

Lyme-Borreliose, Epidemiologie, Klinik, Gender bias, Fachkontroverse, Cartoons Lyme-Borreliosis, Epidemiology, clinic, gender bias, controversy, Cartoons

Maps

https://www.google.de/search?q=lyme+borreliosis+worldwide+maps&hl=de&biw=1600&bih=766&tbm=isch&tbo=u&source=univ&sa=X&ei=vd8HVb_GHMLJPN7PgcgL&ved=0CCUQsAQ

Lyme borreliosis maps

<http://www.cdc.gov/lyme/stats/maps/interactiveMaps.html>

<http://www.borreliose-infektionskrankheiten.de/vorkommen-von-borreliose-infektionen.html>

Keim-Verbreitung unter Mammalia, germ-spreading among Mammalia

<http://www.kabilahsystems.de/borreliensexuellschwanger.pdf>

und über Vektoren, and by means of vectors

<http://www.insectimages.org/browse/highslide-imageservice.cfm?area=77&desc=7&page=2>

(2006) Borrelieninfektion, Therapieversager, Halbwertszeit v. Immunglobulinen und DNA

<http://www.erlebnishaft.de/dauerheilung.pdf>

„Die maximale Latenzzeit bis zum Auftreten von Krankheitssymptomen betrug acht Jahre.... Daher kann heute als geklärt gelten, dass die Lyme-Borreliose eine primär chronisch verlaufende Infektionskrankheit ist, bei der es in Analogie zur Syphilis keine Spontanheilung gibt. Die These eines „Durchseuchungstiters“ im Sinne einer durchgemachten, spontan überstandenen Infektion konnte nie belegt werden und sollte heute obsolet sein“.

“The maximum latency to onset of disease symptoms was eight years The thesis of a "Durchseuchungstiters" in the sense of had taken place spontaneously recovering from infection could never be substantiated and should now be obsolete”.

Cost calculations for causal treatment. Kosten bei Behandlung der Lyme-Borreliose

Maes E, Lecomte P, Ray N (1998) A cost-of-illness study of Lyme disease in the United States. Clin Ther. 20(5), 993-1008 <http://www.ncbi.nlm.nih.gov/pubmed/9829450>

Henningsson AJ, Malmvall B-E, Ernerudh J et al (2010) Neuroborreliosis—an epidemiological, clinical and healthcare cost study from an endemic area in the south-east of Sweden. Clin Microbiol Infect 2010; 16: 1245–1251 10.1111/j.1469-0691.2009.03059.x <http://www.diva-portal.org/smash/get/diva2:343393/FULLTEXT01.pdf>

Johnson L, Wilcox S, Mankoff J, Stricker RB (2014) Severity of chronic Lyme disease compared to other chronic conditions: a quality of life survey. PeerJ 2, e322; DOI 10.7717/peerj.322 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3976119/>

Lohr B, Müller I, Mai M et al. (2014). Epidemiology and cost of hospital care for Lyme borreliosis in Germany: Lessons from a health care utilization database analysis. Ticks Tick-borne Dis., <http://dx.doi.org/10.1016/j.ttbdis.2014.09.004>

Adrión ER, Aucott J, Lemke KW, Weiner JP (2015) Health Care Costs, Utilization and Patterns of Care following Lyme Disease. PLOS ONE | DOI:10.1371/journal.pone.0116767. p 1-14 <http://www.ncbi.nlm.nih.gov/pubmed/25650808>

Cameron D (2016) Lyme Disease Can Cost Billions. <https://www.youtube.com/watch?v=lxvNQMFBDIk&feature=youtu.be&a=>

Davidsson M (2018) The Financial Implications of a Well-Hidden and Ignored Chronic Lyme Disease Pandemic. Healthcare, 6(1), 16; doi:10.3390/healthcare6010016

Leptospiren, leptospiren

- [Kobayashi Y](#) (2005) **Human leptospirosis: management and prognosis.** *J Postgrad Med.* 51(3), 201-4. <https://www.ncbi.nlm.nih.gov/pubmed/16333193?dopt=Abstract> « **Leptospiren are sensitive to a variety of antimicrobial agents, including penicillin, cepheps, aminoglycosides, tetracyclines and macrolides. Of these antimicrobial agents, short-term treatment with streptomycin exterminates, leptospiren. When penicillin, cepheps, tetracyclines and macrolides are used, long-term therapy with large doses may be required from the early stage of the disease until the appearance of antibodies .** »
- [Haake DA](#), [Levett PN](#) (2015) **Leptospirosis in Humans.** *Curr Top Microbiol Immunol.* Author manuscript; available in PMC 2015 May 25. Published in final edited form as: *Curr Top Microbiol Immunol.* 2015; 387: 65–97. doi: [10.1007/978-3-662-45059-8_5](https://doi.org/10.1007/978-3-662-45059-8_5) PMID: PMC4442676 NIHMSID: NIHMS690013 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4442676/>

- **Differential – Diagnosen, Cavete – Diagnosen und symptomatische Behandlung, differential - diagnoses, Cavete - diagnosis and symptomatic treatment** <http://www.erlebnishaft.de/kommentalternativ.pdf>

Epidemiologie, epidemiology

[Damon SR](#) (1926) **A NOTE ON THE SPIROCHAETES OF TERMITES.** *J Bacteriol.* 11(1), 31–36. PMID: PMC379304 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC379304/> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC379304/pdf/jbacter00905-0032.pdf> „**From this survey it will be seen that all the species of termites examined are infested with spiral organisms of one or another sort.**“

[Lennhoff C](#) (1948) **Spirochaetes in Aetiologically Obscure Diseases.** *Acta Derm Venereol* 28(3), 295- 324 (**special stain!**) <http://lymerick.net/1948-Lennhoff.htm> <http://www.ncbi.nlm.nih.gov/pubmed/18891989> <https://www.docphin.com/research/article-detail/15473169/PubMedID-18891989/Spirochaetes-in-aetiologically-obscure-diseases>

[Felsenfeld O.](#) (1971) **Borrelia. Strains, vectors, human and animal borreliosis.** Warren H. Green, Inc., St. Louis, MO <http://annals.org/aim/article/685957/borrelia-strains-vectors-human-animal-borreliosis> "Our patient recovered without antibiotic therapy in about 4 weeks. Untreated TBRFs typically last for 3 weeks up to 7 months."

[Mast WE](#), [Burrows WM](#) (1976) **Erythema chronicum migrans and "lyme arthritis".** *JAMA.* 236(21), 2392. <http://jamanetwork.com/journals/jama/article-abstract/349662>

[Steere AC](#), [Malawista SE](#), [Hardin JA](#) et al. (1977) **Erythema chronicum migrans and Lyme arthritis. The enlarging clinical spectrum.** *Ann Intern Med.* 86(6), 685-98.

[Wallis RC](#), [Brown SE](#), [Kloter KO](#), [Main AJ Jr.](#) (1978) **Erythema chronicum migrans and lyme arthritis: field study of ticks.** *Am J Epidemiol.* 108(4), 322-7.

