

**Dear Patient,**

Once it became evident that Lyme borreliosis affects the entire body and the causative agent was also discovered, the etiology of several diseases were elucidated. **This is how the syndrome behind your complaints was also discovered.** Please note that your symptoms are caused by a germ, which is sensitive to a number of antibiotics. To be able to select the most effective one, we asked you and your family practitioner about former treatments with antibiotics. At the same time, our Therapeutic Workgroup keeps searching for the most effective way of treatment.

However, **the characteristics of this pathogen** (officially called *Borrelia burgdorferi sensu lato*) **are quite different from other bacteria:** the generation cycle of this bacterium is 100 times longer and it is capable of intact survival in any cell of the human host. Poorly vascularized tissues, which are less penetrated by both the product of the immune system and drugs, are the preferred sites of latent infection. As a consequence, **therapy**, too, has to be **different:** the treatment of Lyme borreliosis requires careful planning and management; control tests are also needed to make sure that treatment is both free from adverse reactions and effective.

Please take the time to read our brochure before and during treatment so that therapy may be optimized and the side effects minimized. Therapy damages the pathogenic bacteria, which, in turn, may evoke various reactions from your body. This may even result in temporary worsening of your condition. **Do not change the prescribed drug regimen unless your physician tells you so. Do not discontinue your medications.** In some cases, unexpected reactions may call for a change regarding the antibiotic used.

Please keep in mind that – due to the unique characteristics of this pathogen and the reactions to it, and depending on the extent of damage caused by these germs – **two to three months may be required for full recovery.** After the cure, we strongly recommend that you devote at least a week or two to convalescence.

Tissue involvement may cause your symptoms to reappear should other illnesses ensue. This is not a sign of relapse but rather of **increased susceptibility of certain organs.**

Therapeutic Workgroup of the Lyme Borreliosis Foundation

## ABOUT THE TREATMENT OF LYME BORRELIOSIS

**Lyme borreliosis is a curable disease.** Establishing the correct diagnosis and applying treatment based on the latest advances are prerequisites *for* curing Lyme borreliosis.

Complaints and symptoms of Lyme borreliosis patients are often indistinct and may also relate to other diseases. Lyme borreliosis does not heal spontaneously, which means that other illnesses may be superimposed. The resulting mixture of complaints and symptoms makes the clinical diagnosis quite difficult, while laboratory methods for the detection of similar diseases often fail to identify Lyme borreliosis. As a result, Lyme borreliosis often remains undiagnosed, and novel diagnostic methods had to be developed.

In the Center for Medical Genetics of Istenhegyi Klinika, **we introduced new diagnostic methods** capable of direct detection of the pathogen as well as identification of substrains. In addition to verifying the diagnosis, the identification of substrains provides further clues to devising effective treatment regimens. Consequently, treatment regimens prescribed in our clinic are based on more information.

Having realized the changeability and adaptability of *Borrelia burgdorferi sensu lato*, we introduced a unique approach to therapy using **combinations of antibiotics**. One of the members of these combinations causes direct damage to the pathogenic bacteria while the other prevents spirochetes from adapting to their environment and the antibiotics used. **Treatment effects are monitored through extensive follow-up.** We, the physicians of Istenhegyi Lyme Klinika, are committed to treating the patient as a whole; treatment schedules are based on expert opinion from **patient referrals**.

The following information is needed to help us design your treatment schedule:

