

# Csf syndromes

Template:Zkontrolováno

When interpreting the number of cells in the cerebrospinal fluid and the values of the total protein concentration in the cerebrospinal fluid, the following syndromes are described:

- **Syndrome of proteinocytological dissociation** - increased concentration of total proteins (hyperproteinorachia) and normal number of elements (oligocytosis) - a typical finding for blockage of cerebrospinal fluid channels, e.g. by a tumor, sometimes in multiple sclerosis and in the terminal phase of inflammation.
- **Syndrome of proteinocytological association** - increased concentration of total protein (hyperproteinorachia) and multiplication of elements (pleocytosis). It typically occurs in neuroinfections.
- **Cytoprotein dissociation syndrome** - increased number of elements (pleocytosis) and normal protein concentration (normoproteinorachia) - a frequent finding in the initial phase of inflammation.

Differential diagnosis of cerebrospinal fluid findings in the most common infectious diseases of the CNS						
Illness	Number of cells in µl	Cell type	Total protein	Glucose	Chlorides	Cultivation
Acute bacterial meningitis	500-20 000	no	↑↑	↓ to ↓↓	norm	+
Acute viral meningitis	50-1000	lym, mono	(↑)	(↓)	norm	(+)
Chronic CNS infection	↑↑	lym, mono	↑↑	↓↓	norm	
TB	50-1000	lym, neu	↑↑	↓↓	↓	+
Brain abscess	5-100	no, mono	↑↑	norm	norm	-
Viral encephalitis	5-100	mono	(↑)	norm	norm	-
Acute polyradiculoneuritis	norm	mono	↑↑	norm	norm	-

Added according to: {{#switch: book

|book =

*Incomplete publication citation.* LOBOVSKÁ, Anna. *Infectious diseases*. Prague : Karolinum, 2002. 978-80-7262-438-6.

|collection =

*Incomplete citation of contribution in proceedings.* LOBOVSKÁ, Anna. *Infectious diseases*. Prague : Karolinum, 2002. {{#if: 80-246-0116-8 |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* LOBOVSKÁ, Anna. 2002, year 2002,

|web =

*Incomplete site citation.* LOBOVSKÁ, Anna. Karolinum, ©2002.

|cd =

*Incomplete carrier citation.* LOBOVSKÁ, Anna. Karolinum, ©2002.

|db =

*Incomplete database citation.* Karolinum, ©2002.

|corporate\_literature =

LOBOVSKÁ, Anna. *Infectious diseases*. Prague : Karolinum, 2002. 978-80-7262-438-6} }

## Links

- ws: Likvorové syndromy

## Related Articles

- Cerebrospinal fluid

- Biochemical examination of cerebrospinal fluid
- Proteins in cerebrospinal fluid
- Spectrophotometry of cerebrospinal fluid
- Cytological examination of cerebrospinal fluid

## External links

- {{#switch: web

|book =

*Incomplete publication citation.*, C. ANDRÝS and B FRIEDECKÝ, et al 2005. Also available from <<http://www.csck.cz/csck.php?pg=doporuceni--vysetrovani-mozkomisniho-moku>>.

|collection =

*Incomplete citation of contribution in proceedings.*, C. ANDRÝS and B FRIEDECKÝ, et al. 2005. Also available from <<http://www.csck.cz/csck.php?pg=doporuceni--vysetrovani-mozkomisniho-moku>>. {{#if: |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.*, C. ANDRÝS and B FRIEDECKÝ, et al. Recommendations of the Czech Society of Clinical Biochemistry and the Czech Society of Allergology and Clinical Immunology – Examination of cerebrospinal fluid. 2005, year 2005, also available from <<http://www.csck.cz/csck.php?pg=doporuceni--vysetrovani-mozkomisniho-moku>>.

|web =

, C. ANDRÝS and B FRIEDECKÝ, et al. Recommendations of the Czech Society of Clinical Biochemistry and the Czech Society of Allergology and Clinical Immunology – Examination of cerebrospinal fluid [online]. ©2005. Last revision 2005, [cit. 08/09/2009]. <<http://www.csck.cz/csck.php?pg=doporuceni--vysetrovani-mozkomisniho-moku>>.