[Burgdorfer W](#), [Barbour AG](#), [Hayes SF](#), [Benach JL](#), [Grunwaldt E](#), [Davis JP](#) (1982) **Lyme disease-a tick-borne spirochetosis?** *Science.* 216(4552), 1317-9. <https://www.ncbi.nlm.nih.gov/pubmed/7043737>

Steere AC, Grodzicki RL, Kornblatt AN, Craft JE, Barbour AG, Burgdorfer W, Schmid GP, Johnson E, Malawista SE (1983) The spirochetal etiology of Lyme disease. N Engl J Med. 308(13), 733-40. <https://www.ncbi.nlm.nih.gov/pubmed/6828118>

Burgdorfer W (1984) **Discovery of the Lyme disease spirochete and its relation to tick vectors.** Yale J Biol Med. 57(4), 515–520. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2590008/>

Magnarelli LA, Freier JE, Anderson JF (1987) Experimental Infections of Mosquitoes with Borrelia burgdorferi, the Etiologic Agent of Lyme Disease. J Infect Dis 156 (4), 694-695. DOI: <https://doi.org/10.1093/infdis/156.4.694>
<https://academic.oup.com/jid/article-abstract/156/4/694/2190517/Experimental-Infections-of-Mosquitoes-with?redirectedFrom=PDF>

Mather TN, Fish D, Coughlin RT (1994) **Competence of dogs as reservoirs for Lyme disease spirochetes (Borrelia burgdorferi).** J Am Vet Med Assoc 205(2), 186-188. [PubMed Abstract](#)

Fukunaga M, Takahashi Y, Tsuruta Y, Matsushita O, Ralph D, McClelland M, Nakao M (1995) Genetic and phenotypic analysis of Borrelia miyamotoi sp. nov., isolated from the Ixodid tick Ixodes persulcatus, the vector for Lyme disease in Japan. Int J Syst Bacteriol 45(4), 804-810. [PubMed Abstract](#) | [Publisher Full Text](#)

Huppertz HI, Bohme M, Standaert SM, Karch H, Plotkin SA (1999) Incidence of Lyme borreliosis in the Wurzburg region of Germany. Eur J Clin Microbiol Infect Dis 18, 697-703 <http://www.ncbi.nlm.nih.gov/pubmed/10584895>

Korenberg EI, Gorban LY, Kovalevskii YV et al. (2001) **Risk for human tick-borne encephalitis, borrelioses, and double infection in the pre-Ural region of Russia.** Emerg. Infect. Dis. 7, 459-462. [\[PMC free article\]](#) [\[PubMed\]](#)

Higgins R (2004) **Emerging or re-emerging bacterial zoonotic diseases: bartonellosis, leptospirosis, Lyme borreliosis, plague.** Rev. - Off. Int. Epizoot. 23 (2), 569–81. [PMID 15702720](#)
<http://www.ncbi.nlm.nih.gov/pubmed/15702720>

Barbour A (2005) Relapsing fever, p 220–236. In Dennis DT, Goodman JL, Sonenshine DE (ed), Tick-borne diseases of humans. ASM Press, Washington, DC. [Google Scholar](#)

Mun J, Eisen RJ, Eisen L, Lane RS (2006) [Detection of a Borrelia miyamotoi sensu lato relapsing-fever group spirochete from Ixodes pacificus in California](#) [\[archive\]](#), J Med Entomol. 43, 120-123

Lindgren E, Jaenson TGT (2006) **Lyme borreliosis in Europe: influences of climate and climate change, epidemiology, ecology and adaptation measures.** <http://www.euro.who.int/pubrequest>
http://www.euro.who.int/data/assets/pdf_file/0006/96819/E89522.pdf

Barbour AG, Bunikis J, Travinsky B, Hoen AG, Diuk-Wasser MA, Fish D, Tsao JI (2009) **Niche partitioning of Borrelia burgdorferi and Borrelia miyamotoi in the same tick vector and mammalian reservoir species.** Am J Trop Med Hyg 81(6), 1120-1131. [PubMed Abstract](#) | [Publisher Full Text](#) | [PubMed Central Full Text](#)

RKI (2010). Lyme-Borreliose: Analyse der gemeldeten Erkrankungsfälle der Jahre 2007 bis 2009 aus den sechs östlichen Bundesländern Epi Bull 12, 101-107 http://www.rki.de/DE/Content/Infekt/EpidBull/Archiv/2010/Ausgaben/12_10.pdf?blob=publicationFile

(2010) **Scientific Opinion on Geographic Distribution of Tick-borne Infections and their Vectors in Europe and the other Regions of the Mediterranean Basin** EFSA Panel on Animal Health and Welfare (AHAW) European Food Safety Authority (EFSA), Parma, Italy EFSA Journal 8(9), 1723 <https://www.efsa.europa.eu/de/efsajournal/pub/1723> <http://planetaryhealthalliance.org/publications/scientific-opinion-geographic-distribution-tick-borne-infections-and-their-vectors>
„Findings from this review have provided evidence of the extent of ticks and tick-borne diseases (TBDs) in geographical ranges and the existing risk areas that should be considered as baseline information to assess potential risk of these diseases. The report indicates the validity of using available literature to

support the presence of ticks and TBDs without further predication using weather and other environmental factors associated with the ticks survival. The report concluded that animal and human movement play more impact on the spread of the ticks and TBDs. Climate changes and flight pattern of migratory birds can influence the presence and spread of the ticks and TBDs, but have not been determined to be responsible for the widespread distribution of ticks ».

Platonov AE, Karan LS, Kolyasnikova NM, Makhneva NA, Toporkova MG, Maleev VV, Fish D, Krause PJ (2011) Humans infected with relapsing fever spirochete **Borrelia miyamotoi, Russia**. Emerg Infect Dis 17(10), 1816-1823. [PubMed Abstract](#) | [Publisher Full Text](#) | [PubMed Central Full Text](#)
http://wwwnc.cdc.gov/eid/pdfs/10-1474-ahead_of_print.pdf

Muller I, Freitag MH, Poggensee G, Scharnetzky E, Straube E, Schoerner C, Hlobil H, Hagedorn HJ, Stanek G, Schubert-Unkmeir A, et al. (2012) **Evaluating frequency, diagnostic quality, and cost of Lyme borreliosis testing in Germany: a retrospective model analysis**. Clin Dev Immunol 2012, 595427 <http://edoc.rki.de/oa/articles/re3n01l8fzGj2/PDF/269UqRGEez.pdf>

Richter D, Debski A, Hubalek Z, Matuschka FR (2012) Absence of Lyme Disease Spirochetes in Larval Ixodes ricinus Ticks. VECTOR-BORNE AND ZOONOTIC DISEASES 12(1) ^a Mary Ann Liebert, Inc. DOI: 10.1089/vbz.2011.0668 <http://www.ncbi.nlm.nih.gov/pubmed/21923267>
« Questing nymphal and adult ticks were infected mainly by Borrelia afzelii, whereas larval ticks resulting from engorged females of the same population were solely infected by B. miyamotoi. Since larvae acquire Lyme disease spirochetes within a few hours of attachment to an infected rodent, questing larvae in nature may have acquired Lyme disease spirochetes from an interrupted host contact. »

Krause PJ, Narasimhan S, Wormser GP, Rollend L, Fikrig E, Lepore T, Barbour A, Fish D (2013) **Human Borrelia miyamotoi infection in the United States**. New Engl J Med 368(3), 291-293. [Publisher Full Text](#) <http://www.nejm.org/doi/full/10.1056/NEJMc1215469>
<http://cognitiveliberty.net/2014/human-borrelia-miyamotoi-infection-in-the-united-states/>

