

## Neurologische Patienten

**Bransfield RC\*** (2017) **Infections sometimes cause violence, but to what extent? Literature and chart reviews.** Rutgers-RWJ Medical School, New Jersey, USA ILADS Paris, France, May 19, 2017

« **Results: Animal models demonstrate parasites change host's behavior and cause aggression (Manipulation Hypothesis). Violence in humans was reported with Spanish Flu (Encephalitis Lethargica), Western Equine Encephalitis, Viral Encephalitis, Herpes Simplex encephalitis, Neurosyphilis, Cerebral Malaria, Sepsis, Criminogenic Encephalosis, Toxoplasmosis and Lyme and Associated Diseases (LAD). Soldiers returning from foreign wars often had new and unusual infectious diseases. Possibly some infections contributed to the wars they were returning from and included the Plague of Athens (429 B.C.), Bubonic Plague from Kaffa (1347), Syphilis (1494/1495 French troops from Naples or Columbus returning), Typhus (Napoleon's retreat from Moscow in 1812), Cerebral Malaria (Vietnam), Mycoplasma (Gulf War). Multiple infections in World War I caused encephalopathy in many, possibly contributing to World War II. Many infamous leaders may have had syphilis. Global distribution of cognitive ability is determined in part by variation in the intensity of infectious diseases and lower IQ correlates with a greater risk of violence. Infectious diseases in parts of the Middle East may contribute to violence endemic in these regions. Inflammatory cytokines are associated with aggressive and self-destructive behavior. Infections and immune provocation can alter neural functioning causing dysfunction of the prefrontal cortex, anterior cingulate, amygdala and white matter communication contributing to violence. Homicides, homicide/suicides with LAD were in media reports.**

**Reviewing 253 LAD patients demonstrated 11% had homicidal tendencies. Associated symptoms included low frustration tolerance, cognitive symptoms, mood swings, generalized anxiety, explosive anger, disinhibition, panic disorder, paranoia, depersonalization, hypervigilance, anhedonia, intrusiveness, OCD, hallucinations, substance abuse, and dissociation. Much of the violence is associated with poor impulse control and is often bizarre and senseless.**

**Conclusions: If a pandemic occurs causing mental impairments it could result in global social instability. LAD can cause violence.“**

### Immunosystem

Piliero PJ (2003), Ramesh G (2015), Reiber H (2016),

### Viruses

Ahmed S (2000), Nicholson GL (2008),

### Bacteria

Riggs CE (1914), Sterman AB (1982), Pachner AR (1988, 2x 1989), Schroeter V (1988), Kollikowski HH (1988), Kohler J (1988), Ackermann R (1988), Logigian EL (1990), Gila L (1990), Krupp LB (1991), Krüger H (1991), Barnett W (1991), Pfister HW (1993), Horneff G (1993), Gutknecht J (1994), Dekonenko EP (1995), Caliendo MV (1995), Kobayashi K (1997), Corral I (1997), Riedel M (1998), Shetty T (1998), Pollina DA (1999), Bransfield RC (1999), Hess A (1999), Faul JL (1999), Tager F (2001), Poplawska R (2001), Newberg A (2002), Cowley G (2004), Abbott RA (2005), Hájek T (2006), Créange A (2007), Chabria SB (2007), Gustaw-Rothenberg K (2008), Chandra A (2010), Karosi T (2010), Markeljevi J (2011), Miklossy J (2012), Ibrahim M (2012), Sinclair L (2013), Martínez-Balzano CD (2014), Puri BK (2014), Sokolov AA (2015), Gampourou F (2015), Ebner (2018)

**Riggs CE (1914) SYPHILITIC INFECTIONS OF THE CENTRAL NERVOUS SYSTEM. Can Med Assoc J. 4(1), 9–24. PMID: PMC406544 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC406544/?page=1>**

Sterman AB, Nelson S, Barclay P (1982) **Demyelinating neuropathy accompanying Lyme disease.** doi: <http://dx.doi.org/10.1212/WNL.32.11.1302> Neurology 32(11) 1302 <http://www.neurology.org/content/32/11/1302.short>

**Raucher HS, Kaufman DM, Goldfarb J, Jacobson RI, Roseman B, Wolff RR. (1985) Pseudotumor cerebri and Lyme disease: a new association. J Pediatr. 107(6), 931-3.**

<https://www.ncbi.nlm.nih.gov/pubmed/4067752>

**Pachner AR** (1988) *Borrelia burgdorferi* in the nervous system: the new "great imitator". *Ann N Y Acad Sci.* 539, 56-64.

