

# How parents can improve brain and language development in young children

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## Dr. Suzanne Foley

- Pediatric Audiologist private practice
- Early Intervention audiology provider
- Director, Indiana Early Hearing Detection and Intervention (EHDI)
- Specialize in auditory processing evaluation and treatment



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## Why I talk about this?



- Pediatric Audiologist
- Hearing tests on 2 year olds enrolling in EI for speech and language delay
- Speech therapy is the most common EI service provided in Indiana
- Thirty Million Words by Dana Suskind



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## Early brain development

- Critical age is 0-30months
- 100 billion neural connections being made
- 700-1000 neural connections per second to age 3
- Unused connections are "pruned" off

Length of brain development based on length of stimuli input (stacking rings)  
Short/multiple stimuli-results in shorter potentials



Lack of hearing sounds or language has negative impact on a child's overall development



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"THE MOST POWERFUL FACTOR TO DETERMINE LEARNING POTENTIAL (IQ) WAS EARLY LANGUAGE ENVIRONMENT: HOW MUCH AND HOW A PARENT TALKS TO THEIR CHILD"

Dana Suskind

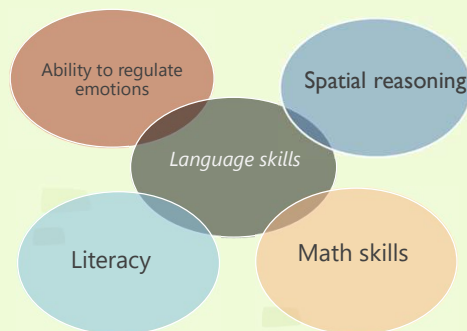
Dad talking to baby



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Verbal interactions with adults develops a baby's

## INTELLIGENCE



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# GENETICS= STRUCTURE OF HOUSE



# ENVIRONMENT= HOME

**Language input-** *less verbal interaction/ louder homes*

**Stability and care** *—improves brain development*

**Chronic stress/adrenaline**

*Prevents development of prefrontal brain areas (executive function)*

*Results in negative verbal interactions from adults*

*Lack of language use leads to reading problems and lack of HS graduation*



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## LONG TERM IMPACT of PARENT VERBAL INTERACTIONS

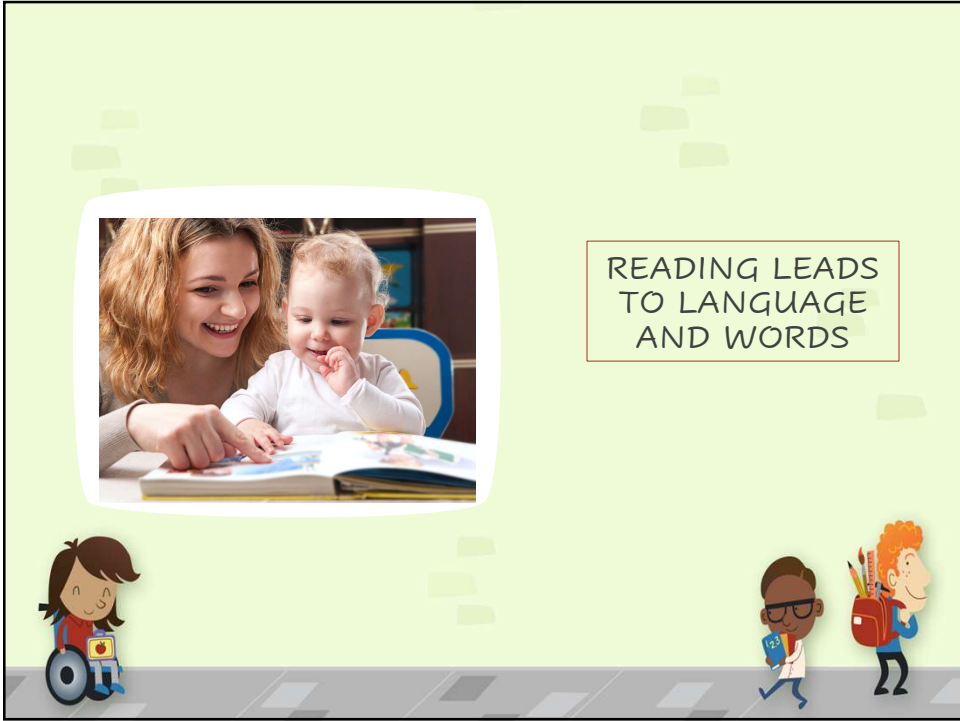
“Children in homes where there was a lot of parent talk, ***no matter the educational or economic status of that home*** did better in language and cognitive development”.

“The amount of talk the children had been exposed to through age 3 predicted their language skills and school test scores at age 10”.

“75% of all preschoolers in early intervention for speech and language delay are at risk for reading disorders.”