Hook S, Nelson C, Mead P (2013) **Self-reported Lyme disease diagnosis, treatment, and recovery**: Results from 2009, 2011, & 2012 Health Styles nationwide surveys. Presented at the 13th International Conference on Lyme Borreliosis and other Tick-Borne Diseases, Boston, MA, August 19, 2013. <http://archive.poughkeepsiejournal.com/assets/pdf/BK211780914.pdf>

Nelson C, Saha S, Shankar M, Kugeler K, Hinckley A, Mead P (2013) **Epidemiology & clinical characteristics** of Lyme disease diagnosed by health care providers: Analysis of a large insurance database. Presented at the 13th International Conference on Lyme Borreliosis and other Tick-Borne Diseases, Boston, MA, August 19, 2013. <http://archive.poughkeepsiejournal.com/assets/pdf/BK211781914.pdf>

Gugliotta JL, Goethert HK, Berardi VP, Telford SR III. (2013) Meningoencephalitis from Borrelia miyamotoi in an immunocompromised patient. N Engl J Med. 368, 240–5. [DOI PubMed](#)

Chowdri HR, Gugliotta JL, Berardi VP, Goethert HK, Molloy PJ, Sterling SL (2013) Borrelia miyamotoi infection presenting as human granulocytic anaplasmosis: a case report. Ann Intern Med. 159, 21–7. [DOI PubMed](#)

Hovius JW, de Wever B, Sohne M, Brouwer MC, Coumou J, Wagemakers A (2013) A case of meningoencephalitis by the relapsing fever spirochaete Borrelia miyamotoi in Europe. Lancet. 382, 658. [DOI PubMed](#)

Taylor KR, Takano A, Konnai S, Shimozuru M, Kawabata H, Tsubota T (2013) Borrelia miyamotoi infections among wild rodents show age and month independence and correlation with Ixodes persulcatus larval attachment in Hokkaido, Japan. Vector Borne Zoonotic Dis. 13, 92–7. [DOI PubMed](#)

Hue F, Ghalyanchi Langeroudi A, Barbour AG (2013) Chromosome sequence of Borrelia miyamotoi, an uncultivable tick-borne agent of human infection. Genome Announc. 1(5), e00713-13. doi:10.1128/genomeA.00713-13. <http://genomea.asm.org/content/1/5/e00713-13.full>

Cowder LA, Yedlin VA, Weinstein ER et al. (2014) Lyme disease and post-treatment Lyme disease syndrome: the neglected disease in our own backyard. Public health 128(9), 784-791
<http://www.ncbi.nlm.nih.gov/pubmed/25213101>

Sato K, Takano A, Konnai S, Nakao M, Ito T, Koyama K, et al. (2014) Human infections with *Borrelia miyamotoi*, Japan. *Emerg Infect Dis* [Internet]. DOI: 10.3201/eid2008.131761
<http://dx.doi.org/10.3201/eid2008.131761>

«Emerging relapsing fever caused by *B. miyamotoi* has been identified in Russia, North America, and Europe, and *B. miyamotoi*-related meningoencephalitis has been reported in the United States and the Netherlands. Our study indicates that a human health threat from emerging relapsing fever is present in Japan. For risk analysis of this emerging relapsing fever, epidemiologic surveys (e.g., determining infection rates of host-seeking ticks of the *I. persulcatus* species complex in various locations in Japan) and improvement of serologic diagnostic systems (especially early diagnosis) should be considered.»

Estrada-Pena A, Ostfeld RS, Townsend Peterson A et al. (2014) **Effects of environmental change on zoonotic disease risk: an ecological primer.** *CellPress* <http://mdlinx.pdr.net/nursing/news-article.cfm/5153209/0/zoonotic-diseases-abiotic-niche-biotic-factors/next/77/?source=scroller>

Gaito A, Gjivoje V, Lutz S, Baxter B (2014) **Comparative analysis of the infectivity rate of both *Borrelia burgdorferi* and *Anaplasma phagocytophilum* in humans and dogs in a New Jersey community.** *Infection and Drug Resistance*. 7, 199–201
<http://www.dovepress.com/comparative-analysis-of-the-infectivity-rate-of-both-borrelia-burgdorferi-peer-reviewed-article-IDR>

Eshoo MW, Crowder CD, Carolan HE et al. (2014) **Broad-Range Survey of Tick-Borne Pathogens in Southern Germany Reveals a High Prevalence of *Babesia microti* and a Diversity of Other Tick-Borne Pathogens.** *VECTOR-BORNE AND ZOONOTIC DISEASES* Volume 14, Number 8, 2014
<http://online.liebertpub.com/doi/pdfplus/10.1089/vbz.2013.1498>

Zhang XC, Yang ZN, Lu B et al. (2014) **The composition and transmission of microbiome in hard tick, *Ixodes persulcatus*, during blood meal.** *Ticks and Tick-borne Diseases* xxx (2014) xxx–xxx
<http://www.sciencedirect.com/science/article/pii/S1877959X14001332>

Crowder CD, Carolan HE, Rounds MA et al. (2014) **Prevalence of *Borrelia miyamotoi* in *Ixodes* Ticks in Europe and the United States.** *CDC Emerging infectious diseases* 20(10)
http://wwwnc.cdc.gov/eid/article/20/10/13-1583_article

Clark KL, Leydet BF, Threlkeld C. (2014) **Geographical and genospecies distribution of *Borrelia burgdorferi sensu lato* DNA detected in humans in the USA.** *J Med Microbiol*. 63(Pt 5), 674-84.
doi: 10.1099/jmm.0.073122-0. Epub 2014 Feb 25.

“The study findings suggest that human cases of Lyme disease in the southern USA may be more common than previously recognized and may also be caused by more than one species of *B. burgdorferi sensu lato*. This study provides further evidence that *B. burgdorferi sensu stricto* is not the only species associated with signs and/or symptoms consistent with Lyme borreliosis in the USA”.

Mayne P, Song S, Shao R et al. (2014) **Evidence for *Ixodes holocyclus* (Acarina: Ixodidae) as a Vector for Human Lyme Borreliosis Infection in Australia.** *Journal of Insect Science*. DOI:
<http://dx.doi.org/10.1093/jisesa/ieu133> <http://journals.oxfordjournals.org/content/14/1/271>

Barker SC, Walker AR, Campelo D (2014) **A list of the 70 species of Australian ticks; diagnostic guides to and species accounts of *Ixodes holocyclus* (paralysis tick), *Ixodes cornuatus* (southern paralysis tick) and *Rhipicephalus australis* (Australian cattle tick); and consideration of the place of Australia in the evolution of ticks with comments on four controversial ideas.** *International Journal of Parasitology* 44, 941-953 doi: 10.1016/j.ijpara.2014.08.008. Epub 2014 Sep 16. <http://www.ncbi.nlm.nih.gov/pubmed/25236960>

Dibemardo A, Cote T, Ogden NH, Lindsay R (2014) The prevalence of *Borrelia miyamotoi* infection, and co-infections with other *Borrelia* spp. In *Ixodes scapularis* ticks collected in Canada. *Parasites & Vectors* 7, 183. <http://www.parasitesandvectors.com/content/7/1/183>