**Schroeter V, Belz GG, Blenk H.** (1988) Paralysis of recurrent laryngeal nerve in Lyme disease. *Lancet.* 2(8622), 1245. <http://www.ncbi.nlm.nih.gov/pubmed/2903968>

Kollikowski HH, Schwendemann G, Schulz M, Wilhelm H, Lehmann HJ (1988) [Chronic borrelia encephalomyelorradiculitis with severe mental disturbance: immunosuppressive versus antibiotic therapy.](#) *J Neurol.* 235(3), 140-2.

Kohler J, Kern U, Kasper J, Rhese-Küpper B, Thoden U (1988) Chronic central nervous system involvement in Lyme borreliosis. *Neurology.* 38(6), 863-7.

Ackermann R, Rehse-Kupper B, Gollmer E, Schmidt R (1988) [Chronic neurologic manifestations of erythema migrans borreliosis.](#) *Ann N Y Acad Sci.* 539, 16-23.

Pachner AR. (1989) Neurologic manifestations of Lyme disease, the new "great imitator". *Rev Infect Dis.* 11 Suppl 6, 1482-6.

Pachner AR, Duray P, Steere AC (1989) Central nervous system manifestations of Lyme disease. *Arch Neurol.* 46(7), 790-5.

Logigian EL, Kaplan RF, Steere AC (1990) [Chronic neurologic manifestations of Lyme disease.](#) *N Engl J Med.* 323(21), 1438-44.

**Mokry M, Flaschka G, Gertrude Kleinert G** et al. (1990) **Chronic Lyme Disease with an Expansive Granulomatous Lesion in the Cerebellopontine Angle.** *Neurosurgery,* 27(3,1), 446–451, <https://doi.org/10.1227/00006123-199009000-00018>  
[Chronic Lyme Disease with an Expansive Granulomatous Lesion in the Cerebellopontine Angle](#)

**Gila L, Guerrero A, Astarloa R, Martí P, Gutiérrez JM** (1990) **Reflex sympathetic dystrophy. A new manifestation of Lyme disease?** *Enferm Infecc Microbiol Clin.* 8(1), 32-5. [Article in Spanish] <http://www.ncbi.nlm.nih.gov/pubmed/2095902> Synonyme : Reflex Sympathetic Dystrophy, RSD, Complex Regional Pain Syndrome Type 1, CRPS, Reflex [Frühere Bezeichnungen, die heute nicht mehr verwendet werden sollen: Reflexdystrophie, Morbus Sudeck, Sudeck Dystrophie, Algodystrophie, sympathische Reflexdystrophie] **„Antigen-antibody bands were detected in increasing number during the evolution, using sonicates of B. burgdorferi and patient's sera with the Western blotting technique. Our data suggest that reflex sympathetic dystrophy is another type of nervous system involvement in the multifaceted Lyme borreliosis“.**

Krupp LB, Masur D, Schwartz J, Coyle PK, Langenbach LJ, Fernquist SK, Jandorf L, Halperin JJ (1991) [Cognitive functioning in late Lyme borreliosis.](#) *Arch Neurol.* 48(11), 1125-9.

Krüger H, Heim E, Schuknecht B, Scholz S. (1991) [Acute and chronic neuroborreliosis with and without CNS involvement: a clinical, MRI, and HLA study of 27 cases.](#) *J Neurol.* 238(5), 271-80.