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## Thirty Million Words-Dana Suskind

Tune in

Talk More

Take turns



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Tune in

Get their attention

Put down your phone

Get on child's level

Play what child wants

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**Talk More**

Tone of voice  
Loving tone

Sing!  
Nursery Rhymes!

Baby talk?

Increase # of words

“Narration” talk  
about what you  
are doing

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## “Talk Types”

**Business Talk**

Necessary for daily tasks

Do not develop language skills

Daily Directives

- Put on your shoes

**Extra Talk**

What a big tree!

The ice cream is cold and yummy!

We put your blue boots on today to keep your feet dry because it rained!

**Key Point**  
Turn taking and multi sensory input

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## Talk Tips

Pitch changes/inflection aids speech perception  
Baby Talk – real words but dynamic  
Adds meaning to words “Huuugggeee dog”

Singing gains attention and keeps young children engaged

“Children need to hear a word 35 times to recognize, remember and understand meaning”



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## Talk More

Sound awareness-where/what?  
Improves listening skills

Offer choices with descriptions to encourage responses: Dresses?

“Because” statements  
“Put your boots on so your feet don't get wait.  
It rained today.”



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## Ideas in Action

- You found Mommy's purse!
  - The purse is heavy
- Should we see what's inside?
  - You found mommy's keys
  - Please don't eat them, they are not food.
  - The keys open the door
  - Let's go use the key to open the door.

(show them)



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## Screen time doesn't do it!!!

A baby's brain does not learn passively, but by *interaction*

American Academy of Pediatrics:


Children over 2 yrs of age: less than 1 to 2 hours a day

Ipad= I don't talk  
[www.hanen.org](http://www.hanen.org)

No television or technology for children under two years of age.



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## Take Turns

Dad talking to baby

Use any experience	Let them respond even if not clear	Ask questions while reading
Use Why and how" Questions Less "what"	Let them change the topic	Offer choices for them to respond

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## Bringing it all together

**Tune in :** Child initiated activity with shoes

Get on the floor with the child

**Talk more:** Point to Daddy's shoes and get child's shoes

"You are wearing Daddy's shoes They are so big on you. Daddy has big feet, so he needs big shoes. Look at the difference in size between Daddy's feet and yours! Your shoes are much smaller".

**Take Turns:** Show both shoes

Whose shoes are bigger? Daddy's or yours? Right! Daddy's shoes are much bigger than yours. But your feet are growing. That is why we bought you new shoes last week. Your old shoes were squeezing your toes. They were too small"






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## Preschool Activities to improve auditory/language

### AUDITORY AWARENESS

Identify sounds in environment-dog barking, airplane

### AUDITORY MEMORY

Alphabet, Sing, Counting, Use objects to hide

### FOLLOWING DIRECTIONS

Duck Duck Goose, Musical Chairs, Grocery Store

### RHYMING

Rhyming books (Bob, Dr. Seuss), Music, nursery rhymes

### PHONOLOGICAL AWARENESS

Clap hands with syllables and sounds

### SEQUENCING

Cooking, dressing, puzzles



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## Praise and Feedback



### Praise for effort

"You tried to find that bug"  
vs...."You are so smart"

### Identify behavior, not character

"Be a good boy" vs "Please listen"

"You were a bad girl" vs  
"You do not bite other children"



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# Behavior



Is behavior  
linked to  
inability to  
communicate?

Sign language  
“1,2,3 Magic”



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## Videos for parents

Toys to help language?

