lyme disease can cause a variety of dermatologic manifestations in children that can mimic other rheumatic and infectious diseases. It can present with monarthritis, but more commonly will develop into a migratory polyarthritis. Joint swelling frequencies are not recaps and may occasionally be seen in late stages of the infection. Patients often complain of "traveling" arthritis. The most commonly involved joints are the knees, hips, neck, wrists and temporomandibular joints.

It is not uncommon for a patient to have concomitant musculitis. The muscle pain is most often found to be in a diffuse pattern, not localized to the classic "trigger point" locations seen in fibromyalgia. Children with lyme disease may also present with fever, myalgia, arthralgia and fatigue.

Babesia microti is an intracellular parasite found in red blood cells which causes a malarial-like illness. Children may complain of intermittent fevers, chills, day and night sweats, as well as having an increased severity and duration of lyme disease symptoms. Diagnosis is made by antibody tests (IGG), blood smear, DNA (PCR) and RNA analysis (FISH assay). Serologic tests include anaemia and autoantibodies, and cholinesterase and quinine.

Borreliosis humanism are intracellular bacteria that can be transmitted either by a cat bite or scratch or a tick bite. When present in combination with lyme disease, atypical presentations result in the classic symptoms of lyme disease. Diagnosis is made by antibody tests (IGG), blood smear, DNA (PCR) and RNA analysis (FISH assay).

STAR. Southern-tick associated rash illness, also called STARI, Southern-tick associated rash illness, also called Southern tick associated illness, also called Borrelia lonestari, Southern tick associated illness. People may be infected with Borrelia lonestari, Southern tick associated illness. People may be infected with Borrelia lonestari, Southern tick associated illness. People may be infected with Borrelia lonestari, Southern tick associated illness. People may be infected with Borrelia lonestari, Southern tick associated illness. People may be infected with Borrelia lonestari, Southern tick associated illness.

In addition to treating the lyme disease with appropriate antibiotic therapy, physicians may have to help relieve some of the symptoms and the discomfort that patients may experience. Patients may be offered education about how to identify symptoms, how to prevent reinfection, and how to manage symptoms.

It is important for physicians and patients to recognize how to identify symptoms, how to prevent reinfection, and how to manage symptoms. Physicians may have to help relieve some of the symptoms and the discomfort that patients may experience.

Students with disabilities may receive services under either the Individuals with Disabilities Education Act, IDEA, where school performance may qualify for special education accommodations or under Section 504 of the 1973 Rehabilitation Act, amendments to which include the Americans with Disabilities Act, 1990. In both cases, schools are required to discuss and document the student's needs and develop a 504 plan or Individualized Education Plan (IEP). A 504 plan is a legal document that outlines the accommodations a student may receive. It is important for physicians and patients to recognize how to identify symptoms, how to prevent reinfection, and how to manage symptoms.
Lyme Disease in the Eye: A Pediatrician and Adolescent Perspective

Sandy Breslen, MD
Breslen, San T

Emotional Needs of Children and Their Families: Psychological Therapy and Family Support

Children with Lyme disease may develop neuropsychiatric symptoms affecting mood, thinking, and behavior. The infection may change the mind or affect it indirectly, or it may also affect the brain through the activation of the immune system which produces substances that make a child feel anxious. For example, patients with Lyme disease would result in trouble paying attention or staying in class as well as struggle with parents about going to school or time. Common psychiatric presentations in younger children include irritability and increased separation anxiety or other fears. In older children, mood swings and anxiety attacks are more common. Less frequently, children may develop new motor or vocal tics, obsessive-compulsive behavior, or a rare regression that looks very much like an autistic spectrum disorder.

Common cognitive problems include trouble with visual and auditory attention and lower mental processing speed. Children with unrecognized Lyme disease may be misdiagnosed as having attention deficit disorder – a mistake that not only results in unnecessary school problems for the child but also may allow a treatable acute infection to become a more entrenched chronic one. For example, these children may have trouble directing or maintaining focus on what the teacher says. The decline in school performance alarms parents and may result in a regression that looks very much like an autistic spectrum disorder.

Lyme disease itself is a complex illness that can impact multiple organ systems. It is important for parents to recognize Lyme disease early in its course, as it can result in a child developing a chronic difficult to treat infection in the brain, eyes, skin, and elsewhere in the body. In my experience treating Lyme disease has been reported in the gastrointestinal tract of children and adolescents. Pediatric gastrointestinal Lyme disease may present as abdominal pain, vomiting, diarrhea, heartburn, blood in the stool, and many children’s stories collected to occur in the GI tract. Bartonella, mycoplasma, H. pylori and babesia have been noted to be involved.

For Further Reading
On School Issues
For Further Reading on Lyme Disease in Children and Adolescents

Martin D. Friel, MD
Director, Pediatric Gastroenterology and Nutrition 
Assistant Program Director, Department of Pediatrics
Jersey Shore Medical Center, Neptune, NJ

Gastrointestinal Lyme disease has been reported in the gastrointestinal tract of children and adolescents. Pediatric gastrointestinal Lyme disease may present as abdominal pain, vomiting, diarrhea, heartburn, blood in the stool, and many children’s stories collected to occur in the GI tract. Bartonella, mycoplasma, H. pylori and babesia have been noted to be involved.

For Further Reading on Lyme Disease in Children and Adolescents

North Jersey Lyme Support Group

Special thanks to the following organizations for cooperation in the publication of this brochure:

Gnex, Inc.

A specialty microbiology laboratory and research facility providing comprehensive testing for infectious diseases.

Further information and research tools in the area of infectious diseases and public health.

SPECT scans can be helpful in differentiating primary psychiatric disorders from neuropsychiatric effects of different illness such as Lyme disease.

I would like to thank my patients who have shared their stories and those who have shared their experiences. In addition to antibiotics, a few diet changes may alleviate some of the symptoms associated with Lyme disease. In patients who reported having anxiety, clarity, and post-treatment, treatment included antimicrobial and anti-inflammatory medications.

The decision in school performance alarms parents and may result in a regression that looks very much like an autistic spectrum disorder.

Additional support was provided by the Center for Lyme Research, North Jersey Lyme Support Group, and by several other organizations.

Young patients may respond to treatments with months or years of continuous antibiotic therapy.

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For Further Reading on School Issues


The child’s IQ has declined considerably, with the decline in school performance alarms parents and may result in a regression that looks very much like an autistic spectrum disorder.

North Jersey Lyme Support Group

For Further Reading on Lyme Disease in Children and Adolescents

Barron Heights, MC, 11-15 year olds

Eaton, J, 11-15 year olds


The decision in school performance alarms parents and may result in a regression that looks very much like an autistic spectrum disorder.

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I would like to thank all the parents who have shared their stories and those who have shared their experiences. In addition to antibiotics, a few diet changes may alleviate some of the symptoms associated with Lyme disease. In patients who reported having anxiety, clarity, and post-treatment, treatment included antimicrobial and anti-inflammatory medications.

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