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## **FACT SHEET** **Hydrocephalus**

Derived from the Greek words “hydro” (water) and “cephalus” (head ) hydrocephalus is a condition of excessive accumulation of fluid in the brain. The fluid known as cerebrospinal fluid (CSF) is a clear fluid surrounding the brain and spinal cord. The excessive accumulation results in an abnormal dilation of the spaces in the brain which causes potentially harmful pressure on the tissues of the brain. Symptoms of hydrocephalus vary with age, disease progression, and individual differences in tolerance to CSF.

Hydrocephalus is most often treated with the surgical placement of a shunt system. A shunt is a flexible but sturdy silastic tube.

Shunt systems are not perfect devices. Complications may include mechanical failure, infections, obstructions, and generally require monitoring and regular medical follow up. When complications do occur, usually the shunt system will require some type of revision. In addition to the common symptoms of hydrocephalus, infections from a shunt may also produce symptoms such as a low-grade fever, soreness of the neck or shoulder muscles, and redness or tenderness along the shunt tract

## **Developmental Areas**

**Children may display some of the following characteristics**

### **Social and Emotional Development**

- May have poor motivation
- Problems with self organisation
- May have has limited social experiences

### **Physical Development**

- Child may be overweight due to lack of physical movement
- May show a downward deviation of the eyes
- May have poor balance, co-ordination and gait
- Decreased strength and feeling in legs and lower limbs
- Bones may be prone to fractures due to weakness
- May suffer from vomiting, sleepiness and seizures
- Limited bladder and bowel control
- May have blurred vision

### **Language and Communication Development**

- May experience difficulties following instructions
- May have a language disorder

### **Cognitive Development**

- May also have intellectual impairments
- May have memory loss
- Cognitive development may be delayed due to lack of concrete experiences
- Cognitive development may be delayed due to inability to physically explore the environment and surroundings

### **Sensory Development**

- May have delayed sensory development due to loss of sensation in the lower body

## Hydrocephalus Inclusion Strategies

Each child diagnosed with Hydrocephalus will be different and individual. It is important to gain information from the parents as to what characteristics of Hydrocephalus their child displays. It is important to work closely with the parents as well as any additional support specialists e.g. therapists who may be involved with the child. It is also important to gain an understanding from the parent as to what is the most important aspect of their child attending your service. What is it that parents hope to gain from using your service? The following inclusion strategies are just some examples which may be applied to support the inclusion process. This list is only the start and it is dependant on a variety of factors such as environment, length of time child is in care, child's interest, likes, dislikes, skills already achieved. The strategies are divided into developmental areas however some strategies overlap and assist in a variety of developmental areas.

### **Social and Emotional Development**

- Support children's social development by recognising and positively reinforcing their successful social interactions
- Ensure that the work environment is quiet, well organised and clearly structured;

### **Physical Development**

- Provide experiences that develop the upper body which may improve mobility for the child
- Use pulleys and ropes in the sand pit to move buckets etc
- Provide opportunities for children to challenge themselves and expend excess energy
- Provide obstacle courses and outdoor experiences such as throwing bean bags at a target.
- Experiences that enhance visual motor integration such as fine motor tasks including pre-writing skills may be helpful

### **Language and Communication Development**

- Encourage the child to use language for communication of meaning rather than only to manipulate others or to conceal areas of difficulties;
- Encourage the child to maintain a shared topic of conversation and redirecting them if they wander;
- Routinely checking the child's understanding of the language they are using (for example, by paraphrasing what has been said)

- Reduce the amount of information presented at one time and allowing extra opportunity for rehearsal;
- Emphasise key points in a logical sequence - information is remembered most effectively when it is processed in an organised and logical way. Extraneous information should be minimised;

### **Cognitive Development**

- Set achievable goals and tasks for the child that they are capable of achieving
- Ensure experiences provided are within the child's capacity for maintaining attention
- Use teaching techniques that avoid the possibility of making mistakes to build confidence and use strategies that prevent any tendency for 'switching out' behaviour
- Remind children of routines regularly
- Give instructions that the child is able to understand
- Reinforce learning with concrete representation
- Avoid tasks that frustrate the child
- reinforce conceptual learning through practical activities related to the child's interests and life experience.

### **Health and Safety Issues**

- Provide protective clothing for children when playing outside or doing messy activities
- Know the procedure for a shunt blockage - ensure staff are trained by a recognised authority who is qualified to provide this type of training
- Be aware of safety issues if the child has no lower body sensation

### **Reference**

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Gilbert, P.(1996) "The A-Z Reference Book of Syndromes and inherited disorders—2nd Edition. " Stanley Thornes (Publishers) Ltd: United Kingdom

Kozma,C. & Stock, J. (1993) Caring for every child—Ideas to meet diverse needs in Child Care. Funded by the Commonwealth department of Human Services and Health : Sydney

### **DISCLAIMER**

Noah's Ark Children's Services Resource Unit provides information to Children's Services upon request. The information provided is obtained from a number of sources e.g. library, other services, resource books and Internet. The information provided is not intended to, nor does it, constitute medical or other advice. Persons access this information assume full responsibility for it's usage.

The information and strategies are designed to provide Childcare Workers in children's services with some strategies to assist in planning an inclusive program. A holistic approach is important, including knowledge gained from the

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child's parents and the knowledge gained through observing and planning for children. Ensure the principals of Early Childhood Care are re-inforced in the programming, focusing upon what the child can do, using positive and supportive interactions that recognises each child's individuality.

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