ALEX
DATE OF ASSESSMENT: 13/03/18
BIRTHDAY: 07/02/10
AGE: 8

TEST SUPERVISED BY:
Marcos

DYSLEXIA COGNITIVE
ASSESSMENT CAB-DX
RESULTS REPORT

ALEX’S PROFILE
LOW RISK  MODERATE RISK  HIGH RISK

- Reading and Writing
- Psychomotricity and Spatial Skills
- Cognitive risks
- Learning and Development
- Social Relations
HIGH RISK OF DYSLEXIA

Alex’s Results

ASSESSMENT

SYMPTOMS

49/50
Symptoms indicate a high risk of dyslexia
No apparent risk range: 0-15
Score: 49

COGNITIVE RISKS

9/10
Weakened cognitive skills associated with dyslexia have been detected
No apparent risk range: 0-2
Score: 9

EVALUATED RISKS AND SYMPTOMS

<table>
<thead>
<tr>
<th>Risk Type</th>
<th>No Apparent Risk</th>
<th>Alex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading and writing</td>
<td>0-6</td>
<td>17</td>
</tr>
<tr>
<td>Psychomotority and spatial skills</td>
<td>0-3</td>
<td>9</td>
</tr>
<tr>
<td>Social relations</td>
<td>0-3</td>
<td>9</td>
</tr>
<tr>
<td>Learning and development</td>
<td>0-3</td>
<td>14</td>
</tr>
<tr>
<td>Cognitive risks</td>
<td>0-2</td>
<td>9</td>
</tr>
</tbody>
</table>

CONCLUSIONS

- We recommend that Alex see a specialist in order to make a more thorough diagnosis with a clinical consultation.
- Activate and train the cognitive skills that Alex scored lowest in.
- Improving the altered cognitive functions related to dyslexia may help improve reading, writing, and reading comprehension, as well as minimize clinical symptoms.

*This assessment is not a diagnostic test, but rather a tool to help detect and assess the risk of language-based learning disorders (dyslexia).*
DYSLEXIA ASSESSMENT BATTERY DESCRIPTION

Alex, 8 years old, took the Dyslexia Assessment Battery (CAB-DX) on 13/03/18. This battery is comprised of a questionnaire followed by a cognitive assessment. The initial questionnaire adapts to the criteria, signs, and symptoms of the user’s age. The cognitive scores are evaluated based on normalized, validated tests for 8 years of age.

The Cognitive Assessment Battery for Dyslexia (CAB-DX) is a 30-40 minute test. The CAB-DX is a scientific resource that makes it possible to assess the user’s dyslexia risk index, looking at the main neuropsychological factors identified in the scientific literature surrounding this learning disorder.

The results presented in this report are a reflection of the user’s performance on a specific day and at a specific time. User performance may vary depending on the time of day, discomfort, alertness, and a number of other factors. The results and data in this report do not reflect a diagnosis and should be reviewed and interpreted by a qualified healthcare or educational professional and should be used as a complement to a clinical or educational consultation.

The results from this assessment offer a base on which to identify support strategies or to get professional help. This cognitive screening was designed to provide valuable information to help professionals objectively assess different neurological factors in people who may suffer from dyslexia.

THE CAB-DX REPORT IS MADE UP OF THREE PARTS

01 SYMPTOMS

The answers from the questionnaire will be focused on the following areas:
- Reading and Writing
- Psychomotricity and Spatial Skills
- Social Relations
- Learning and Development

02 COGNITIVE RISKS

In this section, you will see a circular diagram next to each evaluated area, which will indicate the user’s score based on their percentile and normalized for their age and gender. For example, a score of 500 would be calculated depending on the user’s age group. CogniFit’s values are calculated in percentiles but are shown adjusted on a scale of 0-800. As such, the higher score, the better.

