

# Αγγλική Ορολογία

Ενότητα 9: Η Αγγλική Ορολογία των Διαταραχών Επικοινωνίας στην Αφασία & το ΣΔΗ.

Μελπομένη (Μελίνα) Νησιώτη









#### Ανοιχτά Ακαδημαϊκά Μαθήματα στο ΤΕΙ Ηπείρου





#### Τμήμα Λογοθεραπείας

#### Αγγλική Ορολογία

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M.Sc., Καθηγήτρια Εφαρμογών

Ιωάννινα, 2015













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- Το έργο υλοποιείται στο πλαίσιο του Επιχειρησιακού Προγράμματος «Εκπαίδευση και Δια Βίου Μάθηση» και συγχρηματοδοτείται από την Ευρωπαϊκή Ένωση (Ευρωπαϊκό Κοινωνικό Ταμείο) και από εθνικούς πόρους.
- Το έργο «**Ανοικτά Ακαδημαϊκά Μαθήματα στο ΤΕΙ Ηπείρου**» έχει χρηματοδοτήσει μόνο τη αναδιαμόρφωση του εκπαιδευτικού υλικού.
- Το παρόν εκπαιδευτικό υλικό έχει αναπτυχθεί στα πλαίσια του εκπαιδευτικού έργου του διδάσκοντα.











# Σκοποί ενότητας

- Εισαγωγή στο βασικό λεξιλόγιο που αναφέρεται στις διαταραχές της αφασίας και του συνδρόμου δεξιού ημισφαιρίου (ΣΔΗ).
- Η ανάπτυξή του γίνεται μέσω ασκήσεων ακρόασης (listening), αναγνωστικής κατανόησης επιστημονικών κειμένων (reading comprehension), συγγραφής (writing) και μετάφρασης (translation).





# Περιεχόμενα ενότητας

- Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension)
- Άσκηση Συγγραφή Περίληψης στην Αγγλική
   Γλώσσα Βασισμένη σε Κείμενο (Writing Abstract)
- Άσκηση Μετάφρασης (Translation)
- Άσκηση Ακρόασης (Listening)



# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension)





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (1 από 93)

 Please underline the terminology you can seek in the text, on the following templates.





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (2 από 93)

#### Overview

 Aphasia is an acquired neurogenic language disorder resulting from an injury to the brain, most typically the left hemisphere, that affects all language modalities. Aphasia is not a single disorder, but instead is a family of disorders that involve varying degrees of impairment in four primary areas: [1]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (3 από 93)

#### Overview

 Aphasia is an acquired neurogenic language disorder resulting from an injury to the brain, most typically the left hemisphere, that affects all language modalities. Aphasia is not a single disorder, but instead is a family of disorders that involve varying degrees of impairment in four primary areas: [1]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (4 από 93)

- spoken language expression
- spoken language comprehension,
- written expression, and
- reading comprehension. [1]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (5 από 93)

- spoken language expression
- spoken language comprehension,
- written expression, and
- reading comprehension. [1]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (6 από 93)

 A person with aphasia often has relatively intact nonlinguistic cognitive skills, such as memory and executive function skills, although these and other cognitive deficits may co-occur with aphasia. Sensory deficits such as auditory and visual agnosia and visual field deficits (e.g., hemianopia or visual field cuts) may also be present. [1]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (7 από 93)

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#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (8 από 93)

 Because categorizing aphasia subtypes can be difficult, there is debate over the terminology used to classify aphasia. While no single classification system is completely adequate, some common classifications of aphasia are based on the location of brain damage or the patterns of impaired language abilities in fluency of verbal expression, auditory comprehension, repetition, and word retrieval.[1]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (9 από 93)

 Because categorizing aphasia subtypes can be difficult, there is debate over the terminology used to classify aphasia. While no single classification system is completely adequate, some common classifications of aphasia are based on the location of brain damage or the patterns of impaired language abilities in fluency of verbal expression, auditory comprehension, repetition, and word retrieval.[1]



#### \*

#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (10 από 93)

 Sometimes the terms motor aphasia and sensory aphasia (or nonfluent and fluent aphasia) are used. See the common classifications of aphasia adapted from Aphasiology: Disorders and Clinical Practice (Davis, 2007). It should be noted that a person's symptoms may not fit neatly into a single aphasia type. Further, the initial presenting symptoms can change with recovery, and consequently, the classification that fits most accurately may shift. [1]



