without an apparent intent of wilful self-harm

Etiologies

- Environment
- Positive Reinforcement
- Negative Reinforcement
- Self-Stimulation
- Functional Communication
- Neurochemical

Physiological Reasons for Self-Injurious Behavior

- Biochemical
- Seizures
- Genetic
- Pain
- Sensory
- Frustration

Social Causes

- Communication
- Social attention
- Obtain tangibles

Neurobiologically Driven Behaviors

Prevalence Estimates

- Individuals who engage in SIB are significantly more likely to be non-verbal
- 6 to 22% in an institutionalized population
- 4 to 12% in individuals with intellectual disability
- 33 to 71% in autism spectrum disorders
- People with autism more frequently engage in self-biting when compared to other developmental disorders
- Sleep disturbance is a known precipitant of SIB in ASD
**Conclusion I**

- The case studies presented suggest that SIB, characterised by a sudden occurrence of behaviour and absence of identifiable triggers likely correlates with pain.
- Clinical investigations of these children combined with a functional behavioural analysis indicate that inflammatory gastro-intestinal dysregulations could be related to their pain and self-injurious behaviour.

**Conclusion II**

- Larger group analysis suggest that no particular biomedical marker is specifically associated with SIB, however, immune dysfunction appears to be more prevalent in this sub-group of ASD children.
- Successful interventions require to go beyond the basic nutritional and dietary interventions and should include an anti-inflammatory element.
- The source of inflammation should ultimately be identified for a sustained recovery from SIB and pain.

**Conclusion III**

- Any health deterioration can potentially precipitate the reoccurrence of SIB, even if there is no direct impact on the GI system in children with known GI inflammation and SIB.
- Teaching alternative modes of communication is essential to replace SIB in children who have learned to use such behaviour to communicate their needs.
Hand Mouthing
• 7 to 16% of individuals with severe to profound developmental disabilities
• Individuals with handmouthing exhibited more GERD

SIB in the Dental Literature
• Oral Self-Injurious Behaviors in Patients with Developmental Disabilities

SIB in the Dental Literature

SIB in the Dental Literature

SIB in the Dental Literature

Self-injurious behavior in a patient with mental retardation: Review of the literature and a case report
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SIB in the Dental Literature

Medications

- Naltrexone
- Valproic Acid
- Carbamazepine
- Lithium
- Risperidone
- SSRI’s
- Haldol
- Geodon

Liability?

BRISTLE BLOCKS
Case Study: 45 year old man

- Autism, non-verbal
- Long history of intermittent SIB
- Recently he had begun biting his arms
- Staff noted a foul odor emanating from his mouth
- Brought in for a dental exam

Case Study: 28 year old woman

- Cerebral palsy, non-verbal
- Recently began hair pulling
- Coincidentally an upper 2nd molar fractured, requiring extraction
- Hair pulling stopped
- Two years later a second incidence of hair pulling
- Inflamed / Infected gingival tissues
- Debridement of plaque and calculus
- Two week follow-up, hair pulling stopped
Case Study: 35 year old man
• Autism, non-verbal
• Displaying extremely aggressive and SIB
• Sequestered in a separate room
• Foul odor caused staff to bring him for a dental exam
• Initial exam in the parking lot
• Disruptive behavior in the hospital
• Following treatment “Michael is a big teddy bear”

Case Study: 10 year old boy
• Autism, minimally verbal
• Handmouthing
• Frequent tantrums, crashing his body in the wall
• Most recently saying “teeth”
• An oral swelling brought him in for a dental exam
• Following dental treatment in the hospital, the behaviors stopped