Green: Cognitive strengths
Yellow: Below-average cognitive skills
Red: Cognitive weaknesses

03 CONCLUSIONS

At the end of the report, you will find:
- A description of the risk index and the effects on cognitive profile and detected symptoms.
- Specific recommendations and personalized plan of action.
Dyslexia is characterized by a series of clinical symptoms. These indicators can make it possible to get a better understanding of the possible presence of this learning disorder. Some of the most common symptoms of dyslexia are: learning and development problems (difficulties at school), reading and writing problems (trouble reading or writing), psychomotricity problems (trouble managing space), and social problems (difficulty relating to peers, which can cause poor self-esteem).

**ALEX’S SYMPTOMS SHOW A HIGH RISK FOR DYSEXIA**

**READING AND WRITING**

**HIGH RISK**

The main difficulty that people with dyslexia face are related to the ability to learn to read and write. Various brain structures are used in this nonverbal language process (writing).

**PSYCHOMOTRICITY AND SPATIAL SKILLS**

**HIGH RISK**

Understanding and managing coordination, spatial concepts, and the position and orientation of letters are essential when it comes to reading and writing. Dyslexia may cause an atypical development of the brain areas and connections responsible for these functions.

**SOCIAL RELATIONS**

**HIGH RISK**

Dyslexia can cause different learning difficulties that may lead to frustration, insecurity, social isolation, and a feeling of general unease. Improving the cognitive skills related to dyslexia may help improve these feelings.

**LEARNING AND DEVELOPMENT**

**HIGH RISK**

A number of different neurobiological factors surround dyslexia, which may cause poor academic performance and disturb childhood development.
According to the results of the questionnaire, Alex shows symptoms that indicate a significant risk of dyslexia in the areas of reading and writing, psychomotricity and spatial skills, social relations and learning and development. As such, there is a possibility that Alex suffers from some degree of dyslexia. If Alex shows problems at work, studying, at home, or with friends, it may be due to dyslexia, although it is important not to discard other possibilities. We recommend that you use this information to help make a precise diagnosis.

**IMPORTANT** These results are not a diagnosis. This information cannot substitute a formal diagnosis given by a professional, but it can serve as a complementary tool to help make a comprehensive diagnosis.
IN DETAIL: SYMPTOMS ASSOCIATED WITH DYSLEXIA

READING AND WRITING

HIGH RISK

Alex's scores show significant symptoms that suggest a difficulty with reading and writing. Studies have shown that dyslexia is made up of deficient neural networks used in the learning of reading and writing. Alex may have poor visual and auditory processing, which makes it difficult to understand text, affecting academic performance.

The answers from the questionnaire related to reading and writing that indicate that Alex has a high risk of dyslexia are:

- **READING** HIGH RISK
  - Makes mistakes when reading words, like “word” instead of “world”, or “bush” instead of “brush”.
  - Skips lines when reading and follows along with their finger.
  - Avoids reading tasks.
  - Their main difficulty is reading.
  - Has a hard time understanding what they’ve read.
  - Has a hard time reading, reads slowly, and makes mistakes (reads single words, sounds words out, follows text with their finger, etc.).

- **WRITING** HIGH RISK
  - Has trouble following instructions like “put the books in your backpack and the doll in the box”.
  - Changes the order of letters in a word or write a letter backward or upside-down.
  - Has trouble spacing words on a page. Starts writing in a straight line and then the words start slanting down the page.
  - Has poor and messy handwriting.
  - Makes many spelling mistakes or has trouble learning grammar rules.

- **LANGUAGE** HIGH RISK
  - Confuses symmetrical letters (b-d, p-q, s-z, p-b), or letters that sound similar (b-p, d-t).
  - Gives long and complicated explanations that don’t make sense.
  - Has trouble making and understanding rhymes.
  - Sometimes has trouble finding the right word to use, and uses lots of “filler” words.
  - Has trouble understanding what’s being explained.
  - Started talking correctly at about 3 years old or older.
Alex shows symptoms that suggest a significant deficiency in psychomotricity. The brain areas dedicated to motricity and decoding spatial information are not activated normally in children with dyslexia. This is why graphomotricity, the coordination of the fine muscles and spatial comprehension, are altered. This may cause poor handwriting, awkward movements, left-right confusion, and letter rotation.