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# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (11 από 93)

 Sometimes the terms motor aphasia and sensory aphasia (or nonfluent and fluent aphasia) are used. See the common classifications of aphasia adapted from Aphasiology: Disorders and Clinical Practice (Davis, 2007). It should be noted that a person's symptoms may not fit neatly into a single aphasia type. Further, the initial presenting symptoms can change with recovery, and consequently, the classification that fits most accurately may shift. [1]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (12 από 93)

 This is particularly true as a person's communication improves. In addition, symptoms can co-occur with other speech and language impairments such as dysarthria and/or apraxia of speech, which can complicate assessment and treatment. The outcome of aphasia is difficult to predict given the wide variability of symptoms. Aphasia outcome varies significantly from person to person, depending upon the lesion location and the severity of the brain insult.

[1]



#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (13 από 93)

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### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (14 από 93)

 The most predictive indicator of long-term recovery is initial aphasia severity, along with lesion site and size (Plowman, Hentz, & Ellis, 2011). Other factors that are often considered regarding prognosis include the person's age, gender, education level, and other comorbidities. When examined more closely, however, these factors do not appear to be strong predictors of the extent of recovery. [1]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (15 από 93)

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#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (16 από 93)

#### Incidence and Prevalence

 The "incidence" of aphasia refers to the number of new cases identified in a specified time period. It is estimated that there are 80,000 new cases of aphasia per year in the United States (National Stroke Association, 2008). "Prevalence" of aphasia refers to the number of people who are living with aphasia in a given time period. [2]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (17 από 93)

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#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (18 από 93)

 The National Institute of Neurological Disorders and Stroke (NINDS) estimates that approximately 1 million people, or 1 in 250 in the United States today, suffer from aphasia (NINDS, n.d.). Fifteen percent of individuals under the age of 65 experience aphasia; this percentage increases to 43% for individuals 85 years of age and older (Engelter et al., 2006). [2]





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (19 από 93)

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# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (20 από 93)

No significant differences have been found in the incidence of aphasia in men and women. However, some data suggest differences may exist by type and severity of aphasia. For example, Wernicke's and global aphasia occur more commonly in women and Broca's aphasia occurs more commonly in men (Hier, Yoon, Mohr, & Price, 1994; National Aphasia Association, 2011).[2]





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (21 από 93)

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#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (22 από 93)

#### Signs and Symptoms

 Aphasia symptoms vary across individuals, with some of the variation being related to the neural regions that are damaged and to the extent of that damage. Signs and symptoms may or may not be present in individuals with aphasia and may vary in severity and level of disruption to communication. [3]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (23 από 93)

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### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (24 από 93)

 Signs and symptoms may also vary depending on the speaking situation. For example, a person may need to pause frequently to find words during a conversation that requires a higher level of complexity and precision, but then may have no apparent difficulties when exchanging small talk. Examples of common signs and symptoms of aphasia are listed as follow: [3]





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (25 από 93)

 Signs and symptoms may also vary depending on the speaking situation. For example, a person may need to pause frequently to find words during a conversation that requires a higher level of complexity and precision, but then may have no apparent difficulties when exchanging small talk. Examples of common signs and symptoms of aphasia are listed as follow: [3]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (26 από 93)

#### Verbal Expression Impairments

- Common verbal expression impairments include
  - difficulty finding words (anomia)
  - speaking with effort or haltingly
  - speaking in single words (e.g., names of objects)
  - speaking in short, fragmented phrases [3]





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (27 από 93)

#### Verbal Expression Impairments

- Common verbal expression impairments include
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  - speaking in single words (e.g., names of objects)
  - speaking in short, fragmented phrases [3]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (28 από 93)

- omitting smaller words like "the," "of," and "was" (telegraphic speech)
- putting words in the wrong order or making up words (e.g., jargon)
- substituting sounds and/or words (e.g., bed is called "table" or dishwasher a "wishdasher")
- fluently stringing together nonsense words and real words, but leaving out or including an insufficient amount of relevant content.
- Auditory Comprehension Impairments [3]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (29 από 93)

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# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (30 από 93)

Common auditory comprehension impairments include

- difficulty understanding spoken utterances
- providing unreliable answer to "yes/no" questions
- failing to understanding complex grammar (e.g., The dog was chased by the cat.)
- requiring extra time to understand spoken messages (e.g., like translating a foreign language) [3]



# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού **Κειμένου (Reading Comprehension) (31 από 93)**

