



MINISTERSTVO ŠKOLSTVÍ,  
MLÁDEŽE A TĚLOVÝCHOVY



OP Vzdělávání  
pro konkurenceschopnost



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

## Laterality

### Home preparation

1. Try to explain what the following terms mean?

**BODY ASYMMETRIES**

**LATERALITY**

**DEXTERITY**

**SINISTERITY**

**AMBIDEXTERITY**

**CROSSED LATERALITY**

### In-class material

2. Now answer the following questions focused on Laterality diagnostics:

1. Why is it important to be sure of the child's type of laterality before the entrance to primary school?
2. Who can help to diagnose the laterality type of a child?
3. What diagnostic methods of laterality types are used in the Czech Republic?
4. Can you give any examples of tasks used to diagnose laterality type in the Laterality test by Matejcek and Zlab?
5. Do you know anybody who had any problems with his/her laterality type?

3. Read the article and fill in the missing words:

### *Human laterality*

rare

brain

minority

language

forced

reasons

decreases

dominant

right-handed

The majority of humans are \_\_\_\_\_ (1). Many are also right-sided in general (that is, they prefer to use their right eye, right foot and right ear if forced to make a choice between the two). The \_\_\_\_\_ (2) for this are not fully understood, but it is thought that because the left hemisphere of the \_\_\_\_\_ (3) controls the right side of the body, the right side is generally stronger; it is suggested that the left cerebral hemisphere is \_\_\_\_\_ (4) over the right in most humans because in 90-92% of all humans, the left hemisphere is the \_\_\_\_\_ (5) hemisphere..

When a person is \_\_\_\_\_(6) to use the hand opposite of the hand that they would naturally use, this is known as **forced laterality**, or more specifically **forced dextrality**. A study done by the Department of Neurology at Keele University, North Staffordshire Royal Infirmary suggests that forced dextrality may be part of the reason that the percentage of left-handed people \_\_\_\_\_(7) with the higher age groups.

Ambidexterity is when a person has approximately equal skill with both hands and/or both sides of the body. True ambidexterity is very \_\_\_\_\_(8). Although a small number of people can write competently with both hands and use both sides of their body well, even these people usually show preference for one side of their body over the other. However, this preference is not necessarily consistent for all activities. Some people may for example use their right hand for writing, and their left hand for playing racket sports and eating

Also, it is not uncommon that people preferring to use the right hand prefer to use the left leg, e.g. when kicking a ball. In many cases, this may be because they are disposed for left-handedness but have been trained for right-handedness.

An individual who is more dexterous with the right hand is called *right-handed*, and one who is more skilled with the left is said to be *left-handed*. A \_\_\_\_\_(9) of people are equally skilled with both hands, and are termed *ambidextrous*. People who demonstrate **awkwardness** with both hands are said to be **ambilevous** or **ambisinister**.

(based on data from [www.wikipedia.com](http://www.wikipedia.com))

### **After reading the article, match the following types of dexterity to their definitions:**

There are four main types of handedness:

- |                         |   |
|-------------------------|---|
| <i>Ambidexterity</i>    | is most common. .... people are more dexterous with their right hands when performing a task.   |
| <i>Left-handedness</i>  | is rare, although it can be learned. A true ..... person is able to do any task equally well with either hand. Those who learn it still tend to sway towards their originally dominant hand.  |
| <i>Cross-dominance</i>  | is a less common type of laterality. .... people are more dexterous with their left hands when performing a task. There are about 8–15% in society.   |
| <i>Right-handedness</i> | also known as <i>mixed-handedness</i> , is the ability to do different tasks better with different hands. For example, ..... persons might write better with their left hand but throw a ball more efficiently with their right hand. However, many writers define handedness by the hand used for writing, so mixed-handedness is often <b>neglected</b> . |

#### 4. Are there in your opinion any advantages or disadvantages of being left-handed?

Read the following paragraphs and add more advantages and disadvantages:

##### **Advantage in sports**

The advantage to players in one-on-one sports such as tennis, boxing, fencing or judo is that in a population containing perhaps 10% of left-handers and 90% of right-handers, the left-hander plays 90% of his or her games against right-handed opponents and is well practiced at dealing with this asymmetry. The right-hander plays 90% of their games **against** other right-handers — thus when confronted with a left-hander is less practiced. When a left-hander plays another left-hander, they are both likely to be at the same level of practice, as when right-handers play other right-handers. This explains why a disproportionately high number of left-handers are found in sports where direct one-on-one action predominates. In other sports such as golf, this advantage is not present since the one-on-one action is indirect; the handedness of one player has no effect on the other.

##### **Possible disadvantages in learning**

Although there is little association with children's school performance in regards to handedness, some studies have shown problems in language development in left-handers.[5] Research has shown that left-handers are more likely to have problems with reading and they also "...don't do as well on phonology (the sound system of language) tasks..." when compared with right-handers.

##### **Other advantages**

..

##### **Other disadvantages**

#### 5. Now watch a short video introducing famous left-handed people in history

(<http://www.youtube.com/watch?v=qT8qWldqaBE>)

Who is the most important left-handed person in our history according to your opinion?