|cd =

, C. ANDRÝS and B FRIEDECKÝ, et al. Recommendations of the Czech Society of Clinical Biochemistry and the Czech Society of Allergology and Clinical Immunology – Examination of cerebrospinal fluid [CD/DVD]. ©2005. Last revision 2005, [cit. 08/09/2009].

|db =

*Incomplete database citation.* Recommendations of the Czech Society of Clinical Biochemistry and the Czech Society of Allergology and Clinical Immunology – Examination of cerebrospinal fluid [database]. ©2005. Last revision 2005, [cit. 08/09/2009]. <<http://www.csck.cz/csck.php?pg=doporuceni--vysetrovani-mozkomisniho-moku>>.

|corporate\_literature =

*Incomplete citation of company literature.*, C. ANDRÝS and B FRIEDECKÝ, et al. 2005. Also available from <<http://www.csck.cz/csck.php?pg=doporuceni--vysetrovani-mozkomisniho-moku>>. legislative\_document =  
*Incomplete citation of legislative document.* 2005. Also available from URL <<http://www.csck.cz/csck.php?pg=doporuceni--vysetrovani-mozkomisniho-moku>>.

- {{#switch: web

|book =

*Incomplete publication citation.* PURPLE, L. and M VEJRAŽKA 2005. Also available from <<https://el.lf1.cuni.cz>>.

|collection =

*Incomplete citation of contribution in proceedings.* PURPLE, L. and M VEJRAŽKA. 2005. Also available from <<https://el.lf1.cuni.cz>>. {{#if: |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* PURPLE, L. and M VEJRAŽKA. Basic examination of cerebrospinal fluid. 2005, year 2005, also available from <<https://el.lf1.cuni.cz>>.

|web =

PURPLE, L. and M VEJRAŽKA. Basic examination of cerebrospinal fluid [online]. ©2005. Last revision 2008, [cit. 08/09/2009]. <<https://el.lf1.cuni.cz>>.

|cd =

PURPLE, L. and M VEJRAŽKA. Basic examination of cerebrospinal fluid [CD/DVD]. ©2005. Last revision 2008, [cit. 08/09/2009].

|db =

*Incomplete database citation.* Basic examination of cerebrospinal fluid [database]. ©2005. Last revision 2008, [cit. 08/09/2009]. <<https://el.lf1.cuni.cz>>.

## |corporate\_literature =

*Incomplete citation of company literature.* PURPLE, L. and M VEJRAŽKA. 2005. Also available from <<https://el.lf1.cuni.cz>>. legislative\_document =  
*Incomplete citation of legislative document.* 2005. Also available from URL <<https://el.lf1.cuni.cz>>.

## References

- {{#switch: book

### |book =

*Incomplete publication citation.* , et al. *Cerebrospinal fluid cytology (CD-ROM)*. Prague : SEKK, 2000.

### |collection =

*Incomplete citation of contribution in proceedings.* , et al. *Cerebrospinal fluid cytology (CD-ROM)*. Prague : SEKK, 2000. {{#if: - |  
|article =  
*Incomplete article citation.* , et al. 2000, year 2000,

### |web =

*Incomplete site citation.* , et al. SEKK, ©2000.

### |cd =

*Incomplete carrier citation.* , et al. SEKK, ©2000.

### |db =

*Incomplete database citation.* SEKK, ©2000.

## |corporate\_literature =

, et al. *Cerebrospinal fluid cytology (CD-ROM)*. Prague : SEKK, 2000.

- {{#switch: book

### |book =

*Incomplete publication citation.* AMBLER, Z, J BEDNÁŘÍK and E RUŽIČKA. *Clinical neurology – general part*. Prague : Triton, 2004. 978-80-7262-438-6.

### |collection =

*Incomplete citation of contribution in proceedings.* AMBLER, Z, J BEDNÁŘÍK and E RUŽIČKA. *Clinical neurology – general part*. Prague : Triton, 2004. {{#if: 80-7254-556-6 |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* AMBLER, Z, J BEDNÁŘÍK and E RUŽIČKA. 2004, year 2004,

### |web =

*Incomplete site citation.* AMBLER, Z, J BEDNÁŘÍK and E RUŽIČKA. Triton, ©2004.

