Positioning for Successful Switch Access

Presented by Rhonda Etter
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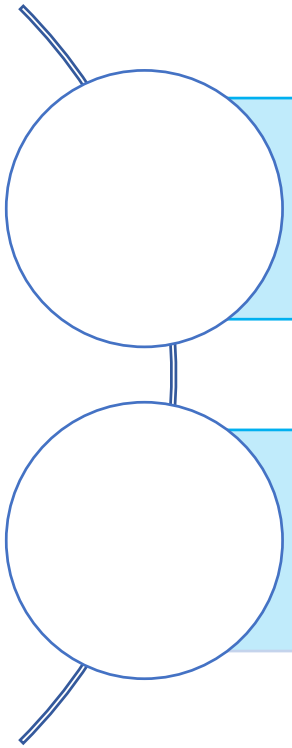
There are two reasons to explore switch access with young children:



Learning: To provide opportunities for learning how to make things happen (cause and effect).

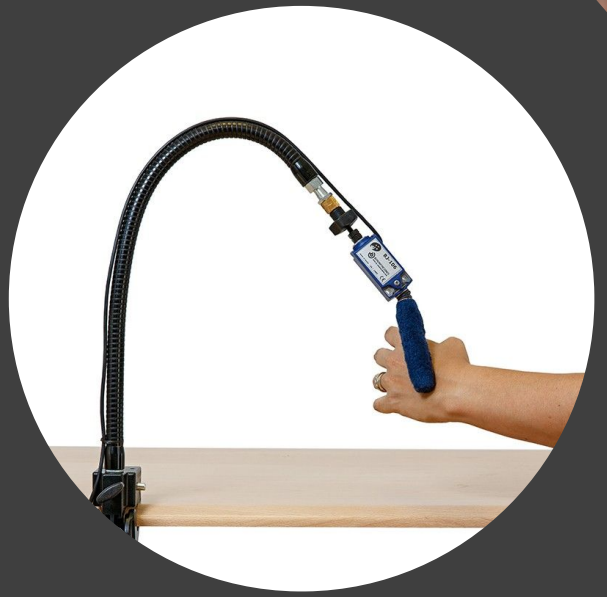
Access: To provide experiences and independence that would not be possible otherwise (environmental control).

Switches

- Switches connect to battery-operated or electric items to create an alternative way to turn the item on and off.
- A variety of switches are commercially available.
- Choosing which switch to use is based primarily on the user's motor abilities.

The most common way to access a switch is using hands.

- Hands can be used to apply pressure to a switch.
- Hands can swipe at wobble switches.
- Hands can move over a proximity switch that does not require touch.



Positioning for switch access

When a child has severe physical disabilities, their ability to use their hands to activate a switch depends on how they are positioned.

We are going to share some positioning strategies, but keep in mind that each child's needs are unique. **Get help** from their physical therapist or occupational therapist to identify the best switch and position for a child.

Other body parts…

- When we cannot find effective positioning to support the child's use of their hands, we can consider other body parts.
- Young children with physical differences can learn to activate a switch using their head, trunk, hands, or feet.

Potential body movement for switch access:

- hand (down, up, to the side, or grasp)
- finger (tap, squeeze, or up)
- elbow (to the side or down)
- chin (down or to the side)
- knee (up or to the side)
- foot (down, up, or to the side)
- toe (down, up, or to the side)

Some general guidelines:

- Select a motor movement that is purposeful and reliable.
- Avoid using movements the user has difficulty controlling.
- Children with severe physical challenges often need more than one therapeutic position for switch access

Motor considerations for switch access

- Stability of the trunk
- Abnormal muscle tone
- Abnormal reflexes
- Skeletal deformities

Stability of the trunk

The child must be able to stabilize their trunk to reliably move their head, hand, or foot.

If the child can't stabilize on their own, assistance should be provided through adaptive positioning and supports.

If the trunk is not stable, the child may adopt abnormal posturing to create stability and that can lead to secondary disabilities such as joint abnormalities and pain.

Abnormal muscle tone

Some children have too much tone—they are stiff or tight. They will have difficulty with precise movements.

Some children have low tone and have difficulty initiating movements.

Some children have fluctuating tone and will have difficulty with extraneous movements of hands and feet or difficulty isolating one movement from other movements.

Some children have different degrees of tone in different body parts.

Abnormal reflexes

Reflexes are a part of typical development that usually becomes integrated into functional movement.

For some children, reflexes are retained and may interfere with purposeful movement.

Abnormal reflexes may be consistently triggered or may be inconsistent.

Skeletal deformities

Skeletal deformities can be caused by problems with muscle tone and abnormal reflexes.

Examples: scoliosis, kyphosis

Positioning for improved switch access

The PT, OT, or seating specialist can help make sure that the child has the right size and type of wheelchair or seat and the best trunk support accessories for them.

Some helpful adjustments and accessories:

- Hard, soft, or contoured seat cushions.
- Lateral supports.
- Chest harnesses.
- Foot supports and straps.