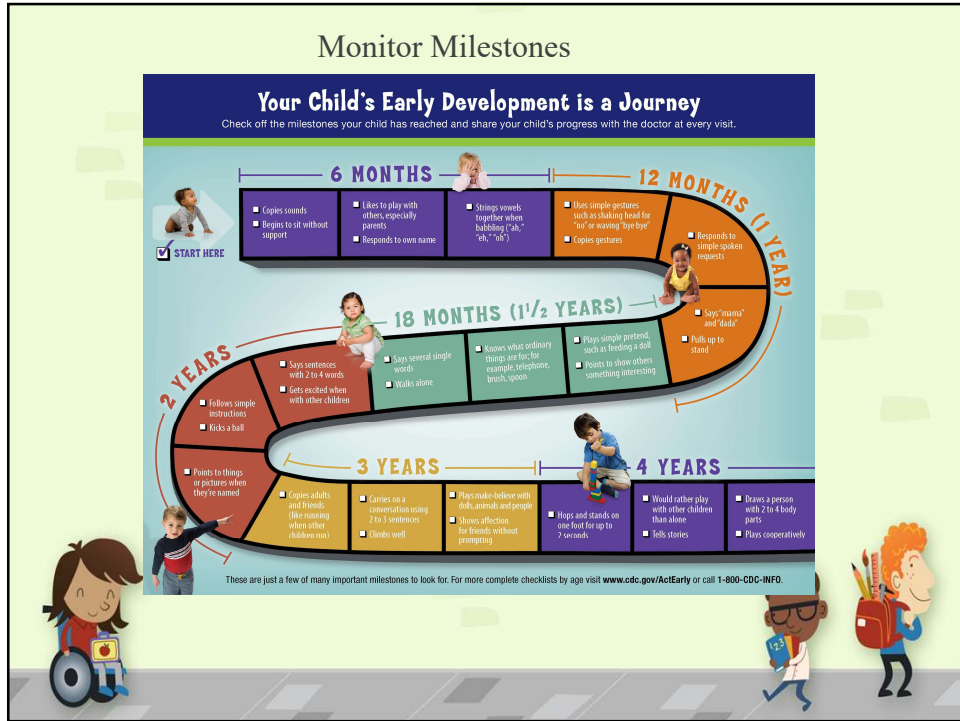
Singing to your child

How to talk to your baby



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## Monitor Milestones



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## Indiana EHDI Developmental Milestones

## Indiana EHD Developmental Milestones-Spanish

**LANGUAGE AND HEARING MILESTONES** 0-24 months  
Early Hearing Detection and Intervention Program (EHDI)

A child's ability to learn and communicate will develop by listening to people talk to them and around them. Unfortunately, the signs of hearing loss are not always obvious. Below are behaviors that your child should be doing between 0-24 months. If your child is not showing these behaviors at the ages listed below, please contact your primary care physician or local audiologist to schedule a hearing test for your child. A list of Indiana audiologists who can complete hearing tests on young children is listed in [www.hearingin.gov](http://www.hearingin.gov) or you can call us at 317-232-0972.

**BIRTH to 3 MONTHS**

- Quiets when spoken to
- Changes eyeing behavior in response to sound
- Startles when there is a sudden, loud sound
- Makes vowel sounds like "oooh" or "ahh"
- Begins to squeal, cry, smile, and gurgle

**3-6 MONTHS**

- Looks for sounds with eyes
- Enjoys toys that make noise
- Babbles
- Begins to babble by making sounds like "baba," "gaga," "mama" or "dada"
- Vocalizes excitement and disappointment

**6-9 MONTHS**

- Follows eyes and head to the direction of quiet and loud sounds
- Enjoys games like peek-a-boo and pat-a-cake
- Uses non-crying sounds to get and keep someone's attention
- Imitates different sounds they hear
- Understands "no no" or "bye-bye"
- Makes babbling sounds even when alone

**9-12 MONTHS**

- Responds to their name (may call)
- Changes their voice to go up and down in pitch when babbling
- Responds to music by bouncing or making sounds in response
- Correctly uses 1 or 2 words (bye-bye)
- Correctly uses mama and dada

**12-18 MONTHS**

- Begins to say consonants in speech like m, n, p, b, d, w, h
- Learns new words each week and can understand many words
- Begins to develop a vocabulary of 10-20 meaningful words mixed with jargon
- Understands simple yes/no questions or "hot/cold" and "no more"
- Points to body parts when asked

**18-24 MONTHS**

- Follows simple commands and understands simple questions
- Uses two-word phrases that are somewhat understandable such as "more milk" or "more cookie"
- Vocabulary of more than 20 words, with more words each month (has a word for most objects)
- Points to pictures in a book when named
- Listens with interest to songs, rhymes, and stories

For more information about EHDI, visit us on the web at [www.hearingin.gov](http://www.hearingin.gov) or you can call us at 317-232-0972.

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# Resources

- Hanen Center [www.hanen.org](http://www.hanen.org) Parent tips: [Hanen Parent Tips](#)
- Center for Developing Child at Harvard University <https://developingchild.harvard.edu/>
- Dana Suskind, [Thirty Million Words](#) and [Parent Nation](#) (2022)
- David Sousa, [How the Brain Learns](#)
- James MacDonald: [Play to Talk: A practical Guide to Help Your late talking Child join the conversation.](#)
- 1-2-3 Magic: <https://www.123magic.com/> Positive Behavior Management

## Developmental Milestones

- CDC [https://www.cdc.gov/ncbddd/actearly/pdf/checklists/Checklists-with-Tips\\_Reader\\_508.pdf](https://www.cdc.gov/ncbddd/actearly/pdf/checklists/Checklists-with-Tips_Reader_508.pdf)
- Indiana EHDI [www.hearing.in.gov](http://www.hearing.in.gov)



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The background is light blue with white clouds at the bottom. At the top, there is a red horizontal line with diagonal white stripes. On the right side, there is a cartoon illustration of a yellow character hanging upside down from the red line. The character has a blue hat and yellow body.

A photograph of a young girl with dark hair, wearing a pink and white floral dress, holding a large ice cream cone with a waffle cone and a scoop of ice cream topped with colorful sprinkles.

A portrait photograph of a woman with long brown hair, wearing a purple top and a colorful necklace, smiling.

Thank you for being here today!  
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