

# Senate Inquiry Submission

## My Story

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I want my story public and are willing to come to a hearing.

I apologise for how poorly written this document is with layout and partial sentences, a part of the illness.

Most if not all patients and medical practitioners have no idea about Borrelia what it is and what it does, they know symptoms and follow various treatment guidelines. When I found out I had Borrelia it was the first thing I did as they say get to know your enemy...

Borrelia bacteria, I've almost given up before the war has begun. What chance do you have against billions of years of evolution, intelligence, and something that could live on other planets, compared to our 5 primitive minutes on the scene?

Borrelia (Bb) is the most genetically complex bacteria identified to date. Bb contains 132 functional genes, compared to the syphilis spirochete *Treponema pallidum* (often called the Bb's "cousin") with mere twenty-two. Ninety percent of these genes are novel to all bacteria. Bb's genome is 2/3 the size of the human genome. Bb contains 21 plasmids, more than any other bacteria. To compare, *Staphylococcus aureus* – the bacterium that causes antibiotic resistant golden staph infection – has only one plasmid. So imagine the plasmid capability of Borrelia bacteria. This characteristic allows the organism to be highly adaptive to its environment, with the ability to survive in a number of different hosts, the ways it does this is unreal.

Bb appears to survive even when the host has an intact immune system as the immune system works by reducing iron levels, Bb is the only known organism that doesn't require iron to live. Bb is not commonly found in body fluids, but rather has an affinity for collagenous tissue, such as the bladder wall, synovium, myelin sheath of nerve fibers, and the meninges. The bacteria can in the early stage of the disease, disseminate to distant areas, it can hide in niches, it can be intracellular, and it can express multi-drug resistance. Further, it can hide in biofilms both in the blood and in anoxic, remote parts of the body, and camouflage itself with proteins from the host. It may perform antigenic changes, manipulate the immune system of the host and change into inactive (dormant) cyst-forms, essentially once you have it you'll always have it, it just may remain dormant until conditions are more favourable. All these properties make specific Borrelia spirochetes unique and some could potentially develop into disease of epidemic proportions.

Borrelia has a slow reproduction time, it has been shown to divide once every 24-48. This is unlike *Streptococcus* throat bacteria which reproduce every 20 minutes. *Streptococcus* bacteria need to be treated for 480 life cycles which equals 7 days of antibiotic treatment. So, 480 life cycles of Bb would be close to 480 days. In theory to treat Borrelia infection for 480 life cycles you may need to take antibiotics for 2.5 years in order to get the infection under control. Once it has penetrated into

the central nervous system (CNS) treatment by many antibiotics is limited, so the treatment time for neuroborreliosis would be more than 3 years, this is me and some! This is not unlike mycobacterium tuberculosis (TB) infection in the CNS where treatment involves more than 3 years of antibiotics.

It has been proven Bb is one of the causes of dementia and Alzheimer's, a host of other chronic illnesses that may follow like MS, CFS, Parkinson's, Lupus, Addison's, Autism, Neurological illnesses and various Arthritis's, the list is long...

Directly and indirectly it also affects: Vitamin and mineral levels, Neurotransmitter production, Detoxification, Repairing and building DNA and RNA, Processing hormones, Produce immune cells, Controlling viral replication, Controlling inflammation, Mitochondrial energy production, Creating Myelin, Growth factors that deliver fats & proteins to cells, Production of glutathione, Repairing cell membranes, Turning the stress response on and off, Supporting fat metabolism...the list goes on and on.

It can be transmitted by any blood sucking parasite. It spreads quickly via rodents, birds (local and long migratory), and mammals. Is a silent global epidemic that certain powers at be are trying to keep quiet due to the cost of treatment for millions of people estimated to be infected, 300,000 new cases per year in the US (I have seen an estimate of 18 million infected in the US and 1.5 million per year in Germany).

If you don't think that is enough a new *Borrelia* has been identified in 2015 and is predatory and you don't only get infected with *Borrelia* but a multitude of other bacteria, protozoa, and viruses see Australian Chronic Infectious Diseases Societies treatment (ACIDS).

Now with an understanding of what *Borrelia* is and does peoples stories will make more sense.

#### Quick Summary of most important points:

- Forget the word cure and think remission, once infected person will always have borrelia, best outcome is remission (*Borrelia* is very similar to cancer in many respects).
- Permanent lifestyle change, this maybe major for some.
- Gut health – the most important factor, without this recovery or remission impossible.
- Coinfections must be treated first.
- Bb presents differently in patients and also with the different coinfections.
- Major public health issue? Is *Borellia* Sexually transmissible? No concrete evidence yet. Culture and identification of *Borrelia* spirochetes in human vaginal and seminal secretions <http://f1000research.com/articles/3-309/v1> by Australian and International Doctors.
- Very restrictive diets for numerous reasons.
- Methylation (epigenetics and nutrigenetics) plays a massive part in remission of borrelia. This is a very new complex medical field which Australia is behind in. This has the potential to cure and prevent many chronic and other illnesses including Australia's obesity which is due to all the hidden sugars in our food.
- Diet education – I've had to research and implement my own extreme diet, I have gone above and beyond the naturopath and doctor due to my own research and educate them both.
- Psychological aspects – trained medical professionals in this field, wide array of patient issues, medicine side effects, ongoing psychological support costs.

- Some coinfections are harder to get rid of than borrelia, eg babesia (malaria like protozoa),
- Treatment of multiple parasites viruses. The order of treatment is critical as it can be disastrous to the patient if not in the correct order.
- Education and treatment of mould refer Dr Shoemaker.
- The need and use of IV antibiotics, I possibly should have IV antibiotics but my self and doctor would rather avoid it. Due to my neurological symptoms I should probably have Ceftriaxone but I need to treat coinfections first.
- Cost of medicines - out of pocket and volume of medicines.
- Cost of supplements – if they are available in Australia typically they are expensive and cheaper to import from overseas.
- Attitude of medical professionals and the general community.
- Lack of supplements in Australia (restore, methylation, humic and fulvic acid products possibly lots of others compound products etc).
- No clear point for quality and correct information about all aspects of borrelia and associated infections with links to published papers.
- Lack of medical professionals that are knowledgeable about borrelia and coinfections.
- Lack of research into borrelia and coinfections, from unidentified stains to relationship to other chronic illnesses.
- Testing for borrelia and coinfections poor results – new dna based testing is being developed overseas.
- Side effects of medications – extreme nausea, sensitivity to light, psychological are a few of a very long list. Most patients cannot tolerate the dosages stipulated in the ACIDS treatment guideline.
- Public Education of borrelia coinfections and transmission vector (including all blood sucking parasites, ticks and mosquitoes are proven).
- Support for patients, all aspects from accommodation to carers which ill. I've had to do everything by myself.
- Is contaminated blood in blood banks? What about transplants organs, CDC has some documents on this.
- I did see a report from 2 doctors that retested their MS and CFS patients for borrelia but can't remember exactly figure but about 80+% tested positive for Lyme disease. With Tasmania having highest incidence of MS in Australia it may actually be Borrelia as the underlying cause
- I've had to look after myself as I've had no support. Even like 2007 when I was bed ridden and only able to crawl to the toilet I had to get food and eat. Even now some days I can't move literally and just go without food or water for the day until the next day when I can move.