Common auditory comprehension impairments include

- difficulty understanding spoken utterances
- providing unreliable answer to "yes/no" questions
- failing to understanding complex grammar (e.g., The dog was chased by the cat.)
- requiring extra time to understand spoken messages (e.g., like translating a foreign language) [3]





## Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (32 από 93)

- finding it very hard to follow fast speech (e.g., radio or television news)
- misinterpreting subtleties of language (e.g., takes the literal meaning of figurative speech such as "It's raining cats and dogs.")
- lacking awareness of errors.
- In addition, the person with aphasia may have similar (parallel) difficulties in written expression and reading comprehension. [3] 39





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (33 από 93)

- finding it very hard to follow fast speech (e.g., radio or television news)
- misinterpreting subtleties of language (e.g., takes the literal meaning of figurative speech such as "It's raining cats and dogs.")
- lacking awareness of errors.
- In addition, the person with aphasia may have similar (parallel) difficulties in written expression and reading comprehension. [3]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (34 από 93)

Reading Comprehension Impairments (Alexia)

- Common reading comprehension impairments include
  - difficulty comprehending written material and recognizing some words by sight
  - inability to sound out words and substituting associated words for a word
  - difficulty reading noncontent words (e.g., function words such as to, from, the).
  - Written Language Impairments (Agraphia) [3]



### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (35 από 93)

Reading Comprehension Impairments (Alexia)

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  - Written Language Impairments (Agraphia) [3]





## Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (36 από 93)

#### Common written language impairments include

- difficulty writing or copying letters, words, and sentences
- writing single words only
- substituting incorrect letters or words
- spelling or writing nonsense syllables or words
- writing run-on sentences that don't make sense
- writing sentences with incorrect grammar. [3]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (37 από 93)

#### Common written language impairments include

- difficulty writing or copying letters, words, and sentences
- writing single words only
- substituting incorrect letters or words
- spelling or writing nonsense syllables or words
- writing run-on sentences that don't make sense
- writing sentences with incorrect grammar. [3]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (38 από 93)

#### Causes

 Aphasia is caused by damage to the language centers of the brain. In most people, these language centers are located in the left hemisphere, but aphasia can also occur as a result of damage to the right hemisphere; this is often referred to as crossed aphasia to denote that the right hemisphere is language dominant in these individuals. Common causes of aphasia are: 4





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (39 από 93)

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#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (40 από 93)

- stroke
- ischemic: blockage that disrupts blood flow to a region of the brain
- hemorrhagic: a ruptured blood vessel that damages surrounding brain tissue
- traumatic brain injury, brain tumors or surgery
- brain infections
- other neurological diseases (e.g., dementia). [4]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (41 από 93)

- stroke
- ischemic: blockage that disrupts blood flow to a region of the brain
- hemorrhagic: a ruptured blood vessel that damages surrounding brain tissue
- traumatic brain injury, brain tumors or surgery
- brain infections
- other neurological diseases (e.g., dementia). [4]



#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (42 από 93)

 Stroke is the most common cause of aphasia. According to the National Aphasia Association (2011), about 25% to 40% of stroke survivors experience aphasia. Approximately 35%-40% of adults admitted to an acute care hospital with a diagnosis of stroke are diagnosed with aphasia by the time they are discharged (Dickey et al., 2010; Pedersen, Jorgensen, Raaschou, & Olsen, 1995).[4]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (43 από 93)

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# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (44 από 93)

#### Roles and Responsibilities

 Speech-language pathologists (SLPs) play a central role in the screening, assessment, diagnosis, and treatment of persons with aphasia. The professional roles and activities in speech-language pathology include clinical/educational services (diagnosis, assessment, planning, and treatment), prevention and advocacy, and education, administration, and research. [5]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού **Κειμένου (Reading Comprehension) (45 από 93)**

Roles and Responsibilities

 Speech-language pathologists (SLPs) play a central role in the screening, assessment, diagnosis, and treatment of persons with aphasia. The professional roles and activities in speech-language pathology include clinical/educational services (diagnosis, assessment, planning, and treatment), prevention and advocacy, and education, administration, and research. [5]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (46 από 93)

Appropriate roles for SLPs include, but are not limited to,

- providing prevention information to individuals and groups known to be at risk for aphasia
- educating other professionals on the needs of persons with aphasia and the role of SLPs in diagnosing and managing aphasia
- screening individuals who present with language and communication difficulties; determining the need for further assessment and/or referral for other services [5]