### |cd =

*Incomplete carrier citation.* AMBLER, Z, J BEDNÁŘÍK and E RUŽIČKA. Triton, ©2004.

### |db =

*Incomplete database citation.* Triton, ©2004.

## |corporate\_literature =

■ {{#switch: book

|book =

*Incomplete publication citation.* GLOSOVÁ, L. *Cytological atlas of cerebrospinal fluid*. Prague : Galen, 1998. 978-80-7262-438-6.

|collection =

*Incomplete citation of contribution in proceedings.* GLOSOVÁ, L. *Cytological atlas of cerebrospinal fluid*. Prague : Galen, 1998. {{ #if: 80-85824-70-1 |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* GLOSOVÁ, L. 1998, year 1998,

|web =

*Incomplete site citation.* GLOSOVÁ, L. Galen, ©1998.

|cd =

*Incomplete carrier citation.* GLOSOVÁ, L. Galen, ©1998.

|db =

*Incomplete database citation.* Galen, ©1998.

|corporate\_literature =

GLOSOVÁ, L. *Cytological atlas of cerebrospinal fluid*. Prague : Galen, 1998. 978-80-7262-438-6 } }

■ {{#switch: book

|book =

*Incomplete publication citation.* KALA, M. and J MAREŠ. *Lumbar puncture and cerebrospinal fluid*. Prague : Galen, 2008. 978-80-7262-438-6.

|collection =

*Incomplete citation of contribution in proceedings.* KALA, M. and J MAREŠ. *Lumbar puncture and cerebrospinal fluid*. Prague : Galen, 2008. {{ #if: 978-80-7262-568-0 |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* KALA, M. and J MAREŠ. 2008, year 2008,

|web =

*Incomplete site citation.* KALA, M. and J MAREŠ. Galen, ©2008.

|cd =

*Incomplete carrier citation.* KALA, M. and J MAREŠ. Galen, ©2008.

|db =

*Incomplete database citation.* Galen, ©2008.

|corporate\_literature =

KALA, M. and J MAREŠ. *Lumbar puncture and cerebrospinal fluid*. Prague : Galen, 2008. 978-80-7262-438-6 } }

■ {{#switch: book

|book =

*Incomplete publication citation.* SHROVETIDE, J. *Clinical Biochemistry. Requesting and evaluation of biochemical examinations I. and II. part*. Prague : Karolinum, 1998. 978-80-7262-438-6.

|collection =

*Incomplete citation of contribution in proceedings.* SHROVETIDE, J. *Clinical Biochemistry. Requesting and evaluation of biochemical examinations I. and II. part.* Prague : Karolinum, 1998. {{#if: 80-7184-650-3 |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* SHROVETIDE, J. 1998, year 1998,

|web =

*Incomplete site citation.* SHROVETIDE, J. Karolinum, ©1998.

|cd =

*Incomplete carrier citation.* SHROVETIDE, J. Karolinum, ©1998.

|db =

*Incomplete database citation.* Karolinum, ©1998.

|corporate\_literature =

SHROVETIDE, J. *Clinical Biochemistry. Requesting and evaluation of biochemical examinations I. and II. part.* Prague : Karolinum, 1998.  
978-80-7262-438-6} }

- {{#switch: book

|book =

*Incomplete publication citation.* OBLIVIOUS, S, E RUŽIČKA and J QUIET, et al. *Neurology.* Prague : Galen, 2005. 978-80-7262-438-6.

|collection =

*Incomplete citation of contribution in proceedings.* OBLIVIOUS, S, E RUŽIČKA and J QUIET, et al. *Neurology.* Prague : Galen, 2005. {{#if: 80-7262-160-2 |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* OBLIVIOUS, S, E RUŽIČKA and J QUIET, et al. 2005, year 2005,

|web =

*Incomplete site citation.* OBLIVIOUS, S, E RUŽIČKA and J QUIET, et al. Galen, ©2005.

|cd =

*Incomplete carrier citation.* OBLIVIOUS, S, E RUŽIČKA and J QUIET, et al. Galen, ©2005.