### Important documents

ACIDS treatment guidelines

<http://www.acids.org.au/Borrelia%20and%20coinfection%20Disease%20Guidelines%202014%20Ver%201.51.pdf>

Biology of Infection with *Borrelia burgdorferi*

<http://www.ncbi.nlm.nih.gov/pubmed/18452798>

Culture and identification of *Borrelia* spirochetes in human vaginal and seminal secretions

<http://f1000research.com/articles/3-309/v1>

Occurrence of *Borrelia burgdorferi* s.l. in different genera of mosquitoes (Culicidae) in Central Europe

<http://www.sciencedirect.com/science/article/pii/S1877959X15300327>

Mould Illness and Borrelia. Patients that fall into this category will never make any improvement while exposed to mould.

Dr Shoemaker

<https://www.survivingmold.com/>

Dr Sandeep Gupta – Australian GP

<https://www.survivingmold.com/australia/Australia>

### About my journey

I have known something was wrong for a very long time (early 1990's) and seen many doctors in four different states.

I began by being extremely detailed in my description of symptoms which drew expressions from the doctors that I was a hypochondriac, over time I learnt to drip feed symptoms to slowly acclimatise the doctors so I wasn't dismissed.

I saw a Neurologist in Tasmania in 1997 for all the neurological pain and symptoms but everything was clear but they did find my pain threshold was extremely high. The Neurologist said there was nothing he could do and I'd just have to live with it and gave me the max dosage of tryptanol (antidepressant). I was not impressed with his response and was determined to still pursue my outdoor activities. At this stage I was in so much pain muscular skeletal and neurological, I could hardly walk and I should have been in a wheel chair but refused to be in one, I wasn't offered one anyway.

I also saw a cardio thoracic surgeon and he wanted to cut out my first set of ribs and with a 5% chance of success in relieving pain I said no way. Had a consult with a pain specialist who offered a nerve block but wasn't keen on that and with hind sight my decision making was not that good.

I saw an osteopath surgeon about my knees which were causing so much pain I could hardly walk and should have been in a wheelchair. I could walk but with the most incredible pain and extremely slowly. Walking as fast as I could at a two lane pedestrian crossing I would only get have way by the time the traffic lights had changed to let the cars go. A double arthroscopy was performed as well as a bi lateral release. The finding were knees were fine, the muscles were that tight they were pulling my patella into a lip of bone. If the lip of bone was not there I would have had permanently dislocated knees, instead I had to put up with bone grinding on bone 24/7 which was extremely painful to say the least.

I explained what was happening to a Centrelink person and they said I should apply for disability which I did. I had a consult with a government doctor who didn't think there was anything wrong as no hard evidence was found by the doctors I had been seeing but they could see something was wrong but had no idea what and the fact that looking at me I looked very fit and healthy.

So I was left in extreme pain with no answers. I had always wanted to go sea kayaking and as that was the only activity I could still potentially do I took it up. I started with only being able to do 30 minutes which was absolute torture and so much worse immediately afterwards but then later it felt better. After a month or two of kayaking the level of pain and the muscles everywhere were releasing and the doctors were amazed after they had told me not to do it. The osteopath was also amazed at how much of an improvement it had made in huge amounts of pain but at least I had an outlet for my stress and frustration, I was still.

When doctors ask me on 1 to 10 what level of pain am I in its hard for me as I have my own pain scale. Imagine this a 2-3mm diameter needle 600mm long and have it thrust as hard as possible under the middle finger nail and continue up the finger, hand, and forearm until it comes out at the elbow. This will drop me to my knees whenever it happens and it's not too bad pain wise for me and is a 5/10 on my pain scale.

I was working in Sydney for a large multinational in a fantastic job with huge potential to head up my own department at a global level. My ongoing fatigue physically and mentally was slowly and constantly getting worse so I went back to a GP yet again describing chronic fatigue symptoms. The GP did the usual blood tests but "nothing out of the norm". The GP said he would refer me to an immunologist go do some research and see who you would like me to refer you to. I did some research and found the highest qualified immunologist I could, a professor at St Vincent's Hospital in Sydney.

I saw the Professor during July 2014 and after a short chat and exam he said I definitely had chronic fatigue and he would run a series of test in their own labs and see if anything came up. What a birthday present I got when he told me on blood serum results I had definitely had Lyme disease without a doubt as my antibody levels were extremely high. As I've since learnt I'm one of the only or very few people to be diagnosed by Australian doctors in Australian hospitals in Australian Labs through the Medicare system. The professor didn't know what if anything could be done to treat it at the time and would discuss with me in 3 months at the next appointment.

On my return to the GP I had beaten the professors letter and told my GP I had Lyme Disease, his response was no you don't who told you that, I said the professor of immunology you sent me to, he took a little time to digest the information and agreed. The initial reaction was very off putting and concerning.

I had a neuropsychology exam which was disturbing but made sense and made me realise I wasn't imagining that I was losing my mind. The results had my attention in the 1<sup>st</sup> percentile, memory and learning in the low teens. The doctors were amazed I was actually able to work, it was only due to the fact that I had a very structured system and everything was documented and listed but creating new work was becoming very difficult to impossible, short emails would take ¼ of a day as rereading was required to ensure it actually made sense. Finally when I had lost a whole chapter to a large manual I had to pull the pin as I realised continuing was no longer fair to the company and was pushing myself to hard.

I didn't know much about Lyme disease so I started my research while I was still able. After some research I was finding a lot of good information. There is so much research that has already been done here in Australia and overseas but it seems it is not looked at, it's easy to find.

One thing I really wanted to know is what this bacteria is biologically, what I found was horrifying and incredible, Borellia is truly an incredible inspiring deadly organism.

Lyme disease is highly political overseas particularly in the US mainly due to members of the Infectious Disease Society of America (IDSA) having undisclosed conflicts of interest with big pharmaceuticals and Lyme disease research and policy.

The ACIDS treatment guideline was one of the best I had come across and was in line with the International Lyme and Associated Disease Society (ILDAS) but no doctor knew about it. The ACIDS guidelines I'm currently following and making minimal progress due to all the blocks in treatment.

