

Lariam Action USA

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Balance System (Vestibular) Fact Sheet

1. Lariam® (mefloquine) can damage the balance system (aka “vestibular” system). This “adverse effect” is listed clearly in Lariam’s product information (“pi” label). See <http://www.lariaminfo.org/information/labeling.shtml> for the latest Lariam label.

2. People all over the world have been diagnosed with post-Lariam vestibular (balance system) problems. Recently reactions attributed to Lariam have become a significant problem among GIs returning from Afghanistan, Iraq, and Kuwait. As of April 2005, the US Navy has diagnosed 19 service persons who developed balance damage (in many cases permanent) after taking Lariam to prevent malaria. To get an idea of what balance system damage can do, visit www.lariaminfo.org and view the clip of the documentary, “Taken As Directed.”*

3. The language of Lariam-related balance system disorders: glossary of terms

Mefloquine – the generic pharmaceutical name for Lariam, an antimalarial drug manufactured by Roche Pharmaceuticals

Neurotologist – A medical doctor (MD) who specializes in inner ear and balance system disorders. Neurotologists usually work in the Ear, Nose and Throat (ENT) or Otolaryngology departments of major hospitals. They may work in Hearing and Balance Centers.

Ototoxin - Any toxic substance that causes nerve damage to the inner ear and/or vestibular (balance) system. “Oto” means “ear.”

Vestibular system (“balance system”) The brain processes information from your eyes, inner ears, and muscles to keep you upright and balanced. Balance is one of the body’s primary functions; other primary functions are maintaining heart rhythm, breathing, etc. If information to one part of the system is not received accurately, the brain cannot do its job efficiently and a host of physical and psychological symptoms can arise. Lariam (mefloquine) can damage the 8th cranial nerve (the nerve that is responsible for hearing and transmitting signals to and from the inner ears).

4. Symptoms of balance disorders

People with balance system damage never have just one symptom. They usually have several symptoms that don’t seem to “fit together.” Yet when taken as a whole, the symptoms might indicate damage to the balance system. Some of these symptoms include:

Balance problems: Dizziness, vertigo, nausea, vomiting, feeling seasick or like you have a hangover, inability to concentrate, poor memory, can’t follow directions, confusion, disorientation

Visual problems: letters jump on the page, horizon shifts, silverware moves, words and letters blur, reading is difficult, comprehension is poor, bright and flickering lights are intolerable

Hearing problems: ears click, pop, buzz, feel full; loud noises and crowded conditions (such as malls, ball games, airports) make you feel ill

Coordination problems: feeling that a weight is on your head, lack of balance, feeling like you are in a small boat

Emotional problems: depression, loss of self esteem, loss of self confidence and self reliance, anxiety, phobias, panic attacks, easily distracted

Other problems: headaches, overwhelming fatigue, can't complete normal daily tasks; constant exhaustion

5. Where to get a diagnosis of balance system damage

If you begin to experience severe dizziness or balance problems, you will want to know why. Your family physician or internist can determine if your dizziness is caused by a problem **unrelated** to the inner ear. However, if your primary care doctor can't help, out, you might need a neurotologist or other specialist, one who specializes in the inner ear and balance issues.

Vestibular Disorders Association is an organization that distributes information about vestibular disorders –www.vestibular.org, veda@vestibular.org. VEDA maintains an international list of balance specialists and resources. The individuals listed have informed VEDA that they specialize in diagnosing and/or treating vestibular disorders. VEDA does not rank the clinicians or clinics or make endorsements. They provide the contact information as a public service.

You can also find the names of balance system specialists through professional organizations such as the **American Academy of Otolaryngology—Head and Neck Surgery** [<http://www.sinuscarecenter.com/AAOHNS.htm>] and the American Neurotology Society [<http://www.otology-neurotology.org/ANS/files/ANSmembership.pdf>].

Your personal acquaintances, **local vestibular support group** members, and members of **online vestibular support groups** may know where to seek help in the area where you live. (Tip: search “vestibular support” at www.google.com.) Try checking phone-directory listings for **otolaryngologists, otologists, neurotologists, otoneurologists, and neurologists** in your