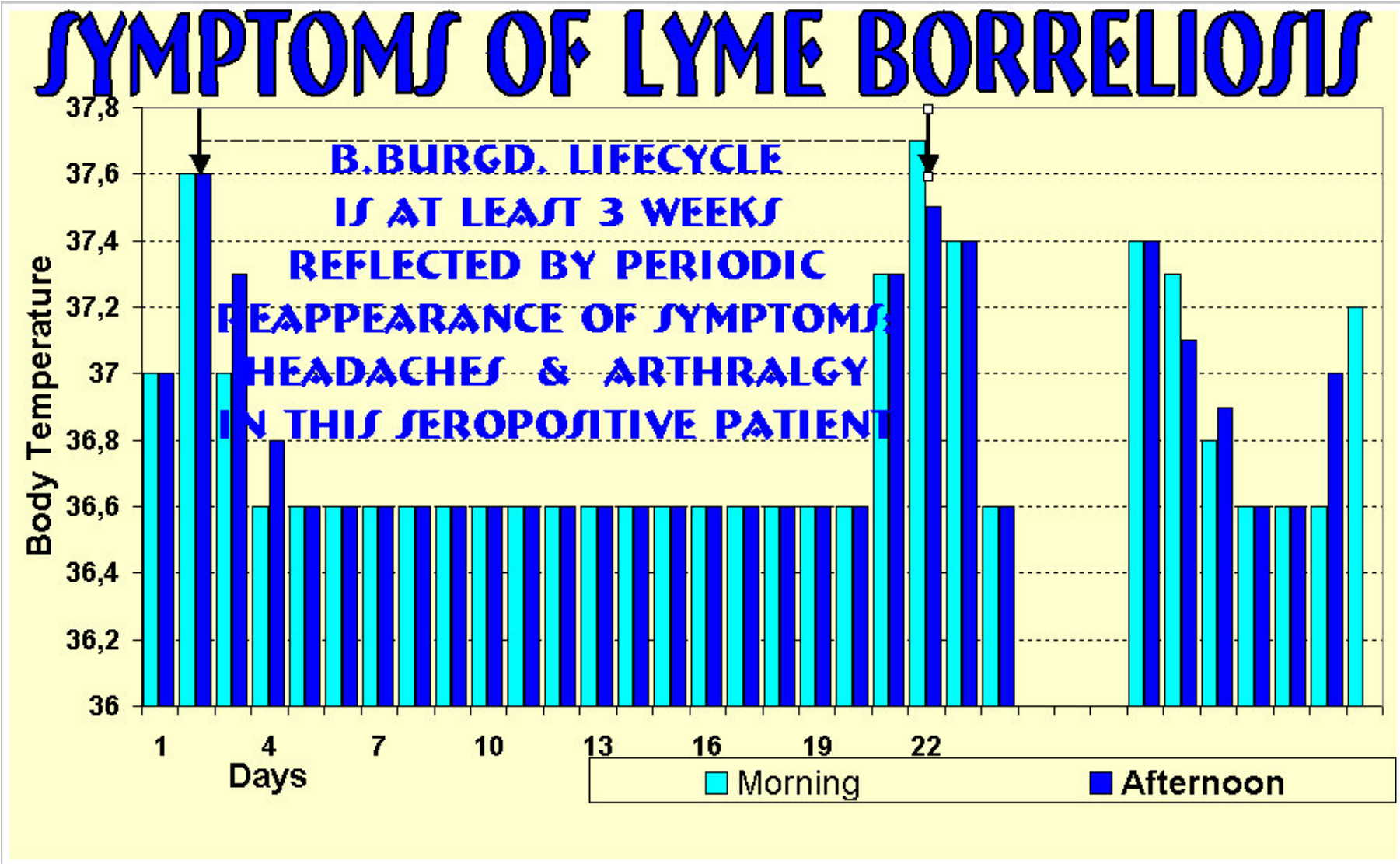
- the duration of intermittent symptoms
- details of former treatment with antibiotics (name and dose of antibiotics, time and duration of treatment), if any
- the effects of these antibiotics on the symptoms related to Lyme borreliosis
- any allergies to drugs

In chronic cases, repeated cures may be needed to attain complete recovery.

**Do not discontinue your medications!**

**During the follow-up period**, patients should ask the physician responsible for treating their Lyme borreliosis before starting antibiotic treatment for other illnesses.

**A LYME BORRELIOSIS TÜNETEINEK HULLÁMZÁSA ALAPJÁN HATÁROZHATÓ MEG A KEZELÉSI IDŐ:  
 EGY KEZELÉSNEK A HÁROMHETES CIKLUS TÖBBSZÖRÖSÉNEK MEGFELELŐ IDEIG KELL TARTANI**



## RECOMMENDATIONS FOR PATIENTS THE TREATMENT PERIOD

**We suggest that you take your medications during meals and at regular intervals.** This is particularly important if you have gastric complaints.

Regular intake of large amounts of **fluid** helps to remove bacterial debris. Chinese acupuncture could help your body to get free of this material. It could help your body to set free from this material with Chinese acupuncture.