The answers from the questionnaire related to psychomotricity and spatial skills that indicate that Alex has a high risk of dyslexia are:

**LATERALITY** HIGH RISK
- Has trouble with gross motor skills (ball games, balance, coordination).
- Has trouble following right-left instructions on the street or in open spaces.
- Has a hard time identifying their own right and left.
- Had a hard time learning right and left.

**GRAPHOMOTRICITY** HIGH RISK
- Has trouble cutting with scissors, using a hole punch, or other fine motor tasks with their hands.
- Shows little dexterity with their hands.

**SPATIAL ORGANIZATION** HIGH RISK
- Has trouble doing puzzles and games where they have to fit pieces into holes.
- Has a hard time understanding spatial concepts like “inside”, “next to”, or “underneath”.
- Has trouble reading and understanding maps.
Alex has some symptoms that suggest there are significant challenges in social relationships. Learning disorders, like dyslexia, can cause negative emotions like frustration, low self-esteem, sadness, or social isolation when they feel like they don’t learn "like everyone else" or that they have to "work extra hard".

**Interpersonal Relations (with others)**
- Seems distracted.
- Is unorganized.
- Sensitive to jokes or comments.
- Often irritable or easily upset.

**Intrapersonal Relations (with oneself)**
- Often avoids being with friends or going to social events.
- Has trouble making friends and keeping relationships.
- People usually say that they are "lazy".

**Motivation**
- Doesn’t seem to like school and doesn’t show enthusiasm to go.
- Feels overwhelmed when doing homework or taking exams.

The answers from the questionnaire related to social relationships that indicate that Alex has a high risk of dyslexia are:

- **INTERPERSONAL RELATIONS (WITH OTHERS)** HIGH RISK
- **INTRAPERSONAL RELATIONS (WITH YOURSELF)** HIGH RISK
- **MOTIVATION** HIGH RISK

**Alex’s Profile**
- Low Risk
- Moderate Risk
- High Risk
LEARNING AND DEVELOPMENT

HIGH RISK

Alex has symptoms that suggest significant challenges in learning and development. The learning difficulties caused by dyslexia may cause poor academic performance and difficulty acquiring the academic skills they need. Problems during childhood development, as well as family background, can be risk factors.

The answers from the questionnaire related to learning and development that indicate that Alex has a high risk of dyslexia are:

- CHILDHOOD DEVELOPMENT [HIGH RISK]
  - Has received extra help at school (speech therapy, psychotherapy, cognitive stimulation, etc.).
  - Has a visual, auditory, or intellectual handicap or has had some neurological damage.
  - Weighed less than 2.5 kg (5.5 lbs).
  - Wasn’t born at full-term.
  - There were complications during birth.
  - There were complications during pregnancy.

- FAMILY BACKGROUND [HIGH RISK]
  - Family history of giftedness.
  - Family history of academic difficulty.
  - Family history of learning disorders or reading difficulties.

- ACADEMIC COMPETENCES [HIGH RISK]
  - Has difficulty understanding mathematical problems.
  - Has trouble doing math and has difficulty understanding numbers and what they mean.
  - Problems became more apparent after entering elementary school.
  - Academic performance is below the average for their age.
  - Often makes mistakes when doing homework and has a hard time passing exams.
02 COGNITIVE RISKS

In this section, you will see a circular diagram next to each evaluated area, which will indicate the user’s score based on their percentile and normalized for their age and gender. For example, a score of 500 would be calculated depending on the user’s age group. CogniFit’s values are calculated in percentiles but are shown adjusted on a scale of 0-800. As such, the higher score, the better.

ALEX’S COGNITIVE PROFILE INDICATES A HIGH RISK OF DYSLEXIA

REASONING
8/800
Ability to efficiently use (organize, relate, etc.) acquired information.