I continued to work as long as I possibly could before stopping at the end of September 2014. Then the drama of dealing with Centrelink started. I've had so many drama's inconsistent following of their policies. A lot of staff do not know their own policies and contradict what some of the other staff say that are knowledgeable about policy and procedures. Some staff are downright rude and extremely unhelpful but others are brilliant. One of the things I constantly struggled with was on at least 3 levels I was exempt from participating in looking for work but I constantly was told to. The first decision was application for disability was rejected and they hadn't even assessed it properly as I had not been given a rating. It took till I got to the final level at the ATT that I they accepted I was at a level that could get the disability but they required more medical information. I was referred to a legal aid lawyer who said I had no chance. I gave my doctor the criteria that you are assessed by and she wrote a letter and we provided all test results. My doctor also told me she had spoken to a doctor from Centrelink. I was recently told that the decision had been over turned and granted the disability pension. This will make things a bit easier as trying to get treatment on Newstart is impossible. Centrelink don't except permanent med certificates on Newstart, is why I've had so much trouble with them and they couldn't see that I had applied and disputed the original decision. No one told me until very recently. Other times I had called there was no issue. Centrelink applies their policies on a very adhoc basis, basically a lot of staff do not know what they should be doing, some are excellent some are hopeless and rude.

If I'm to see the doctors I need and have the most basic supply of medicines and supplements I'm looking at least \$2000/month and more can be added to that if a full holistic approach is taken.

I listed out all my symptoms (see last 8 pages) and I also found an old symptom list I created back in 1997 which was exactly the same. I can trace most of the symptoms back to at least 1992.

I was born and raised in Hobart Tasmania and was extremely active in the outdoors bushwalking, rock climbing etc and spent a lot of time in the bush in the southern half of Tasmania. I would come back out of the bush covered in bruises and scratches and never thought about ticks. I could have been infected by any type of insect in the bush in people's gardens or on my grandparent's cattle stud.

I moved to Queensland in 2000 and have been here except for the 18 months in Sydney 2014 then moved back to Queensland October 2014.

In 2007 I was fatiguing extremely badly and at one point I became bed ridden for 2 months. Doctors couldn't tell what was wrong but could see my body was fighting something. Around this time I had been diagnosed with asthma which I didn't have, it's actually very high histamine levels which have also lead to anaphylactic reactions to ants, sand flies and severe reactions to mosquitos. Due to the high levels of histamine I've also had anaphylactic reactions with yoghurt and alcohol.

I have been to Nambour hospital with abdominal pain, they said sickest healthiest person they have ever seen, bloods best they've seen but physically worst pain.

I have been to New Zealand in 1996 and 2004, but had all the symptoms already.

In February 2014 I spent 2.5 months working in Bangalore India, where I actually started feeling a bit better, with hind sight it was due to the South Indian vegetarian diet. I also visited an Ayurvedic doctor who read my pulse for 20 seconds and told me more about my health than western medicine had, has or could do. Following their advice and herbal supplements did make some improvements.

I found a Lyme literate doctor in my home town [REDACTED] and a Naturopath [REDACTED] who is Australia's leader in Lyme Disease who only treats Lyme patients, from all over Australia.

My test results are nothing short of spectacular typically at or off either end of the ranges. The CD57 natural killer cells are used to measure the infection and when a patient goes into remission, a level of 200 is for a normal person and the sickest Lyme patients at no less than 20, mine is an almost perfect at 0.1 so the Borrelia has basically completely wiped out that part of my immune system. I had very severe cardio pain felt like a kitchen knife in the chest and pain that severe I would almost pass out from the pain. I was referred to a specialist at Nambour hospital. This consult was not good as the specialist didn't believe I had Lyme as he didn't believe it was here in Australia, the same went for the nurses. He still didn't believe even though I told him a Professor of Immunology had made to diagnosis and the lack of knowledge about my case indicated he had not read the referral. He diagnosed me with one of the coinfections but said I didn't have Lyme as it wasn't in Australia. So why do Australian veterinarians believe in Borrelia but human doctors don't??? I went and saw another cardiologist privately and I was extremely lucky as this doctor had experience with Lyme when he worked in the US. His diagnosis was pericarditis due to the Lyme and coinfections and said with the medications I was on it should clear it up. I was given a full work up (angiogram, holter etc.) and apart from having extremely high heart rates when I move around my heart was in perfect condition. I found high heart rates are one of the symptoms of high histamine levels which is a whole other issue but could be due to the infection or diet.

I've had a SPECT and MRI but nothing was unusual but I'm not confident our radiologists know what to look for re Borrelia. I don't think Australian radiologists have any knowledge of reading SPECT scans for Borrelia, I came across a study Columbia University did on how well radiologists read SPECT scans of Borrelia patients and the result was not many could read it that well.

I went to the Noosa hospital with extreme cardio pain after nearly passing out in the Centrelink office due to pain. The hospital said it wasn't a heart attack but I knew it wasn't I was more concerned it was like the report the CDC issued with cardio pain and sudden death of Lyme patients. I told the staff about it all but they didn't seem that interested but they took more interest than most others.

Post-treatment Lyme Syndrome from my experience and understanding could be due to patients not following a strict lifestyle change which enables a change in the body that is conducive to the diseases to re-emerge from hibernation.

In general I've had to educate the doctors I've been seeing with all the information I've found about Borrelia, coinfections, and other related medical information. A holistic treatment plan seems to be the consensus of the Lyme community globally to have the best effect. My GP says I've won the lottery with this illness as I have multiple coinfections and blocks in treatment. A large number of patients have Bartonella and Babesia both of which are extremely hard to get rid of. I have been tested for these but the tests were negative but clinically I have them. Like Borrelia there are many different strains of these that we currently do not know about.