**Thermal therapy** (hot baths, saunas) can create an unfavorable environment for bacteria but should not be used in excess as exhaustion and fluid imbalances are to be avoided. The integrity of your body should always be the first priority.

Avoid both emotional and physical overexertion. Try to create an optimal environment to support the body in its fight against this hideous enemy so that healing can occur as soon as possible.

**Caution!** Certain medications, including very effective ones like doxycycline and ciprofloxacin, cause photosensitivity; neither direct nor indirect **sunlight** may reach your skin during treatment with these agents. High-factor sunblocks will protect your skin from the harmful effects of indirect sunshine (*glass windows, however, will not*). Nevertheless, patients are advised to wear long-sleeved clothes, a hat or even gloves. Sunshine should especially be avoided when it is strongest (from 11 AM to 5 PM).

The bile may become more concentrated during the cure especially during ceftriaxon treatment, and cholagogues can be used for prevention.

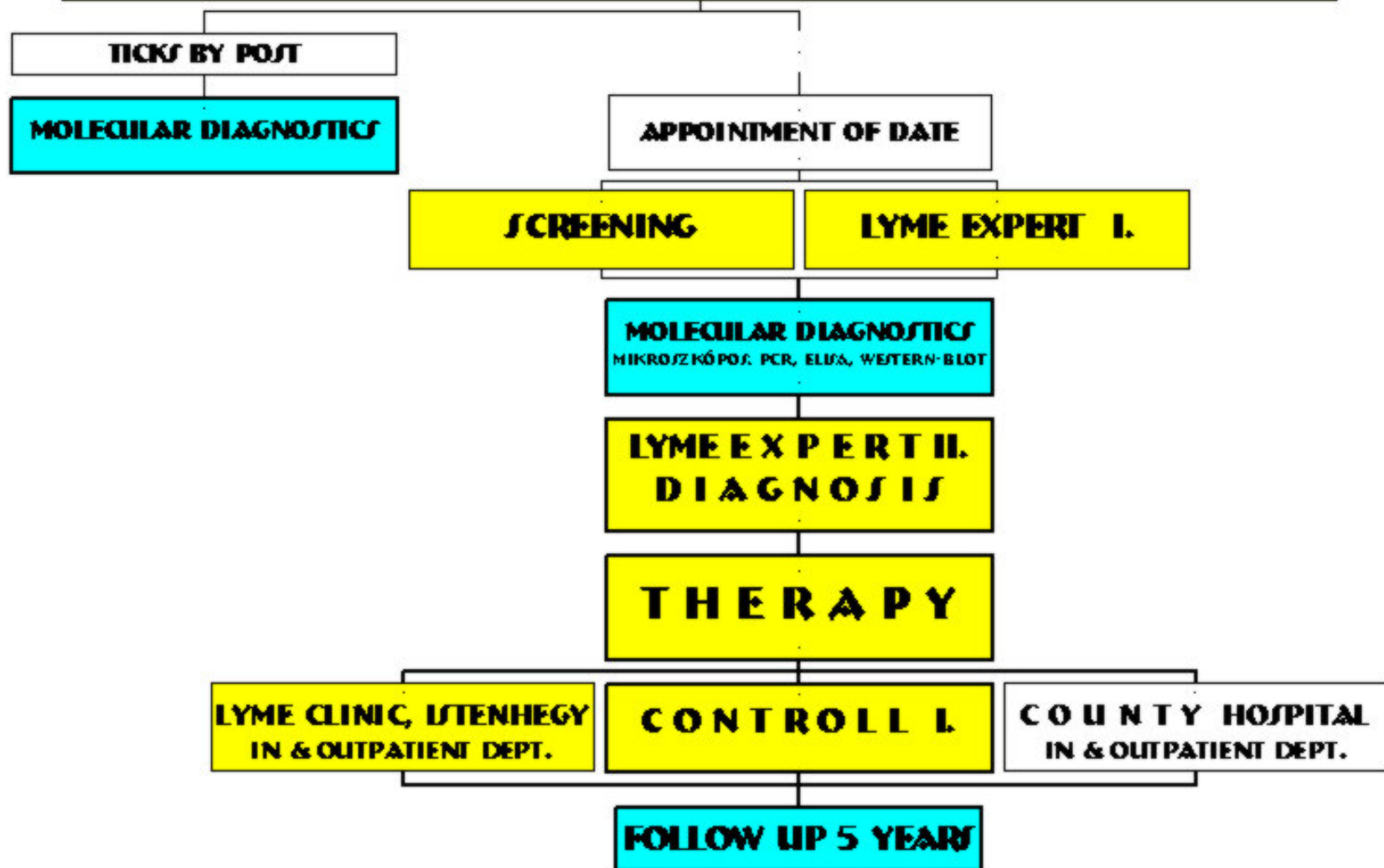
Before beginning therapy, physicians are required to check the function of internal organs and the hemopoietic system and whether there are any fungal infections. Treatment for the latter (*augmented by a moderately low-sugar diet*) should begin before the cure and may extend beyond the time of antibiotic treatment. If this is not observed, fungal infection may cause serious symptoms and become hard to cure.

