

## Hydrocephalus & Sport



Many parents and teachers worry that, if a child with Hydrocephalus joins in with the games and sports that their friends enjoy, damage to the shunt is likely to follow. Shunts are, in fact, difficult to break or dislodge and most sports - with few exceptions - should be encouraged.

### Which Sports

Children with Hydrocephalus, like all children, should be encouraged to try a variety of games and sports. They will never know that they can play if they aren't allowed to try - within sensible limits, of course!

Children can run and jump, trampoline, do forward rolls and use the apparatus in the gym. However, they may need help with balancing and should not hang upside down (eg from wall bars) for any length of time.

Those with lumbar peritoneal (LP) shunts should avoid twisting actions as in aerobics and some dance. They can play all non-contact sports like rounders, track events, cross-country running.

Swimming is excellent exercise; people with shunts can scuba dive but deep sea diving is not advisable and there are sailing and water sports clubs with special facilities for disabled people.

### Modifications

Most children can be involved in a wide variety of physical games and sports in regular physical education classes, with or without modification. As a general rule, teachers should assume a child can join in the activity and then try to work out what modifications, if any, are needed.

Modifications may take the form of:

- Modifying the whole activity slightly
- Modifying the rules for the child
- Modifying equipment used, etc.

**Tips for Teachers:** Children are often very inventive. Ask the child what he or she can do, as a child often has excellent ideas on how he or she can participate as fully as possible. Remember to ask the rest of the class for ideas too. They will usually have more

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understanding of the disability and accept modifications to an activity more readily if they have been involved in the process.

### Modifications

If the child with Hydrocephalus has short-term memory problems, they may need frequent reminders of the rules and will need encouraging to wait their turn.

**Tips for Teachers:** As children with Hydrocephalus can respond well to visual aids, perhaps a 'wait' card would be useful for sports, which require a child to wait their turn.

### Spatial Problems

Some children with spatial problems may find it difficult to go outside if the sky is cloudless and they cannot see where it is in relation to themselves. Going into a room with differing ceiling levels or with beams may have the same effect. So may open tread staircases and highly patterned floor coverings.

**Tips for Teachers:** If a child experiences these problems, their friends should be encouraged to help the child overcome them. If the child realises that they will not hit their head on the sky (prove this by reaching over him/her), or fall through the open treads (a friend could "demonstrate" or measure the gaps), the child will be more confident.

### Safety

When in school, there is little that a shunt will prevent a child from doing. They can swim, play in the playground, run, jump, do PE. A child with a LP shunt should not do stretching or twisting exercises, nor should he/she somersault, do forward rolls or hang upside down for any period.

If he/she has an injury to the back or abdomen and becomes unwell, damage to the shunt should be considered, although this is very rare. With a VP shunt, care should be taken not to "grab" the child round the neck. So he/she would be advised not to take part in judo, rugby scrums etc.

Care should also be taken after a blow to the head or abdomen (eg from a football): if the child does not recover, shunt damage must be considered. Again, this is, fortunately,

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very rare. Although damage to the distal (lower) catheter is highly unlikely, it must be considered if pain persists or signs of shunt malfunction develop.

Whatever sports the child decides they would like to do; they should follow the general safety advice for that sport. For example; helmets must be worn for anywhere injury to the head may occur such as horse riding, cycling, climbing, and canoeing.

Most things are possible with imagination and care. If in doubt, ask SBHI or the neurosurgeon for advice.

### Dehydration

All children with shunts may be prone to dehydration in the heat (more so than their peers) so will need frequent, even hourly drinks of clear fluid (ie water) but not drinks containing caffeine.

They may also have difficulty in body temperature control, so on very hot days they should be encouraged to play in the shade when outside, and sit in a cool part of the room when indoors.

### Social Inclusion

Friendships are very important for children with Hydrocephalus as their natural inclination is often to be "loners", so every effort must be taken to encourage friendships already made and appropriate new friendships.

There will always be those with unrealistic ambitions who will need gentle steering towards a sport more suited to his age and capabilities. A 10 year old will not be a Formula 1 driver but may have a talent for go-cart racing!

***Helen Fernadez, Paediatric Neurosurgeon at Addenbrooke's Hospital, Cambridge, commented:***

***" Children with Hydrocephalus (whether treated by shunt or ETV) can safely take part in most sports that their friends enjoy and their parents and teachers should be supporting them."***