MEMORY
41/800
Ability to retain and manipulate new information and recover past memories.

ATTENTION
246/800
The ability to filter distractions and concentrate on relevant information.

COORDINATION
8/800
The ability to efficiently and precisely carry out organized movements.

PERCEPTION
8/800
Ability to interpret stimuli from the environment.

LANGUAGE
8/800
Ability to understand and express verbal information (written, spoken).
Alex shows a cognitive profile that suggests a high risk of dyslexia. The results from the different tasks in the cognitive assessment highlight that Alex's areas of improvement are the areas of reasoning, memory, attention, coordination, perception and language. As such, Alex's cognitive pattern does not indicate any weak cognitive skills associated with dyslexia. As such, it is possible that Alex suffers from some degree of dyslexia. We recommend that you use this information to help make a more precise diagnosis.

**IMPORTANT** These results are not a diagnosis. This information cannot substitute a formal diagnosis given by a professional, but it can serve as a complementary tool to help make a comprehensive diagnosis.
### Planning
**Score Received:** 8
Alex has received scores that are compatible with a possible alteration in this skill. It is important to remember that planning can be a strong indicator of dyslexia. Planning is the ability to mentally organize the best way to reach a future goal, like organizing a story in your head in order to tell it to someone later. People with alterations in planning have more trouble structuring speeches and writing and reading text.

### Processing Speed
**Score Received:** 8
Alex has received scores in processing speed that are compatible with a possible alteration in this skill. It is important to keep in mind that processing speed can be a strong indicator of dyslexia. Processing speed is the ability to quickly and automatically process information. People with alterations in processing speed generally take longer to understand and process what they read and what they want to say or write. Slow auditory and verbal processing may cause problems when decoding letters, words, and sentences.

### Short-term Memory
**Score Received:** 8
Alex has received scores in short-term memory that are compatible with a possible alteration in this skill. It is important to remember that short-term memory can be a strong indicator of dyslexia. Short-term memory is the ability to maintain a small amount of information for a short amount of time, like when you remember the beginning of a sentence in order to understand the sentence as a whole. A problem with short-term memory can alter auditory comprehension, as we are not able to correctly retain the information that we hear.

### Visual Short-term Memory
**Score Received:** 8
Alex has received some scores in visual short-term memory that are compatible with a possible alteration in this skill. It is important to keep in mind that poor visual short-term memory is a strong indicator of dyslexia. Visual short-term memory is the ability to retain a small amount of visual information for a short period of time, like letters or words. A problem with visual short-term memory may alter reading comprehension, which makes it difficult to remember the beginning of a long sentence.
WORKING MEMORY
Score Received: 108
Alex has received scores that are compatible with an alteration in this ability. It is important to keep in mind that an alteration in working memory can be a strong indicator of dyslexia. Working memory is the ability to retain and manipulate necessary information to carry out complex tasks like language comprehension, learning, and reasoning. A deficient working memory may make it difficult to understand both written and spoken language.

ATTENTION

DIVIDED ATTENTION
Score Received: 149
Alex has received scores in divided attention that are compatible with a possible alteration of this cognitive ability. It is important to remember that an alteration in divided attention may be a strong indicator of dyslexia. Divided attention is the ability to pay attention to more than one stimuli or activity at a time, like listening to someone and writing at the same time. People with difficulties with divided attention consume more cognitive resources when doing two or more tasks at a time, which makes it difficult to listen to someone and take notes.

FOCUSED ATTENTION
Score Received: 343
Alex has received some scores that indicate that focused attention is below the expected scores for the age range, which may be indicative of dyslexia. Focused attention is the ability to pay attention to a stimulus or activity for a long period of time, like paying attention when someone is giving a speech. When you get distracted, you miss important information, which hinders comprehension of the activity. Children and adults with dyslexia are generally distracted easily and have a harder time doing tasks that require concentration.