Physical examinations and laboratory tests during therapy are intended to follow up on your illness and prevent side effects. Antibiotic treatment may cause a temporary worsening of symptoms, which usually occurs either during the first few days of treatment or one or two weeks after the end of therapy – but may also be absent. It is caused by bacterial debris, which originates from Spirochetes killed by antibiotics. **So, temporary worsening of the patient's condition is a favorable sign**, which proves that therapy is effective.

Rashes may also accompany this temporary worsening. Patients must be referred to specialists so that such rashes may be distinguished from cutaneous signs of allergies. Antibiotics should not be discontinued unless drug allergy is proven. If therapy is aborted for this reason, another regimen should be started with different antibiotics after a few days. *In view of the generation cycle of this pathogen, therapy is considered continuous if restarted within 10 days.* Let us remind you once again:

**It is very important that you do not discontinue your medications.**

# LYME CLINIC & MOLECULAR DIAGNOSTICS ISTENHEGY



During the cure, **patients should keep themselves away from** social gatherings, public transportation and cafeterias – places where infections with bacteria resistant to the antibiotics being used may occur. Antibiotic therapy predisposes to infection with other bacteria and – more importantly – fungi. Communities may harbor latent infections, which may present a danger to those who are taking antibiotics. Lyme borreliosis, however, is not contagious.

Eating **proper food** is also important: cooked or stewed meals are recommended in order to prevent superinfections. Add disinfectants when washing the dishes. **Oral hygiene** is another important concern; antiseptics (e.g. dilute solutions of hydrogen peroxide) may be used and superficial fungal infections of the oral cavity should be treated with proper disinfectants (e.g. borax in glycerol). **Increased personal and sexual hygiene** is also advised.

Certain antibiotics (e.g. doxycycline) may interfere with the absorption and availability of minerals; therefore, these antibiotics and mineral supplements need to be taken two hours apart. **Increased intake of vitamins and minerals** (two hours before/after taking antibiotics with some meals) **is also especially recommended.**

## **ADJUNCTIVE THERAPY**

The treatment of Lyme borreliosis must also include psychological counseling. Compassionate support is especially important if unfavorable changes take place in a person's private life while he/she is ill, for emotional stress suppresses the immune system, which, in turn, may lead to the exacerbation of Lyme borreliosis.

Positive thinking enhances the effectiveness of therapy. The resolution of psychological problems also helps and is certainly worth while. Reading the Bible may even be helpful to non-Christians. You may want to visit the following web pages for spiritual support:

<http://www.medugorje.org>,

<http://www.abcsoffaith.com/temp1/abchapel.htm>

<http://www.borg.com/~joachim/DailyMeds.html> (case sensitive).

Continuously deteriorating health caused by this lengthy disease as well as extended therapy with large doses of antibiotics increase vitamin requirements, especially for vitamins B and C. Continuous intake of twice the recommended daily allowance is therefore warranted. The requirements for minerals are also increased. Effective replenishment can be achieved by using Béres's drops or Humet-R; the latter is also recommended for detoxification.

Convalescence can also be augmented by continued intake of larger amounts of vitamins and minerals.

