

A young girl with dark hair, wearing a yellow short-sleeved shirt and green pants, is sitting on a white surface. She is holding a pair of green-rimmed binoculars to her eyes. In front of her are several colorful toy trucks: a red and orange pickup truck, a blue and green tractor, and a red and yellow truck. The background is a plain white surface.

# Denver II

**CLDDV 167: October 21, 2014**

**Denver II Overview**

# Denver II

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## Historical Background

- ❖ First published in 1967. Used by health providers to identify developmental problems in young children.
- ❖ Has been used and standardized in over 12 countries. Used to screen over 50 million children.
- ❖ Such worldwide use has lead to the revision resulting in the Denver II tool.



# Denver II

## Past Concerns:

- ❖ Additional language items needed (1967 norms not the same norms of 1990)
- ❖ Difficult to administer and score
- ❖ Appropriateness for use with ethnic groups, sexes, maternal education levels, and places of residence (significant differences in norms)
- ❖ Lack of test sensitivity in predicting later school performance



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- ❖ Denver II (1992) Previously the Denver Developmental Screening test, DDST (1967)
- ❖ Designed for clinician, k-teacher, or early childhood professionals monitoring the development of infants and preschool age children.
- ❖ Test is primarily based on examiner's actual observation rather than parent support.

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- ❖ Used in public health clinics, private practices, and early education programs.
- ❖ Has been translated in several language
- ❖ Standardized in over a dozen countries
- ❖ American Academy of Pediatrics Council with Disabilities has the Denver II on their approved screening tools list.

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## Past Concerns:

- ❖ Inaccurate administration and /or interpretation

## Changes include:

- ❖ test revision
- ❖ training video
- ❖ emphasis on training
- ❖ and proficiency evaluation in the administration of the test



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## Overview

- ❖ Administered to children ages birth to six
- ❖ Assesses a child's performance on various age-appropriate tasks
- ❖ Screens for possible problems
- ❖ Designed to compare a given child's performance with the performance of other children the same age

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## Overview: What the Denver is not

- ❖ Not an I.Q. test
- ❖ not a diagnostic tool



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## Overview

- ❖ Consists of 125 tasks, or items.

- ❖ Includes four areas:

### 1. Personal –Social:

Getting along with people and caring for personal needs

### 2. Fine Motor-Adaptive:

Eye hand coordination, manipulation of small objects, and problem solving

### 3. Language:

Hearing, understanding, and using language

### 4. Gross Motor:

sitting, walking, jumping, and overall large muscle movement

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## Overview:

- ❖ Includes five “Test Behavior” items to be completed after the test.
- ❖ Subjectively allows screener to assess the child’s overall behavior
- ❖ Designed to be used in a clinical setting by a variety of professionals
- ❖ Must be administered in the standardized manner

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## Value of the Denver II

- ❖ Provides an organized clinical impression of a child's overall development
- ❖ To alert the user to potential developmental difficulties
- ❖ Used to determine how a child compares to other children

**It is not a predictor of later development**

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## Test Materials:

- ❖ Red yarn pom-pom (4" in diameter)
- ❖ Raisins or "O" shaped cereal
- ❖ Rattle with narrow handle
- ❖ 10 1" square colored wooden blocks
- ❖ Small, clear glass bottle with a 5/8 inch
- ❖ Small bell
- ❖ Tennis ball
- ❖ Red pencil
- ❖ Small plastic doll with feeding bottle
- ❖ Plastic cup with handle
- ❖ Blank paper

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## Materials:

- ❖ Items come in a test kit (except for blank paper)
- ❖ Access to table and chairs (examiner, caregiver and child if appropriate)
- ❖ For babies, a blanket or cushioned pad is needed
- ❖ Substituting materials may reduced reliability in comparing a tested child with the norms
- ❖ Children need to be supervised appropriately with test materials to prevent choking or injury

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## Test Form

- ❖ Locate four sections on far left: Personal –Social, Fine

Motor, Language, and Gross Motor.

- ❖ Locate the age scales on the top of the test form and at the bottom
- ❖ Each mark on the scale from the first mark to the 24 month mark represents one month
- ❖ After 24 months, each mark equals 3 month intervals

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## Age Calculations

<b>Example:</b>	<b>Year</b>	<b>Month</b>	<b>Day</b>
Date of Test	2011	<del>10</del> 9	<del>17</del> 30 + 17 = 47
Date of Birth	- 2008	- 8	- 20
Age of Child	3	1	27

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## Adjusting for prematurity:

- ❖ Born more than 2 weeks before expected delivery date
- ❖ Child is less than 2 years of age

Age of child	Year	Month	Day
Age of Child		2	19
6 weeks premature		-1 (30days)	-14 (14 days)
Adjusted age of Child		1	5

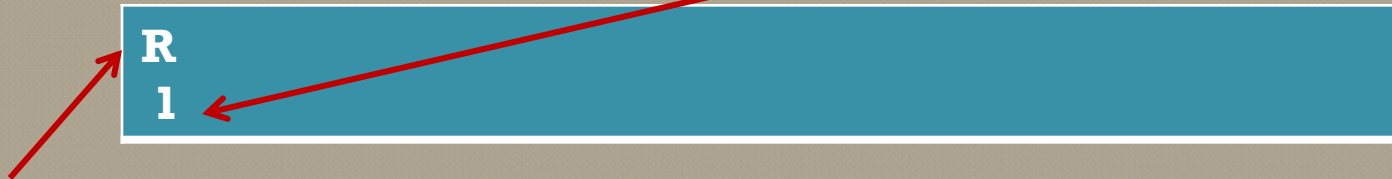


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## Test Form

- ❖ Some items have a small footnote number on the left end of the bar. This number refers to the numbered instructions on the back of test form



- ❖ R = Report
- ❖ Information may be given from parent or caregiver  
Whenever possible, the examiner should observe what the child can do.