Working with my doctors discussing all the new research I find certain aspects of treatment are being tweaked and added. Treating Lyme requires a total and permanent lifestyle change, diet, exercise, no stress. Diet is one of the most important as my research has told me, gut health in borrelia patients is typically bad to horrific, mine seems to be horrific. For me my diet consists of the following:

- Blood group diet A
- No sugar as this feeds the diseases and helps candida, see the documentary "That film about Sugar", due to hidden sugars in food basically anything packaged or tinned has sugar and I need to avoid. Includes no fruit for me as any sugar increases my symptoms.
- No dairy
- No caffeine as this lowers the immune system which is already depressed and borrelia patients immune systems are not that healthy.
- No wheat or gluten as gluten destroys the tight junctions in the bowel. Many patients will have leaky gut with toxins passing through the tight junctions and circulating through their system. (I got myself on a trial of Restore <http://restore4life.com/> and found it worked instantly but this product is not available in Australia.)
- Obviously no preservatives or chemicals.
- No alcohol - depresses immune system adds histamine, sugar, yeasts and moulds.
- No moulds or yeasts as I'm highly allergic and this prevents me from making any progress. (Compound Questran extremely expensive)
- Low histamine diet as I worked out from researching methylation.
- Supplements to aid in Methylation (again some supplements required are not available in Australia and amount of supplementation can be extremely expensive)

So what I'm left with is not much, fresh organic vegetables that are allowable by the blood group and histamine. Every meal needs to be prepared and if I'm not well I don't eat. It is an extremely restrictive diet but extremely healthy and my friends are telling me I look the healthiest in 10 yrs. even though I'm the sickest. My gut health is extremely bad so I need to maintain this extremely strict diet and put as much probiotics into my gut of which I can have virtually none of the normal ones due to one of the things above. I got myself on a trial of Restore (<http://restore4life.com>) and found it worked instantly and from what they say I would need to be on this for at least 2yrs. I will not make any real progress due to my gut health and this is the same for most other borrelia patients. I will be trying to get hold of restore but again like everything related to this illness it is very expensive. I'm also looking into Humic acid and fulvic acids to see if I can find any papers to see if this will help gut health. Without my gut health all the supplements I take are not absorbed and just pass through. Some food groups are completely ruled out due to GMO like corn and soy etc.

I'm probably the sickest best looking person test results are horrific but I look normal and fit

Moon point Fraser Island now may have Lyme and coinfections in the sandfly population as I was completely covered in bites and had to go to hospital, the staff had never seen so many bites on a person. I'm probably lucky I've always been extremely active oxygenating my body and when I stop exercising my health goes downhill extremely fast as the organisms start to multiply. I get seizures when toxins build up, this mainly happens overnight and can prevent me sleeping or wake me up.

I see all forms of borrelia in my vision, spirochete, pearl strings, cyst, and biofilms, basically all the form DR A McDonald describes in his research. Seeing borrelia is in my eyes to my understanding we don't have drugs that can get to these areas, the brain is hard enough.

Borrelia and coinfections take over your body and complement each other and destroy gut health. Stop the inflammation like Dr Horowitz then restore gut health via extreme diets and lifestyle change, this can take years before you start making any real progress.

For me it's:

- stop all stress
- stop inflammation via extreme diet
- fix gut health via extreme diet
- open up methylation pathways
- remove mould toxins
- remove neurotoxins
- gradually build up physical strength and fitness
- Remove any other blocks in treatment
- Kill coinfections
- Target borrelia for remission.

With how well I know my body and know about what needs to be done I am expecting nearly all of my 40's the next 10 years to get to remission.

Australian Popular science article "Have we found Alien Life" on new type of bacteria and it mentioned Lyme as extreme biology

Taking medications my doctors have told me I'm one of the few that can tolerate the full dose of all the medications. They do have side effects but I don't really notice them as my normal symptoms are so strong. The nausea I do notice as it is totally debilitating for at least 3-4 months. Imagine the feeling just before you vomit, you have that feeling 24/7 at an extreme level and when you do vomit it is almost instantaneous with no warning and projectile. The medication also make you extremely photosensitive, 10 minutes in sunlight and I get burnt, it is extremely painful and scars.

One medicine I needed was Azithromycin, its \$285 for 2 months, I was lucky my best friend payed for that for my first 12 months. I have stopped as I cannot afford it.

My blocks in treatment:

1. Infections - Bacterial / Parasitic / Viral / Fungal
2. Immune dysfunction - depressed CD57 mine is 0.1
3. Tissue Inflammation - brain / joints / organs
4. Toxicity - multiple chemical sensitivity, environmental illness, heavy metals, mould and neurotoxins. One of the sickest groups of patients is those with genetic defects making them particularly susceptible to mould (this is me). This group will not improve with any treatment until the challenge is removed from their environment and this always involves checking for environmental mould remediation index, and either taking serious remediation steps for the

residence if positive or moving residence. A 10-step process has been described by Dr Ritchie Shoemaker at [www.survivingmold.com](http://www.survivingmold.com) Many tests are not available in Australia and are very expensive.

5. Allergies – foods (very high histamine levels), environmental
6. Nutritional & enzyme deficiencies/ functional medicine.
7. Genetic disorders of methylation pathways – MTHFR
8. Mitochondrial dysfunction
9. Psychological disorder - stress, depression, anxiety, due to life, illness and medication side effects
10. Endocrine abnormalities - adrenal, sex hormones, vit D deficiency.
11. Sleep disorders - Sometimes I'll not sleep for 4-5 days and other times I'll sleep for days, my longest sleep without waking is 84hrs.
12. Autonomic Nervous System Dysfunction
13. Gastrointestinal - leaky gut, candida,
14. Elevated LFT's - antibiotics, Wilsons disease - my test results indicate this via copper levels,
15. Deconditioning - due to extreme fatigue

## MTHFR

I have found this is one of the most important aspects of recovery. From what I understand epigenetics and nutrigenetics are the future of modern medicine. Diets based on genetic and a cellular level to maintain open methylation pathways to prevent and reverse chronic illnesses to varying degrees. This is extremely new and very complex. My methylation pathways are shut down and require my gut health to be rectified to absorb the nutrients from supplements and an extremely restrictive diet. Doctor Ben Lynch

(<http://mthfr.net> <http://www.drbenlynch.com/> <http://seekinghealth.org/> ) in the US is one of the leaders in this field and in Australia we have MTHFR Support Australia (<http://www.mthfrsupport.com.au/> )

# My Symptom List

## Overall

Below symptoms can be traced back at least 17yrs some possibly 22yrs

Appear deceptively well, even when in intense pain and feeling terribly unwell.

Symptoms wax and wane, change, come and go.

Some symptoms stay, some come and go, some are dramatic and others merely annoying.

Have persistent malaise, with periods of worsening symptoms, often cyclical,

Whenever I'm stressed your pain rises to a higher level.

Whenever I fall, injure, or cut yourself - the injury and its associated pain lingers for an exaggerated amount of time.