During the cure, light meals, reduced amounts of animal proteins and sweets, properly cleaned vegetables and juices (preferably home-made) are recommended to aid the removal of bacterial debris. Coffee and alcohol should not be consumed until recovery is complete. (*Even small amounts of coffee and alcoholic beverages have caused problems; after full recovery, however, such reactions are absent.*)

Patients are advised to start consuming either large quantities of yoghurts with viable *Lactobacilli* or preparations containing *Lactobacilli*. *L. bulgaricus* is preferred, which is considered the healthiest of the *Lactobacilli* responsible for the curding of milk. The *L. casei* of Actimel also enhances certain functions of the body and it is not too sensitive to gastric acid. The outer layer of capsule provides further protection to the *Lactobacilli* from gastric acid, which damages all lactobacilli except *L. casei*. As a result, capsules containing different *Lactobacilli* are more effective at recolonization, while pasteurized yoghurt is completely ineffective.

All kinds of yoghurt may be used for the alleviation of intestinal complaints during therapy. Do not take them together with antibiotics, though, for they may adsorb its active ingredient and the antibiotics can also kill the *Lactobacilli* in the yoghurt. Yoghurt should not be consumed until two hours after taking the antibiotics.

**The most important role of yoghurts is to aid the recolonization of the normal intestinal flora after therapy.** To achieve this goal, at least one liter of yoghurt or triple doses of capsules of *Lactobacilli* are required daily for a few days.

**After the cure**, one or two capsules t.i.d. of unsaturated essential fatty acids 20 minutes before meals are beneficial, especially if arthritic or neurological symptoms were present. In the case of neurological symptoms, ample amounts of different vitamin B's should be provided. Fat-soluble preparations of vitamin B's are not recommended until 3 weeks after therapy is over; after this period, however, they are very effective. Homeopathic medicines should not be prescribed until after the antibiotic treatment. The effects of dietary supplements in general bear little relationship to their cost do not even approximate their price range. Vitamin Q10 is just as good for bacteria as it is for human cells, so it should not be given a try before the end of the cure.

The amount of **physical activity** is to be increased gradually. Massage, gradually increased physical exercise and thermal therapy (sauna, hot baths) may help to achieve this goal. The return to work should also be gradual.

**Two to four months may pass before all effects of therapy are manifested.**

# LYME BORRELIOSIS FOUNDATION



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## QUESTIONNAIRE

– *For orientating the physician* –

Social security number:

Medical history:

- Past illnesses:
- Operations:
- Allergies, especially sensitivity to drugs:
- **Copies** of past medical records related to Lyme borreliosis

### **General symptoms:**

1. (Possible) tick bite
2. “Summer flu”
3. Fatigue
4. Lymphadenopathy
5. Decreased capacity for work
6. Sudden weight loss/gain
7. Elevated body temperature
8. The duration of intermittent symptoms (in weeks)
9. Other, specify:

### **Dermatologic symptoms:**

10. Expanding rash
11. Circumscribed thickening of the skin
12. Circumscribed purplish/brownish discoloration or retraction of the skin
13. Thinner areas of skin
14. Hair loss, changes in the structure of nails (thin nails)
15. Other, specify:

### **Rheumatologic symptoms:**

16. Neck, back or waist pain
17. Painful muscles/muscle cramps/weakness of muscles
18. Swollen hands/feet
19. Joint pain without swelling
20. Painful swollen joints

- 21. Tendosynovitis
- 22. Other, specify:
- 23. Facial palsy
- 24. Other, specify:

**Neurologic symptoms:**

- 25. Dizziness/hearing loss, difficulty chewing or swallowing
- 26. Aphasia
- 27. Altered perception of taste/smell
- 28. Headache/facial pain
- 29. Numb areas/sensory loss/pain
- 30. Altered muscle strength/tone/weight
- 31. Memory loss (short or long term)
- 32. Behavioral changes
- 33. Affective disorders (anxiety, depression, panic)
- 34. Problems with sleep
- 35. Decreased intellectual capacity
- 36. "Unexplained" urinary complaints
- 37. Other, specify:
- 38. Other, specify:

**Ophthalmologic symptoms:**

- 39. Diplopia, blurred vision
- 40. Inflammatory symptoms
- 41. Other, specify:

**Medical symptoms:**

- 42. Arrhythmias
- 43. Myocarditis/pericarditis
- 44. Abdominal pain
- 45. Other, specify:
- 46. Other, specify: