



VibrantWellness

The Horowitz Multiple Systemic Infectious Disease Syndrome Questionnaire (HMQ)

The HMQ, developed by Dr. Richard Horowitz, is a validated Lyme disease screening questionnaire that can be utilized by the provider to evaluate the probability of a patient having Lyme disease. Along with sensitive and specific laboratory testing through the Vibrant TickBorne Diseases Panel, the HMQ can help to facilitate the assessment of Lyme disease and associated tickborne illnesses.

SECTION 1: SYMPTOM FREQUENCY SCORE		SECTION 3: LYME INCIDENCE SCORE	
0 = None 1 = Mild 2 = Moderate 3 = Severe		Now apply the points for each of the following statements you can agree with:	
Write in a 0, 1, 2, or 3 on the line to the right of the symptom			
1	Unexplained fevers, sweats, chills, or flushing _____	1	You have had a tick bite with no rash or flulike symptoms. 3 points _____
2	Unexplained weight change; loss or gain _____	2	You have had a tick bite, an erythema migrans, or an undefined rash, followed by flulike symptoms. 5 points _____
3	Fatigue, tiredness _____	3	You live in what is considered a Lyme-endemic area. 2 points _____
4	Unexplained hair loss _____	4	You have a family member who has been diagnosed with Lyme and/or other tick-borne infections. 1 point _____
5	Swollen glands _____	5	You experience migratory muscle pain. 4 points _____
6	Sore throat _____	6	You experience migratory joint pain. 4 points _____
7	Testicular or pelvic pain _____	7	You experience tingling/burning/numbness that migrates and/or comes and goes. 4 points _____
8	Unexplained menstrual irregularity _____	8	You have received a prior diagnosis of chronic fatigue syndrome or fibromyalgia. 3 points _____
9	Unexplained breast milk production; breast pain _____	9	You have received a prior diagnosis of a specific autoimmune disorder (lupus, MS, or rheumatoid arthritis), or of a nonspecific autoimmune disorder. 3 points _____
10	Irritable bladder or bladder dysfunction _____	10	You have had a positive Lyme test (IFA, ELISA, Western blot, PCR, and/or borrelia culture). 5 points _____
11	Sexual dysfunction or loss of libido _____	Total - Section 3 <input type="text"/>	
12	Upset stomach _____	SECTION 4: OVERALL HEALTH SCORE	
13	Change in bowel function (constipation or diarrhea) _____	1	Thinking about your overall physical health, for how many of the past thirty days was your physical health not good? _____ days
14	Chest pain or rib soreness _____	Award yourself the following points based on the total number of days: <input type="text"/>	
15	Shortness of breath or cough _____	0 - 5 days = 1 point	
16	Heart palpitations, pulse skips, heart block _____	6 - 12 days = 2 points	
17	History of a heart murmur or valve prolapse _____	13 - 20 days = 3 points	
18	Joint pain or swelling _____	21 - 30 days = 4 points	
19	Stiffness of the neck or back _____	2	Thinking about your overall mental health, for how many days during the past thirty days was your mental health not good? _____ days
20	Muscle pain or cramps _____	Award yourself the following points based on the total number of days: <input type="text"/>	
21	Twitching of the face or other muscles _____	0 - 5 days = 1 point	
22	Headaches _____	6 - 12 days = 2 points	
23	Neck cracks or neck stiffness _____	13 - 20 days = 3 points	
24	Tingling, numbness, burning, or stabbing sensations _____	21 - 30 days = 4 points	
25	Facial paralysis (Bell's palsy) _____	Total Section 4 <input type="text"/>	
26	Eyes/vision: double, blurry _____	Record your total scores for each section and add them together to achieve your final score <input type="text"/>	
27	Ears/hearing: buzzing, ringing, ear pain _____	If you scored 46 or more, you have a high probability of a tick-borne disorder and should see a health-care provider for further evaluation.	
28	Increased motion sickness, vertigo _____	If you scored between 21 and 45, you possibly have a tick-borne disorder and should see a health-care provider for further evaluation.	
29	Light-headedness, poor balance, difficulty walking _____	If you scored under 21, you are not likely to have a tick-borne disorder.	
30	Tremors _____	DISCLAIMER: The Lyme Action Network is not a medical organization and does not purport to provide medical advice. The information herein is provided for general information purposes only. We do not make any warranties about the information contained herein, and will not be liable for any losses or damages in connection with the use of our informational	
31	Confusion, difficulty thinking _____		
32	Difficulty with concentration or reading _____		
33	Forgetfulness, poor short-term memory _____		
34	Disorientation: getting lost; going to wrong places _____		
35	Difficulty with speech or writing _____		
36	Mood swings, irritability, depression _____		
37	Disturbed sleep: too much, too little, early awakening _____		
38	Exaggerated symptoms or worse hangover from alcohol _____		
Total Section 1 <input type="text"/>			
SECTION 2: MOST COMMON LYME SYMPTOMS SCORE			
If you rated a "3" in Section 1 for each of the following symptoms, give yourself 5 additional points:			
• Fatigue			
• Forgetfulness, poor short-term memory			
• Joint pain or swelling			
• Tingling, numbness, burning, or stabbing sensations			
• Disturbed sleep: too much, too little, early awakening			
Total Section 2 (enter either "5" or "0") <input type="text"/>			

The HMQ is not a definitive diagnostic tool, but it can help to indicate how likely it is that you may be suffering from Lyme disease or another tickborne illness. The HMQ is not intended to replace the advice of your own physician or other medical professional. It is intended for informational purposes only, and not for self-treatment or diagnosis.

*Vibrant criteria for detection of Lyme Disease has higher sensitivity and specificity than the two-tier testing by CDC criteria, as demonstrated by internal studies. The Vibrant Tickborne Diseases Panel is the first of its kind to be run on a silicon micro-array platform, providing the highest level of specificity and sensitivity in the industry for detecting tickborne diseases. The Vibrant ImmunoChip is made from recombinant proteins of several species of *Borrelia Burgdorferi*, and not just from B31 used by other western blot tests. Vibrant has the most comprehensive antibody tests for IgG and IgM antibodies (indirect) and DNA (direct) test for detection of Lyme and co-infections that, in most cases, can assist the clinician in assessing these situations and lead to the correct diagnosis.

References

1. Empirical validation of the Horowitz Multiple Systemic Infectious Disease Syndrome Questionnaire for suspected Lyme disease Maryalice Citera,¹ Phyllis R Freeman,² and Richard I Horowitz. *Int J Gen Med.* 2017; 10: 249–273. Published online 2017 Sep 4. doi: 10.2147/IJGM.S140224
2. “Why Can’t I get better? Solving the mystery of Lyme and Chronic Disease. Richard Horowitz. 2013
3. Jayaraman, V., Krishna, K., Yang, Y. et al. An ultra-high-density protein microarray for high throughput single-tier serological detection of Lyme disease. *Sci Rep* 10, 18085 (2020). <https://doi.org/10.1038/s41598-020-75036-2>