#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (47 από 93)

Appropriate roles for SLPs include, but are not limited to,

- providing prevention information to individuals and groups known to be at risk for aphasia
- educating other professionals on the needs of persons with aphasia and the role of SLPs in diagnosing and managing aphasia
- screening individuals who present with language and communication difficulties; determining the need for further assessment and/or referral for other services [5]



# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (48 από 93)

- conducting a culturally and linguistically relevant comprehensive assessment of language and communication
- diagnosing the presence or absence of aphasia
- referring to other professionals to rule out other conditions and to facilitate access to comprehensive services
- developing treatment plans, providing treatment, documenting progress, and determining appropriate dismissal criteria [5]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (49 από 93)

- conducting a culturally and linguistically relevant comprehensive assessment of language and communication
- diagnosing the presence or absence of aphasia
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- developing treatment plans, providing treatment, documenting progress, and determining appropriate dismissal criteria [5]





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (50 από 93)

- counseling persons with aphasia and their families regarding communication-related issues and providing education aimed at preventing further complications relating to aphasia
- remaining informed of research in the area of aphasia and helping advance the knowledge base related to the nature and treatment of aphasia [5]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (51 από 93)

- counseling persons with aphasia and their families regarding communication-related issues and providing education aimed at preventing further complications relating to aphasia
- remaining informed of research in the area of aphasia and helping advance the knowledge base related to the nature and treatment of aphasia [5]





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (52 από 93)

- advocating for individuals with aphasia and their families at the local, state, and national levels.
- consulting and collaborating with other professionals, family members, caregivers, and others to facilitate program development and to provide supervision, evaluation, and/or expert testimony, as appropriate <a>[5]</a>



## Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (53 από 93)

- advocating for individuals with aphasia and their families at the local, state, and national levels.
- consulting and collaborating with other professionals, family members, caregivers, and others to facilitate program development and to provide supervision, evaluation, and/or expert testimony, as appropriate [5]



# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (54 από 93)

Assessment (Screening)

 Screening does not provide a detailed description of the severity and characteristics of aphasia, but rather is a procedure for identifying the need for further assessment. Screening is an invaluable tool in the appropriate referral of persons with aphasia to speechlanguage pathology services and is an important first step in determining the need for treatment. It is conducted in the language(s) used by the person, and with sensitivity to cultural and linguistic diversity. [6] 61





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (55 από 93)

#### Assessment (Screening)

 Screening does not provide a detailed description of the severity and characteristics of aphasia, but rather is a procedure for identifying the need for further assessment. Screening is an invaluable tool in the appropriate referral of persons with aphasia to speechlanguage pathology services and is an important first step in determining the need for treatment. It is conducted in the language(s) used by the person, and with sensitivity to cultural and linguistic diversity. [6] 62





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (56 από 93)

 Screenings are completed by the SLP or other professional. Standardized and nonstandardized methods are used to screen oral motor functions, speech production skills, comprehension and production of spoken and written language, and cognitive aspects of communication.





# Άσκηση Αναγνωστική Κατανόηση Επιστημονικού **Κειμένου (Reading Comprehension) (57 από 93)**

 Screenings are completed by the SLP or other professional. Standardized and nonstandardized methods are used to screen oral motor functions, speech production skills, comprehension production of spoken and written language, and cognitive aspects of communication. [6]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (58 από 93)

 Screening typically focuses on body structures/functions, but may also address activities/participation contextual factors affecting communication International Classification of Functioning, Disability and Health [ICF] framework proposed by the World Health Organization [WHO], 2001). Screening may result in recommendations for rescreening; comprehensive speech, language, swallowing, or cognitivecommunication assessments; or referral for other examinations or services. [6] 65



#### είρου

#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (59 από 93)

 Screening typically focuses on body structures/functions, but may also address activities/participation and contextual factors affecting communication International Classification of Functioning, Disability and Health [ICF] framework proposed by the World Health Organization [WHO], 2001). Screening may result in recommendations for rescreening; comprehensive speech, language, swallowing, or cognitivecommunication assessments; or referral for other examinations or services. [6] 66





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (60 από 93)

#### **Treatment**

 Aphasia treatment is individualized to address the specific areas of need identified during assessment as well as the specific goals identified by the person with aphasia and his or her family. Additionally, treatment occurs in the language(s) used by the person with aphasia either by a bilingual SLP or with the use of trained interpreters, when necessary. In general, the aim of aphasia treatment includes: [7] 67