Barnett W, Sigmund D, Roelcke U, Mundt C (1991) [Endogenous paranoid-hallucinatory syndrome caused by Borrelia encephalitis.](#) *Nervenarzt* 62(7), 445-7 [German]

Pfister HW, Preac-Mursic V, Wilske B, Rieder G, Forderreuther S, Schmidt S, Kapfhammer HP (1993) Catatonic syndrome in acute severe encephalitis due to *Borrelia burgdorferi* infection. *Neurology.* 43(2), 433-5.

**Horneff G, Huppertz HI, Müller K, Voit T, Karch H** (1993) **Demonstration of Borrelia burgdorferi infection in a child with Guillain-Barré syndrome.** *Eur J Pediatr.* 152(10), 810-2. <http://www.ncbi.nlm.nih.gov/pubmed/8223782?dopt=Abstract>

- Gutknecht J, De Wazières B, Fest T, Dupond JI (1994) **Guillain-Barre syndrome associated with Lyme disease** *Presse Medicale (Paris, France : 1983)* 23(10), 490  
<http://europepmc.org/abstract/med/8022727>
- Dekonenko EP, Umanskii KG, Virich IE, Kupriianova LV, Rudometov, IuP, Bagrov FI (1995) The basic syndromes of neurological disorders in Lyme borreliosis. *Ter Arkh* 67 (11), 52-53
- Caliendo MV, Kushon DJ, Helz JW (1995) [Delirium and Lyme disease](#). *Psychosomatics*. 36(1), 69-74.
- Kobayashi K, Mizukoshi C, Aoki T, Muramori F, Hayashi M, Miyazu K, Koshino Y, Ohta M, Nakanishi I, Yamaguchi N (1997) [Borrelia burgdorferi-seropositive chronic encephalomyelopathy: Lyme neuroborreliosis? An autopsied report](#). *Dement Geriatr Cogn Disord*. 8(6), 384-90.
- Corral I, Quereda C, Guerrero A, Escudero R, Marti-Belda P (1997) [NEUROLOGICAL MANIFESTATIONS IN PATIENTS WITH SERA POSITIVE FOR BORRELIA BURGENDORFERI] *Neurologia* 12(1), 2-8 <http://www.ncbi.nlm.nih.gov/pubmed/9131908>
- Sumiya H, Kobayashi K, Mizukoshi C et al (1997) [Brain perfusion SPECT in Lyme Neuroborreliosis](#). *J Nucl Med*. 38(7), 1120-2. <https://www.ncbi.nlm.nih.gov/pubmed/9225802>
- Fallon BA, Niels JA. (1998) [Acute disseminated encephalomyelitis \[letter\]](#) *J Neuropsychiatry Clin Neurosci* 10(3), 366-7
- Riedel M, Straube A, Schwarz MJ, Wilske B, Muller N (1998) Lyme disease presenting as **Tourette's syndrome**. *Lancet*. 351(9100), 418-9
- Shetty T, Shetty T, Shapiro EE (1998) **GUILLAIN-BARRÉ SYNDROME IN A CHILD WITH SEROLOGIC EVIDENCE OF BORRELIA BURGENDORFERI INFECTION**. *Pediatric Infectious Disease Journal*: [17\(3\) 264-265](#) Q & A.  
[http://journals.lww.com/pidj/Citation/1998/03000/GUILLAIN\\_BARR\\_SYNDROME\\_IN\\_A\\_CHILD\\_WITH\\_SEROLOGIC.25.aspx](http://journals.lww.com/pidj/Citation/1998/03000/GUILLAIN_BARR_SYNDROME_IN_A_CHILD_WITH_SEROLOGIC.25.aspx)
- Pollina DA, Sliwinski M, Squires NK, Krupp LB (1999) [Cognitive processing speed in Lyme disease](#). *Neuropsychiatry Neuropsychol Behav Neurol*. 12(1), 72-8.
- Zamponi N, Cardinali C, Tavoni MA, Porfiri L, Rossi R, Manca A (1999) Chronic neuroborreliosis in infancy. *Ital J Neurol Sci* 20, 303-307
- Bransfield RC (1999) **Case Report: Lyme Disease and Complex Partial Seizures**. *Journal of Spirochetal and Tick-Borne Diseases*. 6(3), 123-125.
- Hess A, Buchmann J, Zettl UK, Henschel S, Schlaefke D, Grau G, Benecke R. (1999) [Borrelia burgdorferi central nervous system infection presenting as an organic schizophrenialike disorder](#). *Biol Psychiatry* 45(6), 795
- [Faul JL, Ruoss S, Doyle RL, Kao PN](#) (1999) **Diaphragmatic paralysis due to Lyme disease**. *Eur Respir J*. 13(3), 700-2. <http://www.ncbi.nlm.nih.gov/pubmed/10232450>
- Ahmed S, Libman R, Wesson K et al. (2000) **Guillain-Barré syndrome: An unusual presentation of West Nile virus infection**. *Neurology* 55(1) 144-146 doi: <http://dx.doi.org/10.1212/WNL.55.1.144>  
<http://www.neurology.org/content/55/1/144.short>
- Tager F, Fallon B, Keilp J, Rissenberg M, Jones CR, Liebowitz M (2001) A controlled study of deficits in children with chronic Lyme disease. *Journal of Neuropsychiatry and Clinical Neurosciences*, 13, 500-507.
- Poplawska R, Konarzewska B, Gudel-Trochimowicz I, Szulc A (2001) [Psychologic disorders in acute and persistent neuroborreliosis](#). *Pol Merkuriusz Lek* 10(55), 36-7