Haugeberg G, Hansen IJ, Skarpass T et al. (2014) **Lyme arthritis in Southern Norway – an endemic area for Lyme Borreliosis.** *BMC Infectious Diseases*. 14, 185
<http://www.biomedcentral.com/1471-2334/14/185>

Rizzoli A, Silaghi C, Obiegala A et al (2014) ***Ixodes ricinus* and its transmitted pathogens in urban and peri-urban areas in Europe: new hazards and relevance for public health.** *Frontiers in public health*. *Epidemiology*. 2(251), 1-26 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4248671/>

Mascarelli PE, Elmore SA, Jenkins EJ et al. (2014) **Vector-borne pathogens in arctic foxes, *Vulpes lagopus*, from Canada.** *Res Vet Sci*. pii: S0034-5288(14)00352-X. doi: 10.1016/j.rvsc.2014.12.011. [Epub ahead of print] <http://www.ncbi.nlm.nih.gov/pubmed/25596149>

Hofhuis A, Harms M, van den Wijngaard C et al. (2014) **Continuing increase of tick bites and Lyme disease between 1994 and 2009.** *Tick and Tick-borne diseases*. 6, 69-74
<http://www.ncbi.nlm.nih.gov/pubmed/25448421>

Tappe, J, Jordan D, Janecek E et al. (2014) Revisited: ***Borrelia burgdorferi sensu lato*** infections in hard ticks (*Ixodes ricinus*) in the city of **Hannover (Germany)**. *Parasites and Vectors* 7, 441, 1-10
<http://www.ncbi.nlm.nih.gov/pubmed/25233844>

Buckingham SC (2015) **Tick-borne diseases of the USA: Ten things clinicians should know**, *J Infect*. <http://dx.doi.org/10.1016/j.jinf.2015.04.009>
<http://www.journalofinfection.com/article/S0163-4453%2815%2900102-4/abstract?cc=y=>

Wilking H, Fingerle V, Klier C et al (2015) **Antibodies against *Borrelia burgdorferi sensu lato* among Adults, Germany, 2008-2011.** *Emerging Infectious Diseases*. 21(1) 107-110
http://wwwnc.cdc.gov/eid/article/21/1/14-0009_article
<http://wwwnc.cdc.gov/eid/article/21/1/pdfs/14-0009.pdf>

Mayne PJ (2015) Clinical determinants of Lyme borreliosis, babesiosis, bartonellosis, anaplasmosis, and ehrlichiosis in an **Australian cohort**. *International Journal of General Medicine*. Dovepress. 8, 15-26. <http://www.dovepress.com/clinical-determinants-of-lyme-borreliosis-babesiosis-bartonellosis-ana-peer-reviewed-article-IJGM>

Lohr B, Mueller I, Mai M, Norris DE, Schoeffski O, Hunfeld KP (2015) **Epidemiology and cost of hospital care for Lyme borreliosis in Germany: Lessons from a health care utilization database analysis.** *Ticks Tick Borne Dis.*, 6, 56-62 <http://www.ncbi.nlm.nih.gov/pubmed/25448420>

Krause PJ, Fish D, Narasimhan S (2015) ***Borrelia miyamotoi* infection in Nature and in humans.** DOI: <http://dx.doi.org/10.1016/j.cmi.2015.02.006>
<http://www.clinicalmicrobiologyandinfection.com/article/S1198-743X%2815%2900294-3/abstract>

Hofhuis A, Harms M, Bennema S et al. (2015) **Physician reported incidence of early and late Lyme borreliosis.** *Parasites and Vectors*. 8, 161, 1-8 <http://www.parasitesandvectors.com/content/8/1/161>
<http://www.parasitesandvectors.com/content/pdf/s13071-015-0777-6.pdf>

Devevey G, Dang T, Graves ChJ et al.. (2015) **First arrived tasks all : inhibitory priority effects dominate competition between co-infecting *Borrelia burgdorferi* strains.** *BMC Microbiology* 15, 61 <http://www.ncbi.nlm.nih.gov/pubmed/25779303> <http://www.parasitesandvectors.com/content/8/1/161>

Seifert S, Katchikian CE, Zhou W et al. (2015) **Evolution and population genomics of the Lyme borreliosis pathogen, *Borrelia burgdorferi*.** *Trends in Genetics*. 31(4), 201-207
<http://www.cell.com/trends/genetics/abstract/S0168-9525%2815%2900033-5>
<http://www.sciencedirect.com/science/article/pii/S0168952515000335>

Gatzmann F, Metzler D, Krebs S et al. (2015) **NGD population genetics analyses reveal divergent evolution of a Lyme Borreliosis agent in Europe and Asia.** *Ticks and Tick Borne Diseases xxx-xxx*

Rossi C, Stromdahl EY, Rohrbeck P et al (2015) **Characterizing the Relationship Between Tick Bites and Lyme Disease in Active component U.S Armed Forces in the Eastern United States.** *MSSMR* 22(3) 1-10 <http://www.ncbi.nlm.nih.gov/pubmed/25825928>

"In the population of service members in the study sample, mean annual LD incidence was 52.2 per 100,000 person-years (95% CI ± 7.6 per 100,000) between 1 January 2006 and 31 December 2012."
« Note that the old annual CDC surveillance estimate was 9.4 cases per 100,000 person-years. The new CDC estimate (August 2013) is 106.6 cases per 100,000 person-years. So the military falls somewhere in between. »

Kumsa, B., et al. (2015) **New Borrelia species detected in ixodid ticks in Oromia, Ethiopia.** Ticks Tick-borne Dis. <http://dx.doi.org/10.1016/j.ttbdis.2015.03.009>
<http://www.ncbi.nlm.nih.gov/pubmed/25843811>

Wagemakers A, Staarink PJ, Sprong H et al. (2015) **Borrelia miyamotoi: a widespread tick-borne relapsing fever spirochete.** *Trends Parasitol.* pii: S1471-4922(15)00061-6. doi: 10.1016/j.pt.2015.03.008.
<http://www.cell.com/trends/parasitology/abstract/S1471-4922%2815%2900061-6>
<http://www.cell.com/cms/attachment/2029105307/2047098668/mmc1.pdf>
<http://www.ncbi.nlm.nih.gov/pubmed/25892254>
„Here, we review the available literature on B. miyamotoi, describing its presence in ticks, reservoir hosts, and humans, and discussing its potential impact on public health. »

Nunes M, Parreira R, Lopes N et al. (2015) **Molecular Identification of Borrelia miyamotoi in Ixodes ricinus from Portugal.** Vector-Borne and Zoonotic Diseases. 15(8), 515-517.
doi:10.1089/vbz.2014.1765.
<http://online.liebertpub.com/doi/abs/10.1089/vbz.2014.1765?journalCode=vbz>

Pritt BS, Mead PS, Hoang Johnson DK et al. (2016) **Identification of a novel pathogenic Borrelia species causing Lyme borreliosis with unusually high spirochaetaemia: a descriptive study**
The Lancet Infectious Diseases Published online: February 5, 2016