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (61 από 93)

#### **Treatment**

 Aphasia treatment is individualized to address the specific areas of need identified during assessment as well as the specific goals identified by the person with aphasia and his or her family. Additionally, treatment occurs in the language(s) used by the person with aphasia either by a bilingual SLP or with the use of trained interpreters, when necessary. In general, the aim of aphasia treatment includes: [7] 68





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (62 από 93)

- restoring language abilities by addressing all impaired communication modalities and focusing on training in those areas in which a person makes errors
- strengthening intact modalities and behaviors to support and augment communication
- compensating for language impairments by teaching strategies and by incorporating augmentative and alternative methods of communication if they help to improve communication [7]



### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (63 από 93)

- restoring language abilities by addressing all impaired communication modalities and focusing on training in those areas in which a person makes errors
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- compensating for language impairments by teaching strategies and by incorporating augmentative and alternative methods of communication if they help to improve communication [7]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (64 από 93)

- training family and caregivers to effectively communicate with persons with aphasia using communication supports and strategies, in order to maximize communication competence
- facilitating generalization of skills and strategies in all communicative contexts
- educating persons with aphasia, their families, caregivers, and other significant persons about the nature of spoken and/or written language disorders, the course of treatment, and prognosis for recovery. [7]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (65 από 93)

- training family and caregivers to effectively communicate with persons with aphasia using communication supports and strategies, in order to maximize communication competence
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#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (66 από 93)

Because of the complexity and nature of aphasia, and based on the individual's language profile and values, interventions vary. There are many ways to organize treatment options, including by aphasia type or by primary signs and symptoms. However, since most individuals with aphasia present with a variety of communication deficits and bring different backgrounds and unique needs to the treatment situation, treatments here are organized using the framework proposed in the WHO's ICF framework (2001). [7]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (67 από 93)

Because of the complexity and nature of aphasia, and based on the individual's language profile and values, interventions vary. There are many ways to organize treatment options, including by aphasia type or by primary signs and symptoms. However, since most individuals with aphasia present with a variety of communication deficits and bring different backgrounds and unique needs to the treatment situation, treatments here are organized using the framework proposed in the WHO's ICF framework (2001). [7]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (68 από 93)

 Some of the aphasia treatments described directly address body function impairments (e.g., difficulty formulating syntactically correct sentences, finding words, comprehending words or sentences), while others focus on communication activity participation (e.g., working directly on functional tasks or situations in everyday activities such as answering the phone, completing paperwork, or ordering food).



## Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (69 από 93)

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#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (70 από 93)

Regardless of the approach used, the ultimate goal of aphasia treatment is to maximize the individual's quality of life and communication success, using whichever approach or combination of approaches meets the needs and values of that individual. It is important to note that while the interventions below are categorized by a specific ICF domain impairment-based treatment), the outcomes of treatment may extend across domains (Simmons-Mackie & Kagan, 2007). [7]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (71 από 93)

 Regardless of the approach used, the ultimate goal of aphasia treatment is to maximize the individual's quality of life and communication success, using whichever approach or combination of approaches meets the needs and values of that individual. It is important to note that while the interventions below are categorized by a specific ICF domain (e.g., impairment-based treatment), the outcomes of treatment may extend across domains (Simmons-Mackie & Kagan, 2007). [7]



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#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (72 από 93)

What is right hemisphere brain damage?

 Right hemisphere brain damage (RHD) is damage to the right side of the brain. The brain is made up of two sides or hemispheres. Each hemisphere is responsible for different body functions and skills. In most people, the left side of the brain contains the person's language functions. The right side contributes to a number of functions, such as attention, memory, reasoning, and problem solving (all of which contribute to effective communication). [8] 79



#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (73 από 93)

What is right hemisphere brain damage?

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### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (74 από 93)

 Damage to the right hemisphere of the brain may lead to disruption of these cognitive processes, resulting in unique cognitive and communication problems. In many cases, the person with right brain damage is not aware of the problems that he or she is experiencing (anosognosia).





## Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (75 από 93)

 Damage to the right hemisphere of the brain may lead to disruption of these cognitive processes, resulting in unique cognitive and communication problems. In many cases, the person with right brain damage is not aware of the problems that he or she is experiencing (anosognosia).[8]



#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (76 από 93)

What are some signs or symptoms of right hemisphere brain damage?