- Tager FA, Fallon BA, Keilp J, Rissenberg M, Jones CR, Liebowitz MR (2001) A Controlled Study of Cognitive Deficits in Children With Chronic Lyme Disease. *J Neuropsychiatry Clin Neurosci* 13, 500-507 <http://www.lymediseaseassociation.org/Tager.pdf>
- Newberg A, Hassan A, Alavi A (2002) [Cerebral metabolic changes associated with Lyme disease](#) *Nucl Med Commun* 23(8), 773-777
- Van Koningsveld R, Schmitz PJM, Ang CW et al. (2002) **Infections and course of disease in mild forms of Guillain–Barré syndrome.** *Neurology*. 58(4), 610-614. doi: <http://dx.doi.org/10.1212/WNL.58.4.610> <http://www.neurology.org/content/58/4/610.short>
- Sawaishi Y, Takada G (2002) [Acute cerebellitis](#). *Springer* 1, 223
- Arav-Boger R, Crawford T, Steere AC, Halsey N (2002) **Cerebellar ataxia as the presenting manifestation of Lyme disease.** *The Pediatric Infectious Disease Journal* 21(4), 353-356 [https://journals.lww.com/pidj/Fulltext/2002/04000/Cerebellar\\_ataxia\\_as\\_the\\_presenting\\_manifestation.21.aspx](https://journals.lww.com/pidj/Fulltext/2002/04000/Cerebellar_ataxia_as_the_presenting_manifestation.21.aspx)
- Ang CW, Jacobs B, Laman JD (2003) **The Guillain–Barré syndrome: a true case of molecular mimicry.** *Trends in immunology* 25(2), 61-66 <https://doi.org/10.1016/j.it.2003.12.004> <http://www.sciencedirect.com/science/article/pii/S1471490603003855>
- Tselis A, MD, Booss J (2003) Behavioral Consequences of Infections of the Central Nervous System: With Emphasis on Viral Infections. *J Am Acad Psychiatry Law* 31, 289–98
- Piliero PJ, Fish DG, Preston S et al. (2003) **Guillain-Barré Syndrome Associated with Immune Reconstitution.** *Clinical Infectious Diseases*, 36(9), e111–e114, <https://doi.org/10.1086/368311> <http://cid.oxfordjournals.org/content/36/9/e111.short>
- Cowley G, Underwood A (2004) [A disease in disguise. Lyme can masquerade as migraine, or as madness.](#) *Newsweek*. 144(8), 62.
- [Abbott RA, Hammans S, Margaron M, Aji BM](#) (2005) Diaphragmatic paralysis and respiratory failure as a complication of Lyme disease. *J Neurol Neurosurg Psychiatry*. 76(9), 1306-7. <http://www.ncbi.nlm.nih.gov/pubmed/16107377>
- Alaedini A, Latov N (2005) [Antibodies against OspA epitopes of Borrelia burgdorferi cross-react with neural tissue.](#) *J Neuroimmunol*. 159(1-2), 192-5. Epub 2004 Nov 26
- [Kalina P, Decker A, Kornel E, Halperin JJ](#) (2005) **Lyme disease of the brainstem.** *Neuroradiology*. 47(12), 903-7. Epub 2005 Sep 13. <https://www.ncbi.nlm.nih.gov/pubmed/16158278>
- Edelstyn NM, Hunter B, Ellis SJ (2006) [Bilateral dorsolateral thalamic lesions disrupts conscious recollection.](#) *Neuropsychologia*. 44(6), 931-8. Epub 2005 Oct 25.
- Hájek T, Libiger J, Janovská D, Hájek P, Alda M, Höschl C (2006) [Clinical and demographic characteristics of psychiatric patients seropositive for Borrelia burgdorferi.](#) *Eur Psychiatry*. 21(2), 118-22.
- Créange A (2007) [Clinical manifestations and epidemiological aspects leading to a diagnosis of Lyme borreliosis: neurological and psychiatric manifestations in the course of Lyme borreliosis.](#) *Med Mal Infect*. 37(7-8), 532-9. Epub 2007 Mar 26. Review. French.
- Chabria SB, Lawrason J. (2007) [Altered mental status, an unusual manifestation of early disseminated Lyme disease: A case report.](#) *J Med Case Reports*. 9(1), 62.
- Gustaw-Rothenberg K (2008) Cognitive Impairments after Tick-borne Encephalitis. *Dementia and Geriatric Cognitive Disorders*. 26, 165-168.
- Nicholson GL (2008) Chronic Bacterial and Viral Infections in Neurodegenerative and Neurobehavioral Diseases. *Lab Medicine*. 39(5), 291-9