Nelder MP [Email author](#), Russell CB, Sheehan NJ (2016) **Human pathogens associated with the blacklegged tick Ixodes scapularis: a systematic review.** Parasites & Vectors **9**, 265
DOI: 10.1186/s13071-016-1529-y **“Our review is the first systematic assessment of the literature on the human pathogens associated with the blacklegged tick ».**
<http://parasitesandvectors.biomedcentral.com/articles/10.1186/s13071-016-1529-y>

Pritt BS, Mead PS, Hoang Johnson DK et al (2016) **Identification of a novel pathogenic Borrelia Species causing Lyme borreliosis with unusually high spirochaetaemia: a descriptive study.**
www.thelancet.com/infection.
https://www.researchgate.net/publication/293196448_Identification_of_a_novel_pathogenic_Borrelia_species_causing_Lyme_borreliosis_with_unusually_high_spirochaetaemia_A_descriptive_study

Scott JD, Foley JE (2016) Detection of Borrelia americana in the Avian Coastal Tick, Ixodes auritulus (Acari: Ixodidae), Collected from a Bird Captured in Canada. Open Journal of Animal Sciences, 6, 207-216. <http://dx.doi.org/10.4236/ojas.2016.63027>

Kernif T, Leulmi H, Raoult R, Parola P. (2016) **Emerging tick-borne bacterial pathogens.** Microbiol Spectrum 4(3), E110-0012-2016. doi:10.1128/microbiolspec.E110-0012-2016.

[Sudhindra P](#) et al. (2016) **Insights into Borrelia miyamotoi infection from an untreated case demonstrating relapsing fever, monocytosis and a positive C6 Lyme serology.** Diagnostic Microbiology & Infectious Disease DOI: <http://dx.doi.org/10.1016/j.diagmicrobio.2016.06.015>

Sakakibara K, Şen E, Sato K et al. (2016) **Detection and Characterization of the Emerging Relapsing Fever Pathogen, Borrelia miyamotoi, from the Ixodes ricinus Tick in the Rural Trakya (Thrace) Region of Northwestern Turkey.** Vector-Borne and Zoonotic Diseases, 16(12), 797-799. [Abstract](#) | [Full Text HTML](#) | [Full Text PDF \(156 KB\)](#) | [Full Text PDF with Links \(169 KB\)](#)

[Steere AC](#), [Strle F](#), [Wormser GP](#), [Hu LT](#), [Branda JA](#), [Hovius JW](#), [Li X](#), [Mead PS](#) (2016) **Lyme borreliosis.** *Nat Rev Dis Primers.* 2, 16090. doi: 10.1038/nrdp.2016.90.
<https://www.ncbi.nlm.nih.gov/pubmed/27976670> **See comment in PubMed Commons below.**

Stricker RB, Fessler MC (2017) **Chronic Lyme Disease: A Working Case Definition.** Chronic Dis. Int. 4(1), 1025

(2018) **Dr. Robert Bransfield: Presentation on Lyme for Welsh Parliament.** Presentation in Wales on Lyme disease. https://youtu.be/XTeaSzQr_lw
https://www.youtube.com/watch?v=XTeaSzQr_lw&feature=youtu.be

- ➔ **Lyme Disease** (2016) <https://www.youtube.com/playlist?list=PLcuHpcV2MbFj420zTVNNRoF3jJMj6kFs5>
- ➔ **PubMed search** <http://www.ncbi.nlm.nih.gov/m/pubmed/6516454/related/>

Rückfallfieber, relapsing fever, Q-Fieber (*Coxiella burnetii*)

<http://www.rki.de/DE/Content/InfAZ/Q/QFieber/Q-Fieber.html> <http://de.wikipedia.org/wiki/Q-Fieber>

„Läuse Rückfallfieber (louse-borne relapsing fever, LBRF, hauptsächlichster Erreger ist *Borrelia recurrentis*).

Zecken Rückfallfieber (tick-borne relapsing fever, TBRF, meist durch *Borrelia duttoni*).

Relapsing fever is a vector-borne disease caused by [Rickettsia](#) and [Borrelia](#)“.

Quelle, Source: <http://de.wikipedia.org/wiki/R%C3%BCckfallfieber> http://en.wikipedia.org/wiki/Relapsing_fever

Obermeier O (1873) Die Entdeckung von fadenförmigen Gebilden im Blut von Rückfallfieberkranken. Eingeleitet und neu herausgegeben von Heinz Zeiss (= Klassiker der Medizin. Band 31).

Unveränderter Nachdruck [deutsche Ausgabe] J. A. Barth, Leipzig 1926, S. 26ff.

<http://katalog.ub.uni-heidelberg.de/cgi-bin/titel.cgi?katkey=67031803>

Burgdorfer W. (1976) The diagnosis of relapsing fevers. In: Johnson RC, ed. The biology of parasitic spirochetes. New York, NY. Academic Press. 225-34.

Davis RD, Burke JP, Wright LJ (1992) Relapsing fever associated with ARDS in a parturient woman. A case report and review of the literature. *Chest* 102, 630-2.

Trevejo RT, Schriefer ME, Gage KL et al. (1998) An interstate outbreak of tick-borne relapsing fever among vacationers at a Rocky Mountain cabin. *Am J Trop Med Hyg* 58, 743-7

Dworkin MS, Schwan TG, Anderson DE et al. (2002) Tick-borne relapsing fever. *Infect Dis Clin North Am* 2008; 22, 449-68. 6. Anderson JF. The natural history of ticks. *Med Clin North Am* 86, 205-18.

Paul WS, Maupin G, Scott-Wright O et al. (2002) Outbreak of tick-borne relapsing fever at the north rim of the Grand Canyon: evidence for effectiveness of preventive measures. *Am J Trop Med Hyg* 66, 71-5.

Hashimoto Y, Miyamoto K, Iizuka H (2003) Tick bites and Lyme disease in Hokkaido, Japan [in Japanese]. *Hihubyo Shinryo*. 25, 926-9.

Guggenheim JN, Haverkamp AD (2005) Tick-borne relapsing fever during pregnancy. *J Reprod Med* 50, 727-9.

CDC. (2007) Acute respiratory distress syndrome in persons with tick-borne relapsing fever -- three states, 2004-2005. *MMWR Morb Mortal Wkly Rep* 56, 1073-6.

Saito K, Ito T, Asashima N et al. (2007) Case report: *Borrelia valaisiana* infection in a Japanese man associated with traveling to foreign countries. *Am J Trop Med Hyg*. 77, 1124-7. [PubMed](#)

CDC. (2011) Tickborne relapsing fever in a mother and newborn child -- Colorado, 2011. *MMWR Morb Mortal Wkly Rep* 61, 174-6.

[Renvoisé A](#), [Merhej V](#), [Georgiades K](#), [Raoult D](#) (2011) Intracellular Rickettsiales: Insights into manipulators of eukaryotic cells. [Trends Mol Med](#). 17(10), 573-83. doi: 10.1016/j.molmed.2011.05.009. Epub 2011 Jul 15. <http://www.ncbi.nlm.nih.gov/pubmed/21763202>

Takano A, Fujita H, Kadosaka T, Konnai S, Tajima T, Watanabe H (2011) Characterization of reptile-associated *Borrelia* sp. in the vector tick, *Amblyomma geoemydae*, and its association with Lyme disease and relapsing fever *Borrelia* spp. *Environ Microbiol Rep.* 3, 632–7.

