



**Teaching Kids with Severe Gross Motor  
and Cognitive Deficits to Drive Using a  
Universal Platform**

## **EVIDENCE BASED PRACTICE**

Ginny Paleg, MPT  
Email: [ginny@paleg.com](mailto:ginny@paleg.com)  
[www.ginnypaleg.com](http://www.ginnypaleg.com)

### **Our Story**

- Kids with Level I V and V CP can drive
- Use a universal platform
- Start with a single switch (stop/go)
- Start early (9-15 mos)

## **Driving Makes Kids Smarter**

Kermoian R, Campos JJ.  
**Locomotor experience: a  
facilitator of spatial cognitive  
development.**

Child Dev 1988  
Aug;59(4):908-17

## **Driving Makes Kids Smarter**

Children who move through  
space independently score  
higher on tests of cognition

## **Driving Makes Kids Smarter**

Christine A. Wright-Ott, MPA, OTR  
Richard J. Escobar, ATP and Sharon  
Leslie, MS, PT

### **Encouraging Exploration**

Rehab Management July 2002

### **Driving Makes Kids Smarter**

Kids who were exposed to power mobility were more interactive with their peers and the environment

### **Smart kids drive better**

Tefft D, Guerette P, Furumasu J.

**Cognitive predictors of young children's readiness for powered mobility.**

Dev Med Child Neurol. 1999 Oct;41(10):665-70.

### **Smart kids drive better**

The smarter the kid, the easier it will be to teach them to drive. We like a good challenge.

### **Driving Makes Kids Smarter**

Butler C.

**Effects of Powered Mobility on self-initiated behaviors of very young children with locomotor disability**

Dev Med Child Neurol 1986 Jun;28(3):325-32

### **Driving Makes Kids Smarter**

- Six kids age 23-38 months
- Learned to drive in 3 weeks
- Measured self-initiated interaction with objects, spatial exploration and communication with caregiver
- Kids rocked

### **It's Possible to Train Severely Involved Kids to Drive**

Zanier, -Diane-J; McPhail, -Paul-J; Voelker, -Sylvia-L

**A microcomputer-aided mobility training program for the multiply handicapped.**

Mental-Retardation-and-Learning-Disability-Bulletin. 1989; Vol 17(1): 51-62

**It's Possible to Train  
Severely Involved Kids to Drive**

It's the Level IV and V  
kids that need power the  
most  
- they have no other options!

**A test to determine who is  
ready to drive**

Jan Furumasua, Paula Gueretteb, Donita Tefft

**The development of a powered wheelchair  
mobility program for young children**

Rancho Los Amigos Medical Center. 7601  
El Imperial Highway - CART, Downey, CA  
90242, USA

**A test to determine who is  
ready to drive**

Put a lot of stock in your  
gut instinct and the  
twinkle in the kid's eye

**Really Little Kids Can Drive**

Tefft D, Guerette P, Furumasu J.

**Cognitive predictors of young children's  
readiness for  
powered mobility.**

Dev Med Child Neurol.  
1999 Oct;41(10):  
665-70.

**Eval forms  
Annotated bibliography  
Letter of Medical Necessity**

Email Ginny  
Ginny@Paleg.com

**Really Little Kids Can Drive**

Start training  
and exposure  
at 15-20  
months of age

## **Really Little Kids Can Drive**

Dietz J, Swinth Y, White O.

**Powered mobility and preschoolers  
with  
complex developmental delays.**

Am J Occup Ther. 2002;56:86-96.

## **Really Little Kids Can Drive**

Even little kids  
with severe  
cognitive delays  
need to begin  
training and  
exposure early

## **Kids Learned to Drive in 1.7-12 hours!**

Butler C, Okamoto GA, MaKay TM

**Powered Mobility for very young disabled  
children**

Dev Med Child Neurol 1983 Aug;25(4):472-4

## **Kids Learned to Drive in 1.7-12 hours!**

Kids aged 20-39  
months learned to  
drive at home with  
parental supervision.  
Parents reported  
increased social,  
emotional and  
intellectual behavior

## **It may take some time**

Butler C, Okamoto GA, MaKay TM

**Motorized wheelchair driving by disabled  
children.**

Arch Phys Med Rehabil 1984 Feb;65(2):95-7

## **It may take some time**

- 13 kids age 20-37 months learned to drive at home with their parents.
- Specific skills were identified and measured. Sometimes it took up to 43 days, but all were successful.
- Start/stop and circling were the first skills gained in most kids.

## **Take Home Message**

- Power Mobility for Children (even the very young and/or severely involved) is an evidence-based practice

## **WC 19**

- Panda on Pride
- Convaid
- Invacare
- (may be more..)

## **What's the Point?**

- Raise Your Expectations
- Demand More
- Keep Moving
- Break Down Your Dreams Into Measurable Chunks and Go For It

## **Power Mobility Works on A Continuum**

- **Start Simple**
- **Promote Progress**
- **Keep It Interesting**

## **TURTLE TRAINER FOR POWER WHEELCHAIR ASSESSMENT AND TRAINING**

## **Benefits of the Turtle Trainer**

- Seating and Positioning Issue Is Eliminated
- Access Set-ups Are User Friendly
- Storage Space is Simplified

### **Panda on Quantum**

- One system fits most



### **Fun Training Strategies**

- Scavenger Hunts
- Obstacle courses
- Hide and Seek
- Follow the Leader
- Go on Outings
- Pop Balloons