Factsheet: Baclofen Pump

What is it?

Children with baclofen pumps may be diagnosed with cerebral palsy, stroke, brain injury, or spinal cord injury. A baclofen pump is a surgically implanted medical device used to reduce spasticity and spasms. Instead of a child taking baclofen medication everyday by mouth, this device continuously delivers a programmable rate of medication via a catheter. The pump delivers the lowest dose of effective medication directly into intrathecal space. The pump can be set by the doctor to titrate rates throughout the day or week depending upon function. Since intrathecal baclofen medication acts on the central nervous system, side effects can include upset stomach, constipation, urinary retention, loose muscles, sleepiness, dizziness and headaches. With less side effects and better muscle tone, patients can lead more functional and independent lives. The patient will revisit the doctors office to have medication refilled directly into the pump.

What are the parts?

- Pump: surgically placed medical canister that has a refillable reservoir where liquid medication is stored and refilled
- Catheter: flexible tube that is attached to the pump, runs under the skin to the lower spinal canal; tip of catheter placed in spinal fluid
- Liquid medication

Troubleshooting

It is important to understand the troubleshooting of any implanted medical device. A baclofen pump is battery operated with multiple sounding alarms (critical and noncritical alarms). A battery is normally operational for about 7 years but can depend upon the daily rate of delivery. While one alarm will sound for low battery, another alarm will signal that the baclofen medication reservoir is low. It is important to know the alarm sounds of the device. The pump reservoir is normally refilled about every 3 to 6 months, by the doctor, using a needle inserted through the skin and into the refillable pump port. Other complications include movement or dislodgement of the pump under the skin or catheter dysfunction like a kink, leak or disconnection. If for some reason the device stops working abruptly and the medication is not being delivered, it is important to be aware of these side effects. Oral baclofen should be available to be administered in such cases.

The most frequent adverse drug reactions include hypotonia, headache, convulsion, dizziness, urinary retention and nausea.

### Abrupt stop
- High fever
- Altered mental status
- Muscle rigidity and/or spasms

### Overdose
- Drowsy, lightheaded, dizzy
- Difficulty breathing
- Hypothermia
- Seizure

### Underdose (Withdrawal)
- Increase in spasticity
- Itching, burning, tingling
- Low blood pressure
- Lightheaded
SHNIC school nurses information:
Specific health issues for individual health care plans

- Diagnosis and need for baclofen pump
- Location of pump, date of surgery, last refill date and/or predicted refill schedule
- Current medication list
- Skin assessment, incisions
- Note child specific symptoms/characteristics of over/under dosing
- Note any complication with pump
- Activity and/or positioning restrictions
- Fever protocol as implanted device
- Emergency action plan
- PRN medications including oral Baclofen in event of pump malfunction

Hidden Device Information

Type of device: ____________________________

Serial #: ____________________________
Model #: ____________________________
Implant date: ____________________________

For school health professional working with student

Experience with device: ☐ Y ☐ N
Device manual at school: ☐ Y ☐ N
DME contact information: ☐ Y ☐ N

Device specific

Alarms: ☐ Y ☐ N
Battery: ☐ Y ☐ N
Back up equipment at school: ☐ Y ☐ N

Precautions to consider at school

Positioning of student: ☐ Y ☐ N
Emergency plan in place: ☐ Y ☐ N
Physical activity restriction: ☐ Y ☐ N
Magnet sensitivity: ☐ Y ☐ N
Emergency outlet: ☐ Y ☐ N

Resources

Medtronic – About ITB Therapy
http://www.medtronic.com/patients/severe-spasticity/therapy/

Baclofen pump therapy for the treatment of spasticity: A guide for patients and families
http://www.med.umich.edu/1libr/PMR/BaclofenPumpTherapy.pdf.