Trays and arm rests

- Trays are available for many types of positioning and mobility devices.
- Some are integrated into the design and others are optional accessories.
- Trays provide a solid surface for a variety of fine motor activities.
- Many trays adjusts in height, depth, and angle.
- Armrests may be available as accessories or custom made.
- Wings can be added to help position the arms.

Mounts can help keep the switch in the perfect position

- Splatz Mount, Grip pad, or Dicem to hold switch position
- iSlope or Maxess angled mounts
- Desk or table mounts
- Wheelchair mounts
- Friction mounts—easy to adjust with one knob

Does the activity require a momentary or latching switch?

- Momentary switch—when the switch is pressed, the item is activated, when the switch is released, the item turns off.
- Latching Switch--When the switch is pressed, the item turns on and stays on; the switch must be pressed again to turn the item off.
- Helpful for individuals who don't have the motor control to hold a switch down to keep the device on.

Remember:

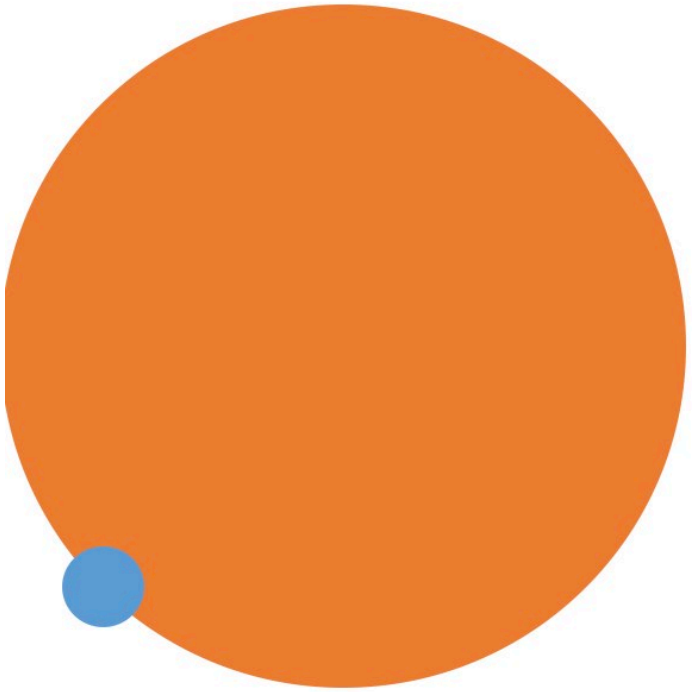
For children with severe disabilities, successful switch placement needs to address:

- The way the child is positioned
- The way the switch is positioned
- The placement of the item to be activated

Sometimes you need help

- Finding the correct position to place a switch is an exercise in fine tuning where change in the support of one body part is reflected in changes throughout the body.
- Make sure that the movement required to activate the switch does not trigger an abnormal reflex that will cause problems later.
- **Get help**: a physical therapist or occupational therapist can help identify the best switch and position for a child.
- When a good solution is found, take a picture for reference and keep it handy.
- Many children will need more than one switch access position/solution.

Borrowing?



When borrowing positioning equipment from the ATK state equipment loan library, be sure to ask for all the positioning “accessories” that go with that item.

Remember that the switch is not the activity

Rethink IFSP goals to identify the outcome of switch access.

- Joey will use an adaptive switch to activate sight and sound enhanced toys to increase his visual and auditory tracking abilities.
- Jamie will use an adaptive switch to turn on the coffee grinder to make fresh coffee.

Provide lots of opportunities to extend basic single switch ability to many activities and settings.

Resources for extending single switch use

- **Activate many things across the day**
  - 60 Things to do with a Switch and a Battery Interrupter (Kate Ahern)
  - Ideas on How to Use the PowerLink at Home and at School (Northcott)
- **Use familiar adapted toys in new ways**
  - 25 Things to Do with a Switch Activated Pouring Cup (Kate Ahern)
  - Fifty Fun Ideas for Simple Switch or Low Tech Activities (Molly Shannon)
- **Build opportunities into the curriculum**
  - **AbleNet Remarkable Ideas** https://www.ablenetinc.com/remarkableideas/

Resources for successful switch placement if you are the OT/PT

Michelle Lange , OTR, ABDA, ATP/SMS is an occupational therapist with many years of experience in the area of assistive technology. She had collaborated with AbleNet to create 3 excellent webinars about switch access for ableU:

- **Switch Assessment Part 1: Determining the Best Switch Type and Location for Clients with Muscle Weakness**
- https://www.youtube.com/watch?v=7ayl40dSiWE

- **Switch Assessment Part 2: Determining the Best Switch & Location for Clients with Increased Muscle Tone**
- https://www.youtube.com/watch?v=1I4cdxpriW0&t=100s

- **Switch Assessment Part 3: Determining the Best Switch Type and Location for Clients Who Aren't Engaged**
- https://www.youtube.com/watch?v=hHaEEQGm9bs