- Cognitive-communication problems that can occur from RHD include difficulty with the following:
  - Attention: Difficulty concentrating on a task or focusing on what is said or seen.
  - Reasoning and problem solving: Difficulty identifying that there is a problem (e.g., ran out of medication) and generating solutions (e.g., call the pharmacy). [8]





## Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (77 από 93)

What are some signs or symptoms of right hemisphere brain damage?

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  - Attention: Difficulty concentrating on a task or focusing on what is said or seen.
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#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (78 από 93)

- Perception: Visual perception deficits causing a person to have difficulty perceiving and processing any information on the left visual field (left-sided neglect). For example, individuals with RHD may have difficulty with reading words on the left side of a page, eating food on the left side of their plate, or acknowledging the left side of their body.
- Orientation: Difficulty recalling the date, time, or place. The individual may also be disoriented to self, meaning that he/she cannot correctly recall personal information, such as birth date, age, or family names. [8]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (79 από 93)

- Perception: Visual perception deficits causing a person to have difficulty perceiving and processing any information on the left visual field (left-sided neglect). For example, individuals with RHD may have difficulty with reading words on the left side of a page, eating food on the left side of their plate, or acknowledging the left side of their body.
- Orientation: Difficulty recalling the date, time, or place. The individual may also be disoriented to self, meaning that he/she cannot correctly recall personal information, such as birth date, age, or family names. [8]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (80 από 93)

- Social communication (pragmatics): Difficulty interpreting abstract language such as metaphors, making inferences, and understanding jokes; and problems understanding nonverbal cues and following the rules of communication (e.g., saying inappropriate things, not using facial expressions, talking at the wrong time).
- Memory: Difficulty recalling previously learned information and learning new information. [8]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (81 από 93)

- Social communication (pragmatics): Difficulty interpreting abstract language such as metaphors, making inferences, and understanding jokes; and problems understanding nonverbal cues and following the rules of communication (e.g., saying inappropriate things, not using facial expressions, talking at the wrong time).
- Memory: Difficulty recalling previously learned information and learning new information. [8]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (82 από 93)

- Organization: Difficulty with systematically arranging information and planning, which is often reflected in communication difficulties, such as trouble telling a story with events in the right order, giving directions, or maintaining a topic during conversation.
- Insight: Difficulty recognizing problems and their impact on daily functioning. [8]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (83 από 93)

- Organization: Difficulty with systematically arranging information and planning, which is often reflected in communication difficulties, such as trouble telling a story with events in the right order, giving directions, or maintaining a topic during conversation.
- Insight: Difficulty recognizing problems and their impact on daily functioning. [8]



#### \*

## Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (84 από 93)

How are cognitive-communication problems following right hemisphere brain damage diagnosed?

• An SLP will complete a variety of formal and informal evaluation procedures. Specifically, the person's language (comprehension and expression) and cognitive processes (attention, memory, reasoning, problem solving) will be examined. The nature and severity of the cognitive-communication problem will depend on the extent of damage to the brain. [8]



### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (85 από 93)

How are cognitive-communication problems following right hemisphere brain damage diagnosed?

 An SLP will complete a variety of formal and informal evaluation procedures. Specifically, the person's language (comprehension and expression) and cognitive processes (attention, memory, reasoning, problem solving) will be examined. The nature and severity of the cognitive-communication problem will depend on the extent of damage to the brain. [8]





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (86 από 93)

What treatment is available for individuals with right hemisphere brain damage?

 A person with right hemisphere brain damage should see an SLP, a professional trained to work with people with communication disorders, in addition to his or her doctor. The SLP will work with the person and develop a treatment plan designed to improve his or her cognitive-communication abilities. [8]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (87 από 93)

What treatment is available for individuals with right hemisphere brain damage?

 A person with right hemisphere brain damage should see an SLP, a professional trained to work with people with communication disorders, in addition to his or her doctor. The SLP will work with the person and develop a treatment plan designed to improve his or her cognitive-communication abilities. [8]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (88 από 93)

How effective are treatments for right hemisphere brain damage?

 ASHA has developed a treatment efficacy summary on right hemisphere brain damage that describes evidence about how well treatment works. This summary is useful not only to individuals with right hemisphere brain damage and their caregivers but also to insurance companies considering payment for much-needed services for RHD. [8]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (89 από 93)

How effective are treatments for right hemisphere brain damage?