Mansueto P, Vitale G, Cascio A et al. (2011) New Insight into Immunity and Immunopathology of Rickettsial diseases. Hindavi Publishing Corporation. *Clinical and Developmental Immunology* 2012, 1-26 <http://www.hindawi.com/journals/jir/2012/967852/>

Fritz CL, Payne JR, Schwan TG (2013) Serologic evidence for *Borrelia hermsii* infection in rodents on federally owned recreational areas in California. *Vector Borne Zoonotic Dis* 13, 376-81.

HANSFORD KM, FONVILLE M, JAHFARI S et al. (2015) ***Borrelia miyamotoi* in host-seeking Ixodes ricinus ticks in England.** *Epidemiol. Infect.* 143, 1079–1087. © Cambridge University Press doi:10.1017/S0950268814001691

[Lambourne JR](#), [Brooks T](#) (2015) **Brucella and Coxiella; if you don't look, you don't find.** *Clinical Medicine* 15(1), 91-92 <http://www.clinmed.rcpjournals.org/content/15/1/91.full.pdf+html>
<http://www.clinmed.rcpjournals.org/content/15/1/91.long>

[Portillo A](#), [Santibáñez S](#), [García-Álvarez L](#) (2015) **Rickettsioses in Europe.** *Microbes Infect.* pii: S1286-4579(15)00193-8. doi: 10.1016/j.micinf.2015.09.009. [Epub ahead of print] <http://www.ncbi.nlm.nih.gov/pubmed/26384814>

➔ **Terminologie, Epidemiologie, Klinik**
http://www.erlebnishaft.de/terminol_epidemiol_klin.pdf

Klinik

[2015 ICD-9-CM Code 088.81](#)

[\[convert to ICD-10-CM\]](#) **Lyme disease**

Acute lyme disease · Arthritis due to Lyme disease · Erythema chronica migrans · Erythema chronicum migrans · Erythema chronicum migrans (skin condition) · Lyme arthritis · Meningitis due to lyme disease · Meningitis in Lyme disease...

[2015 ICD-10-CM Code A69.2](#) **Lyme disease**

and nervous system can occur. · Lyme disease is a bacterial infection you get from... aches a stiff neck fatigue lyme disease can be hard to diagnose because you may not have... history, to figure out whether you have lyme disease. Lab tests may help at this stage... test can confirm whether you have it. antibiotics can cure most cases of lyme disease... post-lyme disease syndrome (plds). Long-term antibiotics have not been shown to help...) in europe. It is a disease with early and late cutaneous manifestations plus involvement of the nervous system, heart, eye, and joints in variable combinations. The disease was formerly known as lyme arthritis and first discovered at old lyme, connecticut. · An infectious disease caused by the spirochete borrelia burgdorferi. Early manifestations... Erythema chronicum migrans due to Borrelia burgdorferi · An infectious disease

[2015 ICD-10-CM Code A69.20](#) [\[convert to ICD-9-CM\]](#) **Lyme disease, unspecified**

Acute lyme disease · Erythema chronica migrans · Erythema chronicum migrans · Erythema chronicum migrans (skin condition) · Lyme disease · The disease was formerly known as lyme arthritis and first discovered at old lyme... the joints, heart, and nervous system can occur. · Lyme disease is a bacterial... muscle and joint aches a stiff

neck fatigue lyme disease can be hard to diagnose because... symptoms and medical history, to figure out whether you have lyme disease. Lab tests may help... of lyme disease. The sooner treatment begins, the quicker and more complete... symptoms. This is called post-lyme disease syndrome (plds). Long-term antibiotics have not been...)
B99.9 Borrelia bergdorfi A69.20 Lyme disease A69.20 · ..., diseased - see also
Syndrome Lyme A69.20 Erythema, erythematous (infectious)

[2015 ICD-10-CM Code A69.21](#) [\[convert to ICD-9-CM\]](#) **Meningitis due to Lyme disease**

Meningitis in Lyme disease · Meningitis (basal) (basic) (brain) (cerebral) (cervical) (congestive) (diffuse) (hemorrhagic) (infantile) (membranous) (metastatic) (nonspecific) (pontine) (progressive) (simple) (spinal) (subacute) (sympathetic) (toxic) G03.9 in (due to) Lyme disease A69.21...

[2015 ICD-10-CM Code A69.22](#) [\[convert to ICD-9-CM\]](#) **Other neurologic disorders in Lyme disease**

in (due to) Lyme disease A69.22 Neuritis (rheumatoid) M79.2 cranial nerve due to Lyme disease A69.22 Polyneuropathy (peripheral) G62.9 in (due to) Lyme disease A69.22 · ...Cranial neuritis · Meningoencephalitis · Polyneuropathy · A nerve disease where many peripheral nerves are affected · An inflammatory process involving the brain (encephalitis) and meninges (meningitis), most often produced by pathogenic organisms which invade the central nervous system, and occasionally by toxins, autoimmune disorders, and other conditions. · Diseases of multiple peripheral nerves simultaneously. Polyneuropathies usually are characterized by symmetrical, bilateral distal motor and sensory impairment with a graded increase in severity distally. The pathological processes

[2015 ICD-10-CM Code A69.23](#) [\[convert to ICD-9-CM\]](#) **Arthritis due to Lyme disease**

Lyme arthritis · Arthritis, arthritic (acute) (chronic) (nonpyogenic) (subacute) M19.90 due to or associated with Lyme disease A69.23 in (due to) Lyme disease A69.23...

[2015 ICD-10-CM Code A69.29](#) [\[convert to ICD-9-CM\]](#) **Other conditions associated with Lyme disease**

Myopericarditis due to Lyme disease · Myocarditis (with arteriosclerosis)(chronic)(fibroid) (interstitial) (old) (progressive) (senile) I51.4 in (due to) Lyme disease A69.29...

PETERSEN LR, SWEENEY AH, CHECKO P et al. (1989) **Epidemiological and Clinical Features of 1,149 Persons with Lyme Disease Identified by Laboratory-Based Surveillance in Connecticut.**

THE YALE JOURNAL OF BIOLOGY AND MEDICINE 62, 253-262

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2589115/>

"Of persons with Lyme disease, 83 percent had erythema migrans, 24 percent had arthritis, 8 percent had neurologic sequelae, and 2 percent had cardiac sequelae. The distribution of symptoms was age-dependent: case-persons <20 years old were almost twice as likely to have arthritis than older case-persons (35 percent versus 18 percent). Of persons with arthritis, 92 percent of those <20 years of age, compared to 68 percent of older persons, did not have antecedent erythema migrans."

Donta ST (1995) **Lyme Disease: A clinical challenge.** J Spirochet and Tick Dis 2,50-51

Ziska MH, Donta ST, and Demarest FC (1995) **Physician preferences in the diagnosis and treatment of Lyme Disease in the U.S.** Infection 23, 1-5.

Donta ST (1997) **Reactivation of latent Lyme Disease.** X Annual LDF International Conference on Lyme Borreliosis, National Institutes of Health.