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## Test Form

- ❖ Some items under the youngest ages do not have all of the percentiles (25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup> and 90<sup>th</sup>)
- ❖ Example “Equal Movements” should be passed by all infants. This item occurs at an early age with more than 90% of children performing the task at birth or soon after.

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## Test Administration

- ❖ Should be given with the parent or primary caregiver present
- ❖ Make caregiver and child comfortable to elicit most natural response
- ❖ Remove boots or shoes that might restrict the child's motor movements
- ❖ Young child may sit on caregiver's lap, older child should sit so arms can rest upon the table
- ❖ Elbows should be level with table top
- ❖ Infants may be evaluated on the floor

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## Test Administration

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- ❖ It should be shared with parent that the tool is to determine the child's current developmental status and that the child is not expected to pass all of the items.
- ❖ Allow child to have appropriate item to manipulate while you ask parent the "Report" questions.
- ❖ Items requiring less active participation should be administered first
- ❖ Items in Fine Motor-Adaptive next  
(items that do not require child to speak)
- ❖ Language items next

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- ❖ and last the Gross Motor items  
Gross Motor requires more confidence which is gained as test progresses.
- ❖ Tasks that the child can perform easily should be administered first
- ❖ Praise child's efforts even if they fail on an item
- ❖ Items that use the same materials may be administered consecutively. Keeps the flow going.

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- ❖ Keep test kit out of sight of child. Keep only materials being used for current activity on the table
- ❖ For infants, it is recommended that all items be administered with the baby lying down to be tested together
- ❖ Testing should begin with items that fall completely to the left of the child's age line, and continue to the right

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## Number of Items to be tested

- ❖ Depends on age and ability of child
- ❖ Step 1: in each sector, administer at least three items nearest to and totally to the left of the age line and every item that is intersected by the age line
- ❖ Step 2: if the child is unable to perform any item in step 1 (fails, refuses, has had no opportunity) administer additional items to left in the appropriate sector **until child passes three consecutive items**

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- ❖ Continue to administer items to the right of any passes in each sector **until three failures are recorded**
- ❖ The child may be given up to three trials to perform each item, when appropriate, before scoring a failure
- ❖ Ask the caregiver or parent if the results are typical of child's performance. Consider if the child is ill, hungry, upset, etc.
- ❖ Rescheduling may be necessary if child is not being cooperative



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## Scoring:

- ❖ P = Pass-child successfully performs item, or caregiver reports that child does item
- ❖ F = Fail-child does not successfully perform item, or report from caregiver is that child does not do item
- ❖ N O = No Opportunity-the child has not had the chance to perform the item, due to restrictions from the caregiver or other reasons (May only be used on report items)
- ❖ R = For Refusal – the child refuses to attempt the item. You can minimize this by telling the child to do rather than asking. Report items cannot be scored as refusals.

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## Advanced Item

Age Line



- ❖ If child passes an item that falls completely to the right of age line, the child's development is considered advanced. This is an item that most children of that age do not pass until they are older
- ❖ Advanced items are not considered for overall interpreting of test

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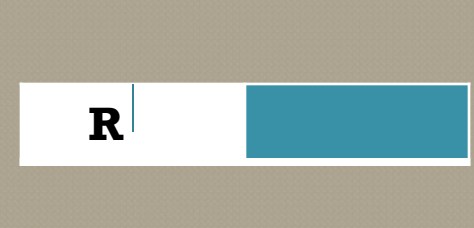
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## Normal Items

**Age Line**



**Age Line**



Child is not expected to pass items on right  
(not considered for purpose of interpreting)

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## Caution Item



Caution when line falls between 75 and 90 percentile and child fails or refuses

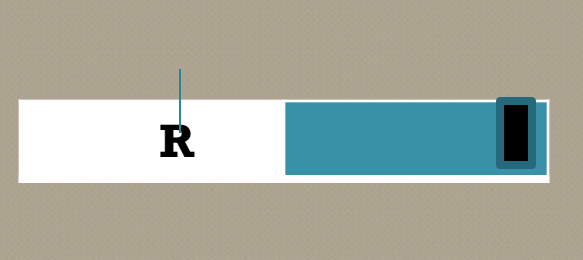
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## Delayed Items

Age Line



Age Line



A delay is indicated when a child fails or refuses an item that falls completely to the left of the age line

Child has failed an item that that 90% of children in the standardization sample passed at an earlier age.

Considered for interpreting overall tests

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## No Opportunity Item

Age Line



Age Line



These items are not considered in interpretation of entire test

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## Interpretation of the Test

**Normal:** No delays and a maximum of  
1 caution

**Suspect:** two or more Cautions and /or  
One or more Delays  
Rescreen in 1-2 weeks

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## Untestable:

Refusal scores on one or more items completely to the left of the age line or on more than one item intersected by the age line in the area of 75% - 90% area



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## Referral Considerations

- ❖ After rescreening, test result is suspect or untestable
- ❖ Number of cautions and delays
- ❖ Clinical history, examination
- ❖ Availability of referral resources