 ASHA has developed a treatment efficacy summary on right hemisphere brain damage that describes evidence about how well treatment works. This summary is useful not only to individuals with right hemisphere brain damage and their caregivers but also to insurance companies considering payment for much-needed services for RHD. [8]





### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (90 από 93)

How can I communicate more effectively with a person with right hemisphere brain damage?

- Ask questions and use reminders to keep the individual on topic.
- Avoid sarcasm, metaphors, etc., when speaking to the individual.
- Provide a consistent routine every day.





#### Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (91 από 93)

How can I communicate more effectively with a person with right hemisphere brain damage?

- Ask questions and use reminders to keep the individual on topic.
- Avoid sarcasm, metaphors, etc., when speaking to the individual.
- Provide a consistent routine every day. [8]





## Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (92 από 93)

- Break down instructions into small steps and repeat directions as needed.
- Decrease distractions when communicating.
- Provide appropriate supervision to ensure the person's safety.
- Stand to the person's right side and place objects to the person's right if he or she is experiencing left-side neglect.
- Use calendars, clocks, and notepads to remind the person of important information. [8]



## Άσκηση Αναγνωστική Κατανόηση Επιστημονικού Κειμένου (Reading Comprehension) (93 από 93)

- Break down instructions into small steps and repeat directions as needed.
- Decrease distractions when communicating.
- Provide appropriate supervision to ensure the person's safety.
- Stand to the person's right side and place objects to the person's right if he or she is experiencing left-side neglect.
- Use calendars, clocks, and notepads to remind the person of important information. [8]





#### Ερωτήσεις (Students Questions)

- 1. What are the symptoms that must be treated during therapy?
- 2. What are the symptoms of this disorder?
- 3. What is the impact of the disorder to patient's life?
- 4. Is there a final cure to this disorder or we just cope with it for life time?
- 5. In text what are the to evaluation and diagnostic procedures?



# Άσκηση Συγγραφή Περίληψης στην Αγγλική Γλώσσα Βασισμένη σε Κείμενο (Writing Abstract)





## Άσκηση Συγγραφή Περίληψης στην Αγγλική Γλώσσα Βασισμένη σε Κείμενο (Writing Abstract)

Please make a summary/abstract of the text given in templates No 89 till No 93.



# Άσκηση Μετάφρασης (Translation)





#### Άσκηση Μετάφρασης (Translation)

Please translate templates No 2 till No 26.



# Άσκηση Ακρόασης (Listening)





#### Άσκηση Ακρόασης (Listening) (1 από 3)

 Speech-Language Therapy: Working with a Patient with Fluent Aphasia

https://www.youtube.com/watch?v=B1SBFUgluK0

PACE treatment demonstration for Wernicke's Aphasia

https://www.youtube.com/watch?v=8Q1KNcQ8EH0





#### Άσκηση Ακρόασης (Listening) (2 από 3)

- 1. Please collect all the terminology you can here during this video.
- 2. What is the end point of this video?
- 3. What are the techniques that there used during therapy?
- 4. What are the symptoms of this disorder?
- 5. What is the impact of the disorder to client's life?
- 6. What are the causes of this disorder?





#### Άσκηση Ακρόασης (Listening) (3 από 3)

- 7. What are the clinical symptoms of this disorder?
- 8. Is there a final cure to this disorder or we just cope with it for life time?
- 9. In this video the speakers referred to evaluation and diagnostic procedures?
- 10. What are the benefits of speech and language therapy upon the disorder mentioned in these videos?





# Αναφορές Κειμένων

- 1. <a href="http://www.asha.org/Practice-Portal/Clinical-Topics/Aphasia/">http://www.asha.org/Practice-Portal/Clinical-Topics/Aphasia/</a>
- 2. <a href="http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Incidence">http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Incidence</a>
  <a href="e-e\_and\_Prevalence">e\_and\_Prevalence</a>
- 3. <a href="http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Signs\_a">http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Signs\_a</a> <a href="mailto:nd\_Symptoms">nd\_Symptoms</a>
- 4. <a href="http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Causes">http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Causes</a>
- 5. <a href="http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Roles\_a">http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Roles\_a</a> <a href="mailto:nd\_Responsibilities">nd\_Responsibilities</a>
- 6. <a href="http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Assessment">http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Assessment</a> <a href="mailto:ent">ent</a>
- 7. <a href="http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Treatme">http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=Treatme</a>
  <a href="mailto:nt-pubme">nt</a>
- 8. <a href="http://www.asha.org/public/speech/disorders/RightBrainDamage/">http://www.asha.org/public/speech/disorders/RightBrainDamage/</a>
- 9. <a href="http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=References">http://www.asha.org/PRPSpecificTopic.aspx?folderid=8589934663&section=References</a>