Alcohol reacts on me. Highly allergic to moulds  
Head is unclear, can't remember, thinking is off...  
As the years go by health progressively deteriorates.  
Very high pain threshold due to long term high pain levels  
Number food groups have inflammatory response, dairy, wheat, moulds & yeasts, gluten, and certain other individual foods.  
Too much exercise can lead to excessive sleeping immediately after or over sleep that night and leaves me exhausted/bed ridden for days after. This is unpredictable

### Cognitive Disturbances

#### Dementia

Brain fog; Like a cloud reducing your clarity of mind.  
Brain block when trying to focus.  
Brain vacant/blank when trying to focusing or at random  
Difficulty in thinking and processing information.  
Difficulty reading,  
Difficulty in planning and organizing.  
Difficulty in problem solving/decision-making  
Difficulty to see or take in the whole picture.  
Difficulty with multi-tasking.  
Difficulty to think quickly and to respond quickly.  
Difficulty with judgment; Saying something without processing it correctly. Inability to think it through and its consequences.  
Difficulty making decisions.  
Difficulty estimating/figuring out time.  
Difficulty in tracking objects in motion.  
Difficulty with calculations. (Inability to hold numbers in head, or to add/subtract on the spur of the moment.  
Difficulty getting started or completing a project.  
Slow processing of information.  
Difficulty in performing sequential tasks.  
Difficulty learning new tasks.  
Suddenly forgetting how to perform routine tasks and remembering how only much later.  
Problems with letter or number reversals  
Intermittent spelling and writing difficulty.  
Difficulty maintaining focus or concentrating.  
Easily distracted.  
Racing thoughts  
Inattention: distractibility, easily side-tracked, trouble staying focused, trouble sitting still.  
Talking a lot, in constant motion, hyperactive.  
Impulsivity: impatient, saying something without thinking first.  
Interrupting others in mid conversation or contributing to the conversation long after it is finished.  
Misspeaking.  
Difficulty in keeping up to a conversation or to understand what is being said. Disrupted participation in conversation.  
Auditory processing problems.  
Difficulty in expressing one's self. Difficulty in word finding. Halting speech; Speech comes out as stammering, slurred, slow, and hesitating.

Name block. Speech errors, wrong word comes out.  
Emotional and expressive incontinence.  
Slow processing, recalling, or remembering of information or what was read.  
Difficulty with basics, social, and day to day functioning.  
Declining performance in school or work.  
Feeling a significant decline in intellectual acuity.  
Feeling a loss of competence.  
Intermittent distorted memory. Short/long term memory lapses. Forgetfulness, poor or loss of short term memory. Impaired memory functions (lost items, missed appointments, retold stories)  
Tendency to get geographically disorientated; suddenly forgetting where a familiar destination is.  
Getting lost. Going to the wrong place. Unable to orientate oneself or recognize familiar places or figure out where one is or how to get back from home as everything looks unfamiliar.  
Progressive decline in cognitive abilities over the years. Drop in measurable IQ

### Dental Disturbances

Difficulty chewing.  
Dental problems; chronic gingivitis, receding gums, thinning enamel.  
Sudden pain within each tooth.  
Painful gums, swollen gums.  
Painful/stiff jaw, mimics TMJ or jaw joint arthritis.

### Digestive System Disturbances

Gastrointestinal tract paralysis and related abnormalities can occur anywhere along the entire length of the tract.  
Malfunction of intestinal muscle contractions.  
Nerves sending incorrect messages to digestive system.  
Paralysis or partial paralysis of the tongue, gag reflex, oesophagus, stomach, and nearby organs, small and/or large intestines.  
Change in smell/taste.  
Difficulty chewing, swallowing, or speaking.  
Disturbances of tongue, gag reflex, numbness.  
Under or over-eating.  
Not knowing when you are hungry or full.  
Unexplained weight gain or weight loss.  
Stomach pain  
Upset stomach  
Nausea, vomiting.  
Belly pain, abdominal cramps, intestinal spasms  
Bloating belly.  
Unusual constipation: putty like/unresponsive to laxatives.  
(Bowels stop working for many days and suddenly restarts for no particular reason)  
Unexplained diarrhoea with sometimes blood in runny stools.  
Reluctance to go to school/work /going out to eat because of bouts of diarrhoea.  
During night, rectal muscle/bowel cramping giving an urge to defecate.  
Unrelenting pain in lower left rib cage  
Pain in bottom of the right rib cage in the upper right quadrant of the abdomen  
Disturbances of any part of the intestines.

### Intestinal Microbial Flora imbalance

Heightened response to alcohol, sweets or caffeine

Candida

### Ears and Hearing Disturbances

High pitched whining, buzzing, clicking, ringing, buzzing, hissing, humming, ticking, whistling, roaring, beeping or a "whooshing" sound, as of wind or waves, or other sound in one or both ears.

Pain in ear(s) with no medical cause.

Sound sensitivity (Sometimes noises causes extreme irritability)

Decreased hearing in one or both ears. At times complete hearing loss. Plugged ears, infected ears.

Ears popping

### Emotional

Discouraged

Deteriorated self-esteem

Feeling ashamed

Lots of anger and frustration.

Self-doubting

Anxiety over finances when inability to earn income.

Fear for deteriorating health or/and of dying.

For every symptom that appears there is also an emotional reaction

Spontaneous crying

### Body Temperature Disturbances

Body temperature feels unregulated.

Can't stand hot or cold temperatures.

Ice cold body parts and patches anywhere on body that do not match environment.

Unexplained sudden over-heating throughout body.

Unexplained chills (difficulty getting warmed up)

When sleeping: Night sweats (drenching) or intense body heat.

Unexplained sweats/fevers/feeling very hot, day or night.

Unexplained fevers (high or low grade) recurrent episodes of fever

Inability to sweat normally.

Hot or Cold feet and hands

Hands and feet excess sweat

### Eyes and Vision Disturbances

Blurriness, inability to see in a particular part of the visual field for a period of time.

Sudden blurred "foggy" vision. Double vision.

Sudden loss of partial vision (half vision) that later returns.

Vision loss

Increased floaters (like internal eye dust)

Floating black specs

"Spots" before eyes

Flashing lights/showers of sparkles.

Kaleidoscope movement in sparkle.

Looking through waviness/wigglyness

Phantom images

Sensitivity to light

Pain behind or in eyes. Swelling around eyes.

Inflamed, itchy eyes, watery eyes.

Conjunctivitis, pink eyeball, or prominent red veins.

Eye redness, bloodshot eyes, and irritation.

Pressure in eyes

Dry eyes

Drooping of eyelid

Feeling as if something is in the eye

Abnormal pupil size. Pupillary dilatation

Swelling around eyes / bags below the eyes.

### Head, Face, Neck Disturbances

Headache, Fever, nausea, decreased alertness, malaise, visual disturbances, stiff neck and back, decreased consciousness, tremor, seizures, lasting days to several months, years

Headache, fever, stiff neck, spine, sensitivity to light, nausea, sleepiness, confusion

Headache, stiff neck, malaise, nausea and muscle aches may develop over days.

Headache lasting weeks to months persistent/severe/ head pressure /congestion /burning. Burning in the brain and sometimes the neck and spinal cord or parts of the head, forehead or most of the head

Extremely painful and disabling headache not relieved by any medication, lasting a long time.

