



Name: _____

Date: _____

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 Wellness Tickborne Diseases panel, the HMQ can help to facilitate the assessment of Lyme disease and associated tickborne illnesses.

The HMQ is not a definitive diagnostic tool, but it can help to indicate how likely it is that a person may be suffering from Lyme disease or tickborne illness. The HMQ is intended for educational purposes. It is not intended to replace the advice of a physician or other medical professional.

Section 1: (Circle or highlight the score that best applies)	Never	Sometimes	Most of the time	All of the time	Not Applicable
Unexplained fevers, sweats, chills, or flushing	0	1	2	3	X
Unexplained weight change (Loss or Gain)	0	1	2	3	X
Fatigue, tiredness	0	1	2	3	X
Unexplained hair loss	0	1	2	3	X
Swollen glands	0	1	2	3	X
Sore throat	0	1	2	3	X
Testicular pain / Pelvic Pain	0	1	2	3	X
Unexplained menstrual irregularity	0	1	2	3	X
Unexplained breast milk production, breast pain	0	1	2	3	X
Irritable bladder or bladder dysfunction	0	1	2	3	X
Sexual dysfunction / loss of libido	0	1	2	3	X
Upset stomach	0	1	2	3	X
Change in bowel function (Constipation or Diarrhea)	0	1	2	3	X
Chest pain or Rib soreness	0	1	2	3	X
Shortness of Breath / Cough	0	1	2	3	X
Heart palpitations, pulse skips, heart block	0	1	2	3	X
History of Heart Murmur or Valve Prolapse	0	1	2	3	X
Joint pain or swelling	0	1	2	3	X
Stiffness of the neck or back	0	1	2	3	X
Muscle pain or cramps	0	1	2	3	X
Twitching of the face or other muscles	0	1	2	3	X
Headaches	0	1	2	3	X
Neck cracks or Neck Stiffness	0	1	2	3	X

(continued on next page)

Section 1: (Circle the score that best applies)	Never	Sometimes	Most of the time	All of the time	Not Applicable
Tingling, numbness, burning or stabbing sensations	0	1	2	3	X
Facial Paralysis (Bell's Palsy)	0	1	2	3	X
Eyes/Vision – Double, Blurry	0	1	2	3	X
Ears/Hearing – Buzzing, Ringing, Ear Pain	0	1	2	3	X
Increased motion sickness, vertigo	0	1	2	3	X
Lightheadedness, poor balance, difficulty walking	0	1	2	3	X
Tremors	0	1	2	3	X
Confusion, difficulty thinking	0	1	2	3	X
Difficulty with concentration or reading	0	1	2	3	X
Forgetfulness, poor short-term memory	0	1	2	3	X
Disorientation; getting lost, going to wrong places	0	1	2	3	X
Difficulty with speech or writing	0	1	2	3	X
Mood swings, irritability, depression	0	1	2	3	X
Disturbed sleep – Too Much, Too Little, Early Awake	0	1	2	3	X
Exaggerated symptoms/worse hangover from alcohol	0	1	2	3	X
COLUMN TOTALS:	0				X

Section 1: Total Score (Sum of all Columns)

Section 2: Now, please check off each incident you can answer yes to with the following questions:

1. You have had a tick bite with no rash or flu-like symptoms.	3 points
2. You had a tick bite, an Erythema migrans or undefined rash, followed by flu-like symptoms.	5 points
3. You live in what is considered a Lyme endemic area.	2 points
4. You have a family member diagnosed with Lyme and/or tick-borne infections.	1 point
5. You experience migratory muscle pain.	4 points
6. You experience migratory joint pain.	4 points
7. You experience tingling/burning/numbness that migrates and/or comes and goes.	4 points
8. You have received a prior diagnosis of chronic fatigue syndrome or Fibromyalgia.	3 points
9. You have received a prior diagnosis of a nonspecific autoimmune disorder (Lupus, MS, Rheumatoid Arthritis).	3 points
*10. You have had a positive Lyme test (ELISA, Western Blot, PCR).	5 points

Section 2 Total Score

+ Section 1 Total Score

= Total Ongoing Score

Section 3: Daily-To-Day Wellness

1. Thinking about your overall physical health, for how many days during the past 30 days was your physical health not good?	days
2. Thinking about your overall mental health, for how many days during the past 30 days was your mental health not good?	days

Compare to the following cutoffs and add points for these 2 questions to your Ongoing Score.

0-5 Days 1 Point	=	6-12 Days 2 Points	=	13-20 Days 3 Points	=	21-30 Days 4 Points	=
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Section 3 Total Score

+ Previous Ongoing Score

= Current Ongoing Score

Section 4: Lastly, if on the first page you rated a '3' for ALL of the following

Fatigue, forgetfulness, poor short-term memory, joint pain or swelling, tingling, numbness, burning or stabbing sensations, disturbed sleep

If you checked yes to the above statement (only if you rated a "3" for all of these symptoms), add a score of 5 to the current ongoing score from Section 3. If unchecked, do not add any additional points

Current Ongoing Score

+ 5 (only if box checked) = Final Score

FINAL SCORE

Take your final score and compare it to the scale used by Dr. Horowitz

0-24	Tick-Borne Illness is Not Likely	45-62	Tick-Borne Illness is Probable
25-44	Tick-Borne Illness is Possible	≥ 63	Tick-Borne Illness is Highly Probable

The **Vibrant Wellness 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 tick-borne illness 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>