COORDINATION

RESPONSE TIME
Score Received: 8
Alex has received scores in response time that are compatible with a possible alteration in this skill. It is important to keep in mind that response time can be a strong indicator of dyslexia. Response time is the ability to perceive and process a simple stimulus and respond to it correctly. People with slow response time generally have more difficulty writing.
Alex has obtained some scores in visual scanning that are compatible with a possible alteration in this skill. It is important to keep in mind that an alteration in visual scanning can be a strong indicator of dyslexia. Visual scanning is the ability to actively and efficiently search for relevant stimuli in your surroundings using sight, like when you detect letters as you read. Poor visual scanning may interfere with the detection of distinctive traits of each letter (b-d, for example), making comprehension difficult.

Alex has received scores in naming that are compatible with a possible alteration in this skill. It is important to remember that naming is a strong indicator of dyslexia. Naming is the ability to access a word from memory to name a certain concept, like when you easily remember the name of your street. A difficulty in naming may cause one to use “fillers” (imprecise words), or problems with reading comprehension.
EXECUTIVE FUNCTION AND DYSLEXIA

Dyslexia is more than a reading disorder. It involves a series of deficits in other sophisticated skills, like executive functions. Executive functions are a set of cognitive abilities that make it possible to regulate behavior and successfully attain specific goals. Dyslexia generally affects executive functions, which is why they are important to measure and assess. Working memory, planning, focused attention, and processing speed are all skills that make up our executive functions. An alteration in these executive functions, along with a central phonological language deficit, is understood to be the reason behind the difficulties related to the learning of reading and writing. Poor executive functions can lead to a number of difficulties, like paying attention in class, planning, or doing homework or other tasks.

IT IS POSSIBLE THAT ALEX:

WORKING MEMORY
- Has severe difficulty remembering information without using abbreviations.
- Unable to remember that they were saying if interrupted.

FOCUSED ATTENTION
- Has some trouble paying attention and is easily distracted.
- Does things quickly and carelessly, or slowly and incomplete.

PLANNING
- Presents significant difficulties calculating how much time a task will take.
- Shows significant problems knowing how to start a task.

PROCESSING SPEED
- Usually needs instructions repeated multiple times.
- Has a very hard time finding the right words for things.
Alex has received scores in some executive functions that indicate that there may be a possible alteration in some of these skills, which is a warning sign for dyslexia. The areas of executive functions that Alex needs to improve are working memory, planning, focused attention and processing speed. This is why we recommend that you use this information to make a more precise diagnosis.

**IMPORTANT** These results are not a diagnosis. This information cannot substitute a formal diagnosis given by a professional, but it can serve as a complementary tool to help make a comprehensive diagnosis.
CONCLUSIONS

Alex shows a high risk of dyslexia in Clinical symptoms and Cognitive risks. This means that it is possible that there is an important alteration due to dyslexia.

In addition to the interpretation of symptoms and cognitive profile assessed, the following criteria should be taken into account to ensure the validity of the diagnosis by a qualified professional:

**General criteria from the questionnaire that Alex responded YES to:**
- Is right-handed.
- Frequently uses a tablet or touchscreen.
- Frequently uses a computer mouse.

**General criteria from the questionnaire that Alex responded NO to:**
- Uses hearing aids.
- Uses glasses or contact lenses.

CONCLUSIONS

We suggest you make a more precise diagnosis, as the results of the tests indicate a high probability of dyslexia. Brain training may help improve cognitive symptoms of dyslexia and the cognitive abilities themselves. CogniFit has a series of scientifically validated and clinical cognitive activities to train the executive functions and other altered cognitive abilities related to dyslexia, making it possible to improve the learning of reading and writing. This can reduce the clinical symptoms of dyslexia.

Please make sure that all of the questions have been answered carefully and correctly and that the assessment was completed in a quiet room free from distractions, as this may alter results. The data in this report corresponds to a specific time in Alex’s life and may vary over time.

COMMENTS