Pressure within the head as if the brain is being squeezed from not enough room.

Swollen forehead (around eyes)

Sharp pains in the head that last for a few seconds but are persistent; electric shock, as if someone hit or thumped the side of the head hard.

Tight scalp muscles. Itchy under the scalp, feeling better when rubbed/scratched or heat is applied.

Sudden itchy, crawly feeling on scalp and also sudden pimples forming on the scalp

Sore and tender areas on skull

Sensation of gurgling or leaking inside the head

Stiff or painful neck inability to turn head.

Light headedness, wooziness, feeling off balance

Difficulty with spatial awareness of where front and back doors are in own house, misjudging furniture and doorways, and when grabbing objects.

Dizziness & equilibrium disorders. Vertigo a sensation of motion sickness, feeling off balance, that the floor is moving etc.

Numbness usually only on one side of the face to forehead

Body feels split in two each side feels different to touch

Body feels split in two each side feels various types nerve pain, needle pain

Twitching of facial muscles (tics), sensation of sharp facial pain, crawly feeling, or itching, tingling of nose and other facial parts.

Sensation of a spider web or loose hair fallen on face.

Cracks around sides of mouth.

Facial flushing (red face)

Drippy nose (unexplained)

Itchy/tingling nose & tongue tips for prolonged periods

Loss or altered sense of smell/hearing/taste

Phantom tastes in mouth (metallic or salty)

Dry mouth.

Pulsing sensations in parts of the body, vibrating sensations, head rocking to rhythm of pulse.

Numb/sore tongue/mouth.

Throat-sore throat, swollen glands, cough, hoarseness, difficulty swallowing

### Heart Disturbances.

Pericarditis

Heart palpitations or extra beats

Irregular heartbeat.

Loss of control over blood pressure that causes dizziness, light headedness, or fainting.

Elevated blood pressure

Low blood pressure

Heart rate slow, faint, rapid, or irregular, skipped beats.

Very high heart rates on inclines and exercising e.g. gentle cycling normal breathing as sitting in a chair HR 175, little effort rises to 190's and can rise above 200 up to 220+ for short periods 30-60s Fainting.

Feeling short of breath and find it harder to exercise.

Have chest pain or chest discomfort or a feeling that your heart is pounding or fluttering

### Immune and Endocrine Disturbances

Immune dysfunction - CD57 result 0.1

Persistent swollen lymph glands/nodes

Decreased energy. Tire quickly.

Declining stress capacity.

Inflammation and what feels like inflammation pain anywhere in the body causes intense pain, including any cysts within the inflamed area.

Sugar craving. (Candida)

Continual infections

Allergies increased or new ones.

Chemical sensitivities

### Loco motor Disturbances

Joint pain and swelling around joint

Some joints remain chronic and pain rises at high level whenever there is a flare in the body.

Sudden "axed-like/broken bone" type pain in a bone, especially near a joint when asleep or in awake time also.

Migratory pains in and around the joints and muscles, intermittent or chronic. Pain rises at high level whenever there is a flare in the body

Creaking, popping, or cracking joints

Stiffness of joints from toes to neck and back, sometimes for a constant period and other times sudden stiffness that goes after movement.

Unexplained backaches. Deep and steady pain in spine that feels as if it radiates from pressure on the nerves surrounding it or as if the pain comes from deep inside of the spine. (From neck to tail bone.)

Intense pain, mostly in the lumbar and cervical regions radiating to the extremities.

Bone sensitivity and bone pain of different levels and intensity.

Sudden agonizing bone pain of an entire length of one bone, the entire rib cage, or all bones connected to any single bone, becomes too sore to touch, similar to a bruised bone or a broken bone.

Tenderness in lower shin medial tibia shaft bone.

Foot, ankle, and heel pain, sore soles (esp. in morning)

Deep aches and burning in palms/soles of feet.

Burning or stabbing pains in odd and shifting places

Feeling of someone tapping on your shoulder or thumping you on the side of the head.

Involuntarily trembling or body rocking or sensation when laying down as if in a boat on water.

Muscle cramps/spasms (all over body)

Throughout body; Muscle tenderness and pains of varying intensity as if over-stretched, bruised, cut, scraped, injured, burned, sharp, dull, or aching.

Knots or tight spot in muscles.

Tendon and ligament pain.

Tingling, numbness, weakness, or pain felt in the hand, forearm, or wrist that awakens from sleep.

Arm(s) inflamed and swollen, for no reason.

Sudden jolting sickening pain down the arm similar to the frozen shoulder pain.

Entire body weakness body feels very heavy.

Diminished reflexes, nerve conductivity defects causing weakness or partial paralysis of limbs, and

coordination.

Tingling sensations of the extremities

Spastic paraparesis: Leg weakness, Difficulty walking, Arm weakness, Clumsiness of hands, Difficulty in fine movements of hands and legs, Spasticity, Weakness, Muscle cramps, Muscle twitches, Exaggerated reflexes, Stiff movements, Jerky movements, Exercise intolerance, Reduced muscle strength

Increased motion sickness

Equilibrium problems/dizziness

Diminished exercise tolerance

Shocks, sharp jabbing, electric-like pain and shooting pains anywhere in the body

### Reproductive Disturbances

Testicular or pelvic pain

Sexual dysfunction/ Loss or increase of sex drive

### Mental Disturbances

Feeling you are losing your mind/going crazy because the people around you disbelieve the reality of your pain, disabilities, and deteriorating health, most especially when you do not know what has afflicted you.

Exaggerated fear.

Suicidal thoughts for relief from physical/emotional pain. And/or suddenly suicidal.

Unusual sadness, hopelessness, guilt.

Unusual Depression

Over-emotional reactions to fit the situation.

Crying or screaming impulses for no reason

Easily frustrated, irritated, agitated, unusually short tempered and often cyclical.

Sudden explosive irritability for no apparent cause.

Much activity or noise or any sensory stimulation within environment triggers extreme agitation and or aggressiveness.

Sudden moments of suspiciousness/paranoia.

Delusions.

Trying to do everything during periods of feeling okay and very little activity when laden with pain.

Periods of extreme high energy to extreme lows. Rapid mood swings

A driving need to do something repeatedly and having much anxiety if unable to do it.

Persistent thoughts that cause anxiety/distress.

Persistent anxiety, for no reason.

Panic attacks.

Feeling detached from one's self or reality. Feeling of unrealness".

Always hurried, even without a deadline.

Personality change. Saying and doing something unlike your usual self. Behavioural changes

Hearing music or sounds others can't hear. Odour, Visual or auditory hallucinations. Language difficulties (halting speech, disrupted participation in conversation)

Mimics most every psychiatric disorder (inconsistently) in the similar way the weird physical disorders keep changing depending where the brain inflammation is that day.