|db =

*Incomplete database citation.* Galen, ©2005.

|corporate\_literature =

OBLIVIOUS, S, E RUŽIČKA and J QUIET, et al. *Neurology.* Prague : Galen, 2005. 978-80-7262-438-6} }

- {{#switch: book

|book =

*Incomplete publication citation.* SCHNEIDERKA, Peter, et al. *Chapters in Clinical Biochemistry.* Prague : Karolinum, 2004. 978-80-7262-438-6.

|collection =

*Incomplete citation of contribution in proceedings.* SCHNEIDERKA, Peter, et al. *Chapters in Clinical Biochemistry.* Prague : Karolinum, 2004. {{#if: 80-246-0678-X |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* SCHNEIDERKA, Peter, et al. 2004, year 2004,

|web =

*Incomplete site citation.* SCHNEIDERKA, Peter, et al. Karolinum, ©2004.

|cd =

*Incomplete carrier citation.* SCHNEIDERKA, Peter, et al. Karolinum, ©2004.

|db =

*Incomplete database citation.* Karolinum, ©2004.

|corporate\_literature =

SCHNEIDERKA, Peter, et al. *Chapters in Clinical Biochemistry*. Prague : Karolinum, 2004. 978-80-7262-438-6} }

- {{#switch: book

|book =

*Incomplete publication citation.* , et al Prague : Galen, 2006. 329 s. pp. 276-277. 978-80-7262-438-6.

|collection =

*Incomplete citation of contribution in proceedings.* , et al. Prague : Galen, 2006. 329 s. pp. 276-277. {{#if: 80-7262-324-9 |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* , et al. 2006, year 2006, pp. 276-277,

|web =

*Incomplete site citation.* , et al. Galen, ©2006.

|cd =

*Incomplete carrier citation.* , et al. Galen, ©2006.

|db =

*Incomplete database citation.* Galen, ©2006.

|corporate\_literature =

*Incomplete citation of company literature.* , et al. Prague : Galen, 2006. 329 s. 978-80-7262-438-6} }, s. 276-277.

- {{#switch: book

|book =

*Incomplete publication citation.* ŠTERN, P, et al. *General and clinical biochemistry for bachelor's degree programs*. Prague : Karolinum, 2005. 978-80-7262-438-6.

|collection =

*Incomplete citation of contribution in proceedings.* ŠTERN, P, et al. *General and clinical biochemistry for bachelor's degree programs*. Prague : Karolinum, 2005. {{#if: 978-80-246-1025-2 |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* ŠTERN, P, et al. 2005, year 2005,

|web =

*Incomplete site citation.* ŠTERN, P, et al. Karolinum, ©2005.

|cd =

*Incomplete carrier citation.* ŠTERN, P, et al. Karolinum, ©2005.

|db =

|corporate\_literature =

ŠTERN, P, et al. *General and clinical biochemistry for bachelor's degree programs*. Prague : Karolinum, 2005. 978-80-7262-438-6} }

- {{#switch: book

|book =

*Incomplete publication citation.* WINTER, T, et al. *Laboratory diagnostics*. Prague : Galén – Karolinum, 2002. 978-80-7262-438-6.

|collection =

*Incomplete citation of contribution in proceedings.* WINTER, T, et al. *Laboratory diagnostics*. Prague : Galén – Karolinum, 2002. {{#if: 80-7262-201-3 |978-80-7262-438-6} }  
|article =  
*Incomplete article citation.* WINTER, T, et al. 2002, year 2002,

|web =

*Incomplete site citation.* WINTER, T, et al. Galén – Karolinum, ©2002.

|cd =

*Incomplete carrier citation.* WINTER, T, et al. Galén – Karolinum, ©2002.

|db =

*Incomplete database citation.* Galén – Karolinum, ©2002.

|corporate\_literature =

WINTER, T, et al. *Laboratory diagnostics*. Prague : Galén – Karolinum, 2002. 978-80-7262-438-6} }

Kategorie:Biochemie Kategorie:Klinická biochemie Kategorie:Neurologie Kategorie:Infekční lékařství