Grier TM (2000) **The Complexities of Lyme Disease.** (A Microbiology Tutorial) (An excerpt from the Lyme Disease Survival Manual 2000, Duluth, MN, USA)
https://www.researchgate.net/profile/Thomas_Grier3/publication/242731133_The_Complexities_of_Lyme_Disease/links/584660c608ae2d217568fa92.pdf

Donta ST (2002) **Late and chronic Lyme disease.** *Med Clin North Am.* 86(2), 341-9, vii.
<http://www.ncbi.nlm.nih.gov/pubmed/11982305> <http://www.lymeneteurope.org/info/late-and-chronic-lyme-disease>

Gabitzsch ES, Piesman J, Dolan MC, Sykes CM, Zeidner NS (2006) Transfer of *Borrelia burgdorferi* s.s. infection via blood transfusion in a murine model. *J Parasitol.* 92(4), 869-70.

Stanek G, Fingerle V, Hunfeld KP, Jaulhac B, Kaiser R, Krause A, Kristoferitsch W, O'Connell S, Ornstein K, Strle F, et al. (2009/2011) **Lyme borreliosis: clinical case definitions for diagnosis and management in Europe.** *Clin Microbiol Infect* 17, 69-79
<http://www.ncbi.nlm.nih.gov/pubmed/20132258>

Stricker RB, Johnson L (2010) **Lyme disease diagnosis and treatment: lessons from the AIDS epidemic.** *Minerva Med.* 101, 419-25 <http://www.ncbi.nlm.nih.gov/pubmed/21196901>
“Although antibiotic monotherapy has been successful in treating early Lyme disease, the use of combination antibiotic therapy modelled on HIV treatment appears to be more effective for patients with persistent symptoms of tick-borne infection.”

Donta ST (2012) **Issues in the Diagnosis and Treatment of Lyme Disease.** *The Open Neurology Journal* 6 (Suppl 1-M8) 140-145 <http://www.ncbi.nlm.nih.gov/pubmed/23248715>

Berghoff W (2012) **Chronic Lyme Disease and Co-infections: Differential Diagnosis.** *Open Neurol J.* 6, 158-78. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3565243/>

Huppertz H-I, Christen H-J, Fingerle V, Heininger U (2013) **Lyme-Borreliose.** In *Handbuch Infektionen bei Kindern und Jugendlichen*. D.G.f.P.I.e.V.D. (eds.), editor: Thieme Verlag.

Horowitz R (2013) **Lyme Disease and Chronic Illness.** <https://www.youtube.com/watch?v=xYMezkiqMWk>

Huismans BD (2014) **Chronisch verlaufende Multisystemkrankheiten durch fakultativ pathogene Krankheits – Erreger bei immundefizienten bzw. immunpleomorphen Patienten unter Beteiligung von Virus- und Bakterien - Persistieren, Borrelien, Protozoen, anderen Krankheits – Erregern und Toxinen.** *Literatur- Archiv und Kurz-Kommentare* <http://www.erlebnishaft.de>

Vieria ML (2014) **Treponema, Borrelia e Leptospira in Microbiologia Médica – Vol. 1** In book: *Microbiologia Médica, Chapter: Cap 35 - Parte 4 (Vol. 1) - Bacteriologia Médica*, Publisher: LIDEL - Edições Técnicas, Lda, Editors: Helena Barroso, António Meliço-Silvestre, Nuno Taveira, pp.444-466
https://www.researchgate.net/publication/266146033_Treponema_Borrelia_e_Leptospira_in_Microbiologia_Mdica_-_Volume_1

Burrascano J (2014) **Lyme Disease History and Evolution of Tick borne Disease HD**
<https://www.youtube.com/watch?v=tMWCvJWVFDs>

Horowitz R (2014) **Co infections Presentation, Diagnosis and Treatment HD.** Youtube
<https://www.youtube.com/watch?v=O9a-2Nb2sbk>

Coumou J, Herkes EA, Brouwer MC et al. (2014) **Ticking the right boxes: classification of patients suspected of Lyme borreliosis at an academic referral center in the Netherlands.** *Clin Microbiol Infect.* pii: S1198-743X(14)00100-1. doi: 10.1016/j.cmi.2014.11.014. [Epub ahead of print]
<http://www.ncbi.nlm.nih.gov/pubmed/25658524>

«The overall high number of questionable cases illustrates the fact that it can sometimes be challenging to either rule out or demonstrate an association with a *B. burgdorferi* s.l. infection, even in an academic setting. Finally, we were able to establish alternative diagnoses in a large proportion of patients. «

Borchers AT, et al. (2015) **Lyme disease: A rigorous review of diagnostic criteria and treatment.** *Journal of Autoimmunity* <http://dx.doi.org/10.1016/j.jaut.2014.09.004>
<http://www.sciencedirect.com/science/article/pii/S0896841114001334>

Adrion ER, Aucott J, Lemke KW et al. (2015) **Health Care Costs, Utilization and Patterns of Care following Lyme Disease**. PLoSone 10(2), e0116767. doi: 10.1371/journal.pone.0116767. eCollection 2015. <http://www.ncbi.nlm.nih.gov/pubmed/25650808>

«Lyme disease is associated with increased costs above what would be expected for an easy to treat infection. The presence of PTLDS-related diagnoses after treatment is associated with significant health care costs and utilization. «

Thuile T, Eisendle K, Tschachler A, Zelger B (2015) **Kutane und systemische Borreliose Pathogenese – Diagnose – Therapie. Cutaneous and Systemic Lyme Disease Pathogenesis – Diagnosis – Treatment**. DOI <http://dx.doi.org/10.1055/s-0034-1392014> Online-Publikation: 2015 Akt Dermatol © Georg Thieme Verlag KG Stuttgart · New York ISSN 0340-2541 <https://www.thieme-connect.de/products/ejournals/pdf/10.1055/s-0034-1392014.pdf>

Wright WF, Oliverio JA (2016) **First Case of Lyme Arthritis Involving a Prosthetic Knee Joint**. OFID. Brief Report <http://ofid.oxfordjournals.org/content/3/2/ofw096.full.pdf>

Javid A, Zlotnikov N, Pětrošová H et al. (2016) **Hyperglycemia Impairs Neutrophil-Mediated Bacterial Clearance in Mice Infected with the Lyme Disease Pathogen**. PLoS One. 11(6), e0158019. doi: 10.1371/journal.pone.0158019. eCollection 2016. PMID: 27340827 [PubMed - in process] [Similar articles](#)

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- ➔ Therapie <http://www.kabilahsystems.de/kommentinhalt.pdf>

- ➔ Textauswahl <http://www.xerlebnishaft.de/textauswahl.pdf>
- ➔ Ärztliche Praxis http://www.erlebnishaft.de/kommentinhalt_praxis.pdf

- ➔ Die kleine Diagnostik-Therapie-Fibel bei Borrelien und Ko-Infekten für Kliniker <http://www.grin.com/de/e-book/283084/die-kleine-diagnostik-therapie-fibel-bei-borrelien-und-ko-infekten-fuer>
- ➔ The small Diagnostic - Therapy – Booklet on Borrelia and Co – Infections for Clinicians and Practitioners http://www.erlebnishaft.de/inhalt_eng.pdf

- ➔ Differential – und „Cavete – Diagnosen“, cavete diagnoses <http://www.erlebnishaft.de/kommentalternativ.pdf>