### Neuro Disturbances

Hypersensitivity to light, sound, smells, taste, touch and vibrations.

Seizures, momentary mini blackouts, periods of confused memory, episodes of staring, unexplained periods of unresponsiveness.

Fainting spells

Abnormalities of taste or smell (Peculiar metallic or salty taste).

Visual, odour or auditory hallucinations

Tremors, unexplained shaking, jerking, twitching.

Sensations in the body of pinpricks, stabbing, burning.

Sensations of vibration or flutters.

A sensation of wearing an invisible "glove" or "sock"

Numbness in parts of the body and/or extremities.

Increased motion sickness

Difficulty walking or moving the arms.

Dizziness, poor balance, weakness, or partial paralysis of limbs, loss or diminished reflexes or coordination.

Feet/legs experience poor automatic response; Walking problems. Gait disturbance. Clumsiness.

Tripping. Walking into things. Not knowing where your feet are. Poor muscle coordination, loss of reflexes, experiencing weakness

Burning, freezing, throbbing, shooting pain in limbs, hands and feet or toes and fingers or all, that is often worse at night and is felt equally on both sides periodically or constant. Lyme

Peripheral Neuropathy

Intense pain, mostly in the lumbar and cervical regions, and radiating to the extremities

Involuntary movement of arms, legs, and digits.

Irresistible urge to move legs; sensations include creeping, itching, pulling, creepy-crawly, tugging, or gnawing in legs. Restless legs syndrome

Need to bend legs inward toward chest as close as possible

Periods of jumpiness, easily startled

Pressure-related neuropathic symptoms (e.g. an arm going to "sleep" while resting on a car door while driving),

Drooping shoulders

Increased motion sickness

Susceptibility to electrostatic shock.

Diminished reflexes

### Respiratory Disturbances

Air hunger, laboured breathing, or gasping

Cough (non-productive, odd, unexplained)

Respiratory infections, asthma, pneumonia, cough, chest pains.

Can't get a full or satisfying breath.

Shortness of breath with exertion.

When talking suddenly running out of air.

### Severe Sleep Disturbances.

Unusual, extreme, persistent fatigue.

Instantly falling asleep, at any time

Difficulty falling or staying asleep or unable to sleep for no apparent reason.(Insomnia awake 5 days)

Unable to fall asleep or being awakened during sleep because of the high level of pain throughout the body.

Sleeping too much. Can sleep for 84 hrs. straight

Unable to get into a normal deep sleep

Being awakened in the middle of the night by sudden severe arthritic pains throughout entire body that is excruciating, dramatic, and feels like you are on death's door and most of this horrid pain is gone by the next morning.

### Skin Disturbances

Pinna and ear lobes have varying shades of red. Images

A benign nodule or tumour on ear lobe, scrotum

Sensation of water dripping on skin or tingling sensations (like an insect crawling on skin, water dripping on skin, tingling, or spider web laying on skin.

Spots and areas on the body under skin that suddenly become extremely sensitive to touch.

Burning pain like sunburn or freshly scraped skin embedded with sand in the digits/ limbs.

Sudden itchiness of limbs or parts of body.

Skin flushes

Nodules under the skin

All lumps and cysts become very painful during periods of active Lyme and within areas of inflammation.

Fingernail changes such as vertical ridges, curved under, flat in centre

Scalp rash

Rashes

Numbness

Tingling

Stretch mark scarring around hips and buttocks

### Urinary Disturbances

Underactive/overactive. Tiny stream. Straining to urinate. Hesitancy. Bladder not emptying completely. These symptoms just as suddenly disappear and everything is back to normal, until they again suddenly reappear.

What feels urinary tract infections come and go

## References

Australian Chronic Infectious Diseases Society – **A must read and not many know about this.** Lists Borrelia found in Australia to date, on sequencing by a NATA accredited laboratory Australian Genome Research Facility (AGRF) Sydney.

<http://www.acids.org.au/Borrelia%20and%20coinfection%20Disease%20Guidelines%202014%20Ver%201.51.pdf>

International Lyme and Associated Disease Society (ILDAS) Guidelines

<http://ilads.org/lyme/treatment-guideline.php>

Lyme Disease Association of Australia

<http://www.lymedisease.org.au/>

Karl McManus Site

<http://www.karlmcmanusfoundation.org.au/>

Norvect Conference – Nordic Network for vector-borne diseases

<http://norvect.no/>

About Lyme Disease and list of reference articles

<http://norvect.no/vector-borne-diseases/>

Dr Alan B McDonald – One of the leaders in Borrelia research

Has proven Borrelia is a cause of dementia and alzheimers, papers and video presentations on site.

<http://alzheimerborreliosis.net/>

Dr Eva Sapi – another leading researcher with many published papers and video presentations.

Dr Horowitz – leading in Inflammation with Lyme disease.

Australian Papers taken from <http://www.lymedisease.org.au>

There are a number of journal articles proving the existence of Lyme disease in Australia, some of which are difficult to locate however they have been sourced via Australia's National Library below:

1982 – Lyme Disease in the Hunter Valley; Med Journal of Australia – [Lyme Disease in the Hunter Valley Med Jnl of Australia 1982](#)

1986 – Lyme Disease on the South Coast of NSW; McCrossin Med Journal Aust – [Lyme Disease on the South Coast of NSW McCrossin Med Jnl Aust 1986](#)

1991 – Detecting the Cause of Lyme Disease in Australia; Med Journal of Australia – [Detecting the cause of Lyme disease in Australia Med Jnl of Australia 1991](#)

1998 – Lyme Disease in Australia; Aust/NZ Journal of Public Health – [Lyme Disease in Australia Aust NZ Jnl of Pub Health 1998](#)

1998 – Culture Positive Lyme Borreliosis; Hudson Medical Journal of Australia – [Culture positive Lyme borreliosis Hudson Med Jnl Aust 1998](#)

Lyme Disease Association of Australia, 2014. [Lyme disease in Australia: Patient submission to the Australian Government Department of Health's 'Scoping study to develop a research project\(s\) to investigate the presence or absence of Lyme disease in Australia'](#).

Mackerras MJ. 1959, [The haematozoa of Australian mammals](#). Aust J Zool. Vol. 7: 105-135. This study reported the isolation of Borrelia from Australian fauna including kangaroos, wallabies and bandicoots.

Carley JG & Pope JH. 1962, [A new species of Borrelia \(B. Queenslandica\) from Rattus Villosissimus in Queensland](#), Aust J Exp Biol Vol. 40: 255-262. This study resulted in the identification of a new species of Borrelia, B. Queenslandica, was identified in a native Australian rodent. It produced a relapsing infection in laboratory rats and mice that responded to antibiotics. A human volunteer inoculated with B. Queenslandica did not, however, become infected.