# Βιβλιογραφία (1 από 2)

- Davis, G. A. (2007). Aphasiology: Disorders and clinical practice (2nd ed.). Needham Heights, MA: Allyn & Bacon.
- Dickey, L., Kagan, A., Lindsay, M. P., Fang, J., Rowland, A., & Black, S. (2010). Incidence and profile of inpatient stroke-induced aphasia in Ontario, Canada. *Archives of Physical Medicine and Rehabilitation*, 91, 196-202.
- Engelter, S. T., Gostynski, M., Papa, S., Maya, F., Claudia, B., Vladeta, A.G., ... Phillipe, A. L. (2006). Epidemiology of aphasia attributable to first ischemic stroke: Incidence, severity, fluency, etiology, and thrombolysis. Stroke, *37*, 1379-1384
- Framework for Outcome Measurement (FROM). Aphasia Institute. Toronto, Ontario, Canada. OR Kagan, A., Simmons-Mackie, N., Rowland, A., Huijbregts, M., Shumway, E., McEwen, S., ... & Sharp, S. (2008). Counting what counts: A framework for capturing real-life outcomes of aphasia intervention. *Aphasiaology*, 22(3), 259-280.
- Hier, D. B., Yoon, W. B., Mohr, J. P. & Price, T. R. (1994). Gender and aphasia in the stroke bank. *Brain and Language*, *47* , 155-167.
- Limited English Proficiency A Federal Interagency Website (2013). Available from www.lep.gov National Aphasia Association (2011). www.aphasia.org





## Βιβλιογραφία (2 από 2)

- National Institute of Neurological Disorders and Stroke. (n.d.). *NINDS aphasia information page.* Retrieved from <a href="http://www.ninds.nih.gov/disorders/aphasia/aphasia.htm">http://www.ninds.nih.gov/disorders/aphasia/aphasia.htm</a>
- National Stroke Association. (2008). <a href="http://www.stroke.org">http://www.stroke.org</a>
- National Stroke Foundation (2010). *Clinical guidelines for acute stroke management 2010.* Melbourne, Australia: Author.
- Pedersen, P. M., Jorgensen, H. S., Raaschou, H. O., & Olsen, T. S. (1995). Aphasia in acute stroke: Incidence, determinants, and recovery. *Annals of Neurology, 38,* 659-666.
- Plowman, E., Hentz, B., & Ellis, C. (2012). Post-stroke aphasia prognosis: A review of patient-related and stroke-related factors. *Journal of Evaluation in Clinical Practice*, 18, 689-694.
- Simmons-Mackie, N., & Kagan, A. (2007). Application of the ICF in aphasia. *Seminars in Speech and Language, 28,* 244-253.
- Simmons-Mackie, N., Raymer, A., Armstrong, E., Holland, A., & Cherney, L. R. (2010). Communication partner training in aphasia: A systematic review. *Archives of Physical Medicine and Rehabilitation*, *91*, 1814-1837.
- Management of Stroke Rehabilitation Working Group (2010). VA/DOD clinical practice guideline for the management of stroke rehabilitation. *Journal of Rehabilitation Research & Development, 47(9),* 1-43.
- World Health Organization. (2001). *International classification of functioning, disability and health.* Geneva, Switzerland: Author.





Νησιώτη Μ. (2015). Αγγλική Ορολογία. ΤΕΙ Ηπείρου. Διαθέσιμο από:

http://eclass.teiep.gr/courses/LOGO129/



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# Τέλος Ενότητας

Επεξεργασία: Ταφιάδης Διονύσιος

Ιωάννινα, 2015











# Σημειώματα





# Διατήρηση Σημειωμάτων

Οποιαδήποτε αναπαραγωγή ή διασκευή του υλικού θα πρέπει να συμπεριλαμβάνει:

- το Σημείωμα Αναφοράς
- το Σημείωμα Αδειοδότησης
- τη Δήλωση Διατήρησης Σημειωμάτων
- το Σημείωμα Χρήσης Έργων Τρίτων (εφόσον υπάρχει)

μαζί με τους συνοδευόμενους υπερσυνδέσμους.

# Τέλος Ενότητας







