

How big is the risk of Lyme disease to your job?

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Doctors from the Tufts University School of Medicine, New England Medical Center described the financial damage Lyme disease caused to 27 individuals with chronic neurologic Lyme disease. "Although most were able to remain employed, three quit their jobs, three decreased their work load to part-time, and two retired earlier," according to the lead author Logigian. [2]

Another study, published in the journal *Emerging Infectious Diseases*, described the cost of Lyme disease to patients living in five counties along the eastern shore of Maryland between 1997 and 2000. [3] Investigators found that more than 50% of the costs were due to productivity losses. For patients with early Lyme disease, the average cost was \$16,199 annually; \$8,785 was attributed to losses in productivity.

"We used patient-reported time lost from work to estimate productivity losses due to Lyme disease on the basis of the human capital method and valued the time lost by using age- and sex-weighted productivity valuation tables," states Zhang from the Centers for Disease Control and Prevention (CDC). [3]

"For patients <15 years of age, we assumed that their parents (usually the mother) had to take time off from their work to take care of them. Therefore, their mothers' values of lost days of work were included."

Furthermore, the risk of Lyme disease affecting everyday functioning was significant even to those patients who were treated for early Lyme disease. Out of 76 patients, 11 (14.47%) suffered from post-treatment Lyme disease syndrome (PTLDS) despite receiving a 3-week course of antibiotics for early Lyme disease. [3]

Another study found 11% of 128 Lyme disease patients, treated for culture-confirmed early Lyme disease, suffered from possible PTLDS a decade after initial treatment, according to a study by New York Medical College.

Based on the incidence of PTLDS, the risk of Lyme disease to the workforce might be higher than original estimates. Twenty-nine (38.16 %) of 76 LD subjects in the Johns Hopkins study met the "symptoms only" criteria. These 29 individuals were able to function on an SF-36 scale despite "persistent symptoms, defined by either fatigue, musculoskeletal pain in at least three areas of the body, and/or cognitive complaints of difficulty finding words, focusing, concentrating or memory impairment." [5] The Johns Hopkins authors did not address whether these persistent symptoms might affect workers' productivity.

The risk of LD impacting work and its potential risk to the workforce reinforces the need to introduce

more effective treatment options. The Johns Hopkins authors suggested treatment for immune-related issues, such as medications used to treat depression to decrease cytokine levels, behavioral interventions for pain and cognitive rehabilitation. [5]

The authors also suggested that pathophysiology of PTLDS might be related to persistent infection. "The use of short-term antibiotic retreatment in the early, post-treatment phase of Lyme disease has yet to be formally tested, although it may be widely applied in clinical practice," according to Aucott. He cited two clinical studies where short-term antibiotic retreatment in the early, post-treatment phase of Lyme disease had been applied. [6,7]

PTLDS has been defined by the Infectious Diseases Society of America (IDSA). "This definition includes two components: 1) the presence of persistent symptoms, defined by either fatigue, musculoskeletal pain in at least three areas of the body, and/or cognitive complaints of difficulty finding words, focusing, concentrating or memory impairment; and 2) functional impact." [4]

Functional impact was defined by a composite T-score less than 45 (a half standard deviation below the normative mean) on four previously identified subscales of the Short Form (36) Health Survey (SF-36).

References:

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