- ➔ Borrelien, sexuelle Übertragbarkeit und Schwangerschaft, Lyme Disease: Pregnancy and Sexual Transmission <http://www.kabilahsystems.de/borreliensexuellschwanger.pdf>

Gender bias

Albert A (1987) Xenobiosis. Food, drugs and poisons in the human body. University Press Cambridge. <http://www.abebooks.de/9780412288005/Xenobiosis-Foods-Drugs-Poisons-Human-0412288001/plp>

Payami H, Zarepari S, Montee KR et al. (1996) **Gender difference in apolipoprotein E-associated risk for familial Alzheimer disease: a possible clue to the higher incidence of Alzheimer disease in women**. Am J Hum Genet. 58(4), 803-11. <http://www.ncbi.nlm.nih.gov/pubmed/8644745>

Vlassoff C (2007) Gender Differences in Determinants and Consequences of Health and Illness. J Health Popul Nutr. 25(1), 47–61. PMID: PMC3013263 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3013263/>

Rickey T (2007) **Cold sore virus might play role in Alzheimer's disease**. http://www.eurekalert.org/pub_releases/2007-01/uorm-csv010307.php

Hormones and Lyme (2008) <http://www.lymeinfo.net/hormones.html>

[Wormser GP, Shapiro ED.](#) (2009) Implications of gender in chronic Lyme disease. J Womens Health (Larchmt). 18(6), 831-4. doi: 10.1089/jwh.2008.1193. <http://www.ncbi.nlm.nih.gov/pubmed/19514824>

Stricker RB, Johnson L (2009) Gender Bias in Chronic Lyme Disease. Journal of Woman's Health 18(10), 1717-1718 <http://www.ncbi.nlm.nih.gov/pubmed/19857097>

Klemann W, Huismans BD. (2009) Patienten mit Erreger-Direktnachweis bei chronischer Lyme-Borreliose: Klinik, Labordiagnostik, Antibiotika-Therapie und Krankheitsverlauf. Eine retrospektive Studie. Umwelt-medizin-gesellschaft 22 (2) 132-138 http://www.umg-verlag.de/umwelt-medizin-gesellschaft/209_kh_z.pdf

[Bornstein SR](#) (2009) **Predisposing factors for adrenal insufficiency.** N Engl J Med. 360(22):2328-39 doi: 10.1056/NEJMra0804635. <http://www.ncbi.nlm.nih.gov/pubmed/19474430>

Gaazeeri G, Abdullah L, Abbas O (2011) **Immunological Differences in Woman compared with Men:** Overview and Contributing Factors. American Journal of Reproductive Immunology 66, 163-169 <http://www.ncbi.nlm.nih.gov/pubmed/21749547>

[Oertelt-Prigione S, Regitz-Zagrosek V](#) (2011) Sex and Gender Aspects in Clinical Medicine. Springer. http://www.springer.com/?SGWID=0-102-24-0-0&searchType=EASY_CDA&queryText=Sex+and+Gender+Aspects+in+Clinical+Medicine&submit=Daten+absenden

Regitz-Zagrosek V (2012) Sex and Gender Differences in Pharmacology. Springer. <http://link.springer.com/book/10.1007%2F978-3-642-30726-3>

Khadori R, Castillo D. (2012) **Endocrine and metabolic changes during sepsis:** an update. Med Clin North Am. 96(6), 1095-105. doi: 10.1016/j.mcna.2012.09.005. Epub 2012 Oct 4. Review. <http://www.ncbi.nlm.nih.gov/pubmed/23102479>

Kuo CH, Yang SN, Kuo PL, Hung CH (2012) **Immunomodulatory effects of environmental endocrine disrupting chemicals.** Kaohsiung J Med Sci. 2012 Jul;28(7 Suppl):S37-42. doi: 10.1016/j.kjms.2012.05.008. Epub 2012 Jul 4. Review. <http://www.ncbi.nlm.nih.gov/pubmed/22871600>

Goldman B. (2012) **Alzheimer's risk gene disrupts brain function in healthy older women, but not men.** http://www.eurekalert.org/pub_releases/2012-06/sumc-arg060612.php

Holden A (2012) **Gladstone scientists: 'ApoE is an ideal target for halting progression of Alzheimer's disease'.** http://www.eurekalert.org/pub_releases/2012-12/gj-gs120412.php

[Vest RS, Pike CJ](#) (2013) Review **Gender, sex steroid hormones, and Alzheimer's disease.** *Hormones and Behavior* 63(2), 301–307 <http://www.sciencedirect.com/science/article/pii/S0018506X12001134>

(2013) Endocrine disruption, otter - UK: (ENG, WAL) **endocrine disruptors suspected.** <http://www.promedmail.org/direct.php?id=20130227.1562667>

[Strle F, Wormser GP, Mead P, Dhaduvai K, Longo MV, Adenikinju O, Soman S, Tefera Y, Maraspin V, Lotrič-Furlan S, Ogrinc K, Cimperman J, Ružič-Sabljic E, Stupica D.](#)(2013) **Gender disparity between cutaneous and non-cutaneous manifestations of Lyme borreliosis.** PLoS One. 8(5), e64110. doi: 10.1371/journal.pone.0064110. Print 2013. <http://www.ncbi.nlm.nih.gov/pubmed/23737968>

“In conclusion, patients with cutaneous manifestations of Lyme borreliosis were predominantly female, whereas those with non-cutaneous manifestations were predominantly male. This provocative finding is unexplained but may have direct relevance to the pathogenesis of Lyme borreliosis”.

Jamshed N, Ozair FF, Aggarwal P, Ekka M. (2014) Alzheimer disease in post-menopausal women: Intervene in the critical window period. J Mid-life Health [serial online] 2014 [cited 2014 Nov 22];5, 38-40. Available from: <http://www.jmidlifehealth.org/text.asp?2014/5/1/38/127791>

(2014) **Alzheimer's Association Alzheimer's Disease Facts and Figures.** http://www.alz.org/alzheimers_disease_facts_and_figures.asp

➔ **Biogene Amine und Peptide** <http://www.kabilahsystems.de/biogeamineundpeptide.pdf>

Fachkontroverse, Videos

Med RID-Foundation, (2007) Fachkontroverse Diagnostik und Therapie bei Erkrankung an Borreliose. http://www.borreliose-nachrichten.de/Schweiz_med_RID-Foundation.pdf

Johnson L, Stricker RB (2010) The Infectious Diseases Society of America Lyme guidelines: a cautionary tale about the development of clinical practice guidelines. Philosophy, Ethics, and Humanities in Medicine 5, 9 doi:10.1186/1747-5341-5-9 <http://www.peh-med.com/content/5/1/9>

- ➔ **Pro und Contra** http://www.erlebnishaft.de/pro_contra.pdf
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Lyme disease? Bah! The Very Idea! http://goanimate.com/videos/0XCA4kvs8vk4?utm_source=facebook

Lyme Disease - Dr Phil

<https://www.youtube.com/watch?v=regyYSAFb9I&list=PL53Pb2ML9857IVdyye5ID8f20hcvGCQwT>

https://www.youtube.com/watch?annotation_id=annotation_310036&feature=iv&src_vid=regyYSAFb9I&v=ICIS8IEkvok

MWV 81 - Sheldon Campbell - The Singing Microbiologist

<https://www.youtube.com/watch?v=lxTTaD15msY>

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