Hurley RA, Taber KH. (2008) Acute and Chronic Lyme Disease: Controversies for Neuropsychiatry. *J Neuropsychiatry Clin Neurosci* 20, 1 <http://neuro.psychiatryonline.org>

Van Doorn PA, Ruts L, Jacobs BC (2008) **Clinical features, pathogenesis, and treatment of Guillain-Barré syndrome.** *The Lancet Neurology* 7(10), p939-950  
[http://www.thelancet.com/journals/laneur/article/PIIS1474-4422\(08\)70215-1/abstract](http://www.thelancet.com/journals/laneur/article/PIIS1474-4422(08)70215-1/abstract)

[Chandra A](#), [Wormser GP](#), [Klempner MS](#), [Trevino RP](#), [Crow MK](#), [Latov N](#), [Alaedini A](#). (2010) **Anti-neural antibody reactivity in patients with a history of Lyme borreliosis and persistent symptoms.** *Brain Behav Immun.* 24(6), 1018-24. doi: 10.1016/j.bbi.2010.03.002. Epub 2010 Mar 18.  
<http://www.ncbi.nlm.nih.gov/pubmed/20227484>

[Karosi T](#), [Rácz T](#), [Szekanecz E](#), [Tóth A](#), [Sziklai I](#) (2010) Recurrent laryngeal nerve paralysis due to subclinical Lyme borreliosis. *J Laryngol Otol.* 124(3), 336-8. doi: 10.1017/S0022215109990867. Epub 2009 Sep 10. <http://www.ncbi.nlm.nih.gov/pubmed/19740453>

Gheorghiev C, De Montleau F, Defuentes G (2011) Alcohol and epilepsy: a case report between alcohol withdrawal seizures and neuroborreliosis. *Encephale* 2011 06; 37 (3): 231-237

Markeljevi J, Sarac H, Rados M (2011) **Tremor, Seizures and Psychosis as Presenting Symptoms in a Patient with Chronic Lyme Neuroborreliosis (Lnb).** *Coll. Antropol.* 35 Suppl. 1, 313–318 Case report

Miklossy J (2012) Chronic or late lyme neuroborreliosis: analysis of evidence compared to chronic or late neurosyphilis. *Open Neurol J* 6, 146-57.

