Use of Snoezelen Method for Rett Syndrome Management

### Rett Syndrome

- Rett syndrome is a neurological disorder most often resulting from a mutation of the X-linked MECP2 gene.
- Rett Syndrome is thought to be a problem with formation of neuronal pathways in the brain.
- This disorder predominately affects females within the first six to eighteen months of life.
- The life expectancy is shortened for most but some are able to live into their sixth and seventh decades.

There are four stages of Rett Syndrome:

- **Stage One:** The child displays small differences in development which are regarded as normal variances. Child may exhibit some hypotonia.
- **Stage Two:** Regression of previously acquired skills begins. This can have a rapid onset or can develop slowly over a few weeks or months. The become uncoordinated and their senses can become hyperactive.
- **Stage Three:** During this stage the girl's regression plateaus. The stage can last for a number of years.
- **Stage Four:** A second deterioration can occur in the later stages of life. They may begin to lose their functional abilities. Spasticity could also develop as age increases.

### Diagnosis

- Child is apparently normal at birth
- Apparently normal early development
- Postnatal deceleration of head size for most children
- Failure of purposeful hand movements to develop
- Regression in social interaction/interest, motor skills, communication, and cognition (including loss of previously learned words) and gait dysfunction (dyspraxic or failing locomotion)
- Development of stereotypic hand movements (eg, hand wringing and mouthing)
- Gait disturbance: dyspraxic or failing locomotion

### Snoezelen Method

- The multi-sensory room is a partially lit room that provides sensory stimulation. Colors, lights, fiber optics, halls, music, mirrors and tactile feelings are used in this environment.
- Aim of treatment is to find a balance between relaxation and activities within the framework of a safe, adapted environment by means of an enabling therapist
- Without sensation and awakening of the senses, people with disturbances find it very difficult to understand the world around them and as a result will have difficulty learning.

### Typical RS Interventions that can be Addressed with Snoezelen

- Close interpersonal contact
- Activity in a quiet, interesting environment to reduce anxiety and agitation
- Music
- Facilitation of learning without pressure
- Face to face contact, tactile cues, and talking
- Gentle movement of all limbs throughout full range
- Gross motor and transitional skills

### Literature Findings and Clinical Significance

- The snoezelen method can be used as an area for girls with RS to obtain an increase in functional abilities when needed while also providing a calming environment when they become over stimulated.
- It can be used throughout the span of RS by multiple disciplines in order to provide what is needed in each stage.
- Most of the literature done on snoezelen to date has been published by Lotan in combination with other authors. However, it does seem to be an acceptable treatment method in order to meet the needs of these girls as they are defined in other literature available for physical therapist and pediatrician use.

### References


**Picture from Snoezelen Multi-Sensory Environment - Richard Villan**