Stewart A, Glass J, Patel A, Watt G, Cripps A & Clancy R. 1982, [Lyme arthritis in the Hunter Valley](#), Med J Aust. Feb 6;1(3):139. This study documents the 1980 case of a man bitten by an unidentified insect in the NSW Hunter Valley, and his resulting symptoms, described as "classical features of Lyme arthritis". Mention is also made of 6 cases of EM (bullseye) rash diagnosed by local dermatologists within the previous 12 months.

McCrossin 1986, [Lyme disease on the NSW South Coast](#), letter to Medical Journal of Australia. Vol. 144 (June), 724-725. This letter details the cases of two people on the NSW South Coast who experienced EM (bullseye) rashes – one of them also reported additional symptoms such as lethargy. Both were treated with antibiotics, and subsequently reported no further issues.

Rothwell JT, Christie BM, Williams C & Walker KH. 1989, Suspected Lyme disease in a cow, Aust Vet J. Sep;66(9):296-8. This study details the case of a cow located in Camden, NSW who suffered from lameness, emaciation and severe diarrhoea. The cow was euthanased, and a positive serology for Borrelia burgdorferi was reported.

Wills MC & Barry RD. 1991, [Detecting the cause of Lyme disease in Australia](#). Med J Aust, 155:275. This letter details a study in which the gut contents of ticks found in the NSW Hunter Valley and Manning River districts were cultured. Many of the ticks were removed from pets and livestock, some of which were lame. 42% were culture-positive for Borrelia-like spirochetes. The letter also asserts more than a dozen Australians on the northern beaches of Sydney and in the Hunter Valley have acquired Lyme disease, as reported in a letter to the Medical Journal of Australia. In addition, it found 70 of 167 of Australian ticks were culture positive for Borrelia-like spirochaetes.

Hudson BJ, Barry RD, Shafren DR, Wills MC, Caves S, & Lennox, VA. 1994, [Does Lyme borreliosis exist in Australia?](#) J Spirochetal Tick Borne Dis, 1, 46-52. This study suggests that based on immunoblotting testing, an indigenous form of Lyme occurs in Australia, caused by spirochaetes more closely related to B. garinii and B. afzelii than B. burgdorferi sensu stricto. This document is particularly interesting, as the authors refer to the (then recent) Russell and Doggett study that did not find evidence of Borrelia in Australia: "These negative results have not deterred our research as one of us (BJH) regularly sees clinical cases of LB acquired in Australia".

Cestnick L. 1998, [Lyme disease in Australia](#), Australian and New Zealand Journal of Public Health, 22(5), 524. This editorial article acknowledges previous studies that have confirmed the presence of Borrelia in Australia. The author offers potential reasons for the difficulty in identifying Borrelia serologically, and the differences in symptoms compared to cases reported in other countries.

Hudson BJ, Stewart M, Lennox VA, Fukunaga M, Yabuki M, Marcorison H & Kitchener-Smith J. 1998, [Culture-positive Lyme borreliosis](#), Med J Aust, Vol 168:500-502. This study details the case of a patient with Lyme-like symptoms whose skin biopsy cultured positive for Borrelia garinii. Despite previous European travel, his clinical history indicated a tick bite on the NSW Northern Beaches as the likely cause. The authors suggest that B. garinii may be a more appropriate positive control than B. burgdorferi, when searching for an indigenous Australian spirochaete.

Mayne PJ. 2011, [Emerging incidence of Lyme borreliosis, babesiosis, bartonellosis, and granulocytic ehrlichiosis in Australia](#). Int J Gen Med.; 4:845-852. Patients reporting symptoms of Lyme and co-infections were tested for the causative agents via multiple methods (IFA, IgG and IgM Western Blot and PCR). Testing was specific to each patient's likely infections. 55% tested positive for Lyme, 32% for Babesia, 22% for Bartonella and 16% for Anaplasma phagocytophilum. Patients included an individual who, despite testing positive for Lyme, Babesia duncani, Babesia microti and Bartonella henselae, had never left Queensland.

Treatment Guidelines from around the globe.

There are a range of treatment guidelines available including:

Australian Treatment Guidelines: [Australian Chronic Infectious Disease Society Guidelines](#).

International Treatment Guidelines: [International Lyme and Associated Disease Society Guidelines](#).

American Treatment Guidelines: [Diagnostic Hints and Treatment Guidelines for Lyme and other tick borne illnesses by Dr J Burrascano](#).

German Treatment Guidelines: [Deutsche Borreliose-Gesellschaft e. V. Diagnosis and Treatment of Lyme borreliosis guidelines](#).

References from the Lyme disease org

<http://www.lymedisease.org.au/references/>

Columbia University Medical Centre (Lyme Research)

<http://www.columbia-lyme.org/index.html>

<http://www.newswise.com/articles/scans-distinguish-lyme-disease-from-psychological-disorder>

Peter J Maine – Australia's leading doctor, Now retired

Dr Keith Berndtson

Immune evasion and persistent infection in Lyme disease

<http://www.ncbi.nlm.nih.gov/pubmed/23637552>

<http://parkridgemultimed.com/>

### **PUBMED and other Papers**

Biology of Infection with *Borrelia burgdorferi*

<http://www.ncbi.nlm.nih.gov/pubmed/18452798>

### **Is Borrelia an STD?**

Culture and identification of *Borrelia* spirochetes in human vaginal and seminal secretions

<http://f1000research.com/articles/3-309/v1>

### **Any blood sucking parasite has the potential to pass on the disease.**

Occurrence of *Borrelia burgdorferi* s.l. in different genera of mosquitoes (Culicidae) in Central Europe

<http://www.sciencedirect.com/science/article/pii/S1877959X15300327>

Borreliacidal activity of Borrelia metal transporter A (BmtA) binding small molecules by manganese transport inhibition

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4330029/>

SPECT brain imaging in chronic Lyme disease.

<http://www.ncbi.nlm.nih.gov/pubmed/22889796>

Mould Illness and Borrelia.

Dr Shoemaker

<https://www.survivingmold.com/>

Dr Sandeep Gupta – Australian GP

<https://www.survivingmold.com/australia/Australia>

#### **Other relevant Articles**

High Histamine Levels - I reduced my histamine levels with dramatic effect

<http://ajcn.nutrition.org/content/85/5/1185.long>

Antiviral properties of clinoptilolite – with regard to patients with herpes this works better than any pharma.

[https://www.researchgate.net/publication/237533187\\_Antiviral\\_properties\\_of\\_clinoptilolite](https://www.researchgate.net/publication/237533187_Antiviral_properties_of_clinoptilolite)

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