Bechter K (2012) Diagnosis of Infectious or Inflammatory Psychosyndromes. *The Open Neurology Journal*, 6, 113-118. [DOI: 10.2174/1874205X01206010113]  
<http://benthamscience.com/open/toneuj/articles/V006/SI0078TONEUJ/113TONEUJ.pdf>

Miklossy J, Donta S, Mueller K, Nolte O, Perry G. (2012) Chronic or Late Lyme Neuroborreliosis: Present and Future. *The Open Neurology Journal.* 6, 78 [DOI: 10.2174/1874205X01206010078]  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3474955/>  
<http://benthamscience.com/open/toneuj/articles/V006/SI0078TONEUJ/78TONEUJ.pdf>

Ibrahim M. Binalsheikh IM, David Griesemer D, Sonya Wang S, Rebeca Alvarez-Altalef R (2012) Lyme Neuroborreliosis Presenting as **Alice in Wonderland Syndrome.** *Pediatric Neurology.* 46(3), 185-186

Krause D L, Müller N (2012) The Relationship between **Tourette's Syndrome** and Infections. *The Open Neurology Journal*, 6, (Suppl 1-M8) 124-128  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3514747/pdf/TONEUJ-6-124.pdf>

Sinclair L (2013) Case Shows How Lyme Disease Can Mimic New-Onset Panic Disorder. *Psychiatric News.* 48(13), 1 DOI: 10.1176/appi.pn.2013.6b19  
<http://psychnews.psychiatryonline.org/newsarticle.aspx?articleid=1700960>

Reiber H, Ressel CB, Spreer A (2013) **Diagnosis of neuroborreliosis-Improved knowledge base for qualified antibody analysis and cerebrospinal fluid data pattern related interpretations.** *Neurol Psychiatry Brain Res.* 19(4), 159-69. doi:10.1016/j.npbr.2013.10.004

[Ilknur E](#), [Semra Saygi](#), [Fusun Alehan](#) (2013) **Acute Cerebellar Ataxia in a Pediatric Case of Lyme Disease and a Review of Literature.** *Pediatric Neurology* 48(5), 407–410  
[Acute Cerebellar Ataxia in a Pediatric Case of Lyme Disease and a Review of Literature](#)

[Wutte N](#), [Archelos J](#), [Crowe BA](#) et al. (2014) **Laboratory diagnosis of Lyme neuroborreliosis is influenced by the test used: Comparison of two ELISAs, immunoblot and CXCL13 testing.** *Journal of the Neurological Sciences.* DOI: <http://dx.doi.org/10.1016/j.jns.2014.09.027>  
<http://www.jns-journal.com/article/S0022-510X%2814%2900625-X/abstract>

[Martínez-Balzano CD, Greenberg B](#) (2014) Bilateral vocal cord paralysis requiring tracheostomy due to neuroborreliosis. [Chest](#). 146(5), e153-5. doi: 10.1378/chest.14-0515. <http://www.ncbi.nlm.nih.gov/pubmed/25367481>

[Puri BK, Shah M, Monro JA, Kingston MC, Julu PO](#) (2014) Respiratory modulation of cardiac vagal tone in Lyme disease. [World J Cardiol](#). 6(6), 502-6. doi: 10.4330/wjc.v6.i6.502. <http://www.ncbi.nlm.nih.gov/pubmed/24976922>

Sokolov AA, Lienhard R, Du Pasquier R et al. (2015) Acute Lyme Neuroborreliosis With Transient Hemiparesis and Aphasia. *Annals of Emergency Medicine*  
DOI: <http://dx.doi.org/10.1016/j.annemergmed.2015.01.011>  
<http://www.annemergmed.com/article/S0196-0644%2815%2900028-1/abstract>

Ramesh G, Didier PJ, England JD et al. (2015) IMMUNOPATHOLOGY AND INFECTIOUS DISEASES. **Inflammation in the Pathogenesis of Lyme Neuroborreliosis**. *The American Journal of Pathology*. 185(5), 1344-1360 <http://www.ncbi.nlm.nih.gov/pubmed/25892509>

[Gampourou F, Taithe F, Moisset X, Clavelou P](#) (2015) **Seronegative Lyme neuroborreliosis in a patient treated by rituximab**. [Rev Neurol \(Paris\)](#). pii: S0035-3787(15)00794-8. doi: 10.1016/j.neurol.2015.06.009. [Epub ahead of print] <http://www.ncbi.nlm.nih.gov/pubmed/26318890>

[Reiber H](#) (2016) **Cerebrospinal fluid data compilation and knowledge-based interpretation of bacterial, viral, parasitic, oncological, chronic inflammatory and demyelinating diseases. Diagnostic patterns not to be missed in neurology and psychiatry**. [Arq Neuropsiquiatr](#). 74(4), 337-50. doi: 10.1590/0004-282X20160044. <http://www.ncbi.nlm.nih.gov/pubmed/27097008>

[Halperin J](#) (2017) **A critical appraisal of the mild axonal peripheral neuropathy of late neurologic Lyme disease**. [Diagn Microbiol Infect Dis](#). pii: S0732-8893(17)30038-X. doi: 10.1016/j.diagmicrobio.2017.01.019. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/28238389> [http://www.dmidjournal.com/article/S0732-8893\(17\)30037-8/fulltext](http://www.dmidjournal.com/article/S0732-8893(17)30037-8/fulltext)

[McKay KA, Kowalec K, Brinkman F](#) et al. (2017) **From bugs to brains: The microbiome in neurological health**. [Mult Scler Relat Disord](#). 12, 1-3. doi: 10.1016/j.msard.2016.12.007. Epub 2016 Dec 18. <https://www.ncbi.nlm.nih.gov/pubmed/28283098>

[Pavia CS, Plummer MM](#) (2017) **Was it authentic Lyme disease or some other disorder?** [Pathog Dis](#). doi: 10.1093/femspd/ftx028. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/28369369>

«We compared the evidence presented recently that challenges the long-standing belief that, in 1922, two French physicians reported the first case of neurologic Lyme disease with a further analysis of the original findings that were translated and re-published in 1993. Alternative possibilities are offered that could explain these discrepant interpretations on what was considered to be a landmark clinical case of historical significance.»

[Halperin JJ](#) (2017) **Diagnosis and management of Lyme neuroborreliosis**. [Expert Rev Anti Infect Ther](#). 1-7. doi: 10.1080/14787210.2018.1417836. [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/29278020>

« Although the nervous system is slow to recover after insults (e.g. persistent facial weakness after appropriately treated facial nerve palsy) there is no evidence that prolonged post-treatment neurocognitive symptoms are related to nervous system infection - either as a triggering event or as a cause of ongoing symptoms. «

«Does someone want to tell Halperin (a 2006 IDSA Lyme Guideline author) that no one believes his hoo-ha anymore? « Barnes L. 2017

„The large majority of the sources cited are greater than 10 years old. If I wrote a paper for even a Bachelor level course with sources that old I would immediately be given a failing grade. With all of the recent research available, this is shameful and should not be accepted by a publication that wants to maintain a high level reputation." Lee-Ann Gordon RN, MSN/PHN PA Lyme Resource Network 2017

[Ebner D, Smith K, DeSimone D, Sohail MR](#) (2018) **Cranial neuropathy and severe pain due to early disseminated *Borrelia burgdorferi* infection**. [BMJ Case Rep](#). 2018. pii: bcr-2017-223307. doi: 10.1136/bcr-2017-223307.

Bransfield RC (2018) **Aggressiveness, violence, homicidality, homicide, and Lyme disease.**  
DovePress. 2018, 14, 693-713 [https://www.dovepress.com/articles.php?article\\_id=37144](https://www.dovepress.com/articles.php?article_id=37144)

- Bransfield R (2016) **MICROBES AND MENTAL ILLNESS**  
[https://www.researchgate.net/publication/301204217\\_Microbes\\_and\\_Mental\\_Illness](https://www.researchgate.net/publication/301204217_Microbes_and_Mental_Illness)
- **Toxoplasma** <http://www.kabilahsystems.de/toxoplasmen.pdf>
- **Chlamydia** [www.kabilahsystems.de/chlamydia\\_pneumoniae.pdf](http://www.kabilahsystems.de/chlamydia_pneumoniae.pdf)
- -> **Antibiotherapieplan** [www.kabilahsystems.de/antibiotherapieplan.pdf](http://www.kabilahsystems.de/antibiotherapieplan.pdf)  
[www.kabilahsystems.de/kommentantibiotherapie.pdf](http://www.kabilahsystems.de/kommentantibiotherapie.pdf)
- **Cytonerves and cytobones (deDuve)** <http://www.xerlebnishaft.de/zytoskelett.pdf>
- **Mitochondrien** [www.xerlebnishaft.de/mitochondrien.pdf](http://www.xerlebnishaft.de/mitochondrien.pdf)
- **HNO-diseases** [http://www.xerlebnishaft.de/hoeren\\_und\\_spirochaeten.pdf](http://www.xerlebnishaft.de/hoeren_und_spirochaeten.pdf)
- **Eye diseases** [http://www.xerlebnishaft.de/lyme\\_augenbefall.pdf](http://www.xerlebnishaft.de/lyme_augenbefall.pdf)
- **Multiple Sklerose** <http://www.erlebnishaft.de/multipleskleroseborreliose.pdf>
- **Amyotrophe Lateralsklerose (ALS)** <http://www.xerlebnishaft.de/als.pdf>
- **Demetia, Alzheimer´s, Parkinsonism, cerebral atrophy**  
<http://www.erlebnishaft.de/alzheimerspirochaetosis.pdf>
- **Creutzfeldt – Jakob – disease** <http://www.erlebnishaft.de/prione.pdf>
- **ADHS (Aufmerksamkeits Defizit Hyperaktivitätsstörung)**
- **„Broader Autism Phenotype“ (BAP), Asperger-Syndrome**  
[www.xerlebnishaft.de/autismus\\_und\\_lyme.pdf](http://www.xerlebnishaft.de/autismus_und_lyme.pdf)
- **Psychiatric patients, bipolar disorders**  
[http://www.erlebnishaft.de/psychiatric\\_patients.pdf](http://www.erlebnishaft.de/psychiatric_patients.pdf)
- **Guillan Barré Syndrom, CIDP (chronische inflammatorische demyelinisierende Polyneuropathie)**
- **Polyradikuloneuropathie, PANDAS (Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections) Parsonage-Turner Syndrome**
- **Epilepsy** <http://www.ncbi.nlm.nih.gov/pubmed/25180856>
- **Charcot Marie-Tooth (Hereditäre motorisch-sensible Neuropathie Typ I (HMSN)), Anti-NMDA-Rezeptor-Enzephalitis**
- **Polyneuritis, periphere Nervenlähmungen, Paresen, Rezidivierende akute aseptische Meningitis**

[Bernt - Dieter Huismans](http://www.Huismans.click) Letzte Revision März 2018 [www.Huismans.click](http://www.Huismans.click)  
Back to top: [http://www.xerlebnishaft.de/neurologische\\_patienten.pdf](http://www.xerlebnishaft.de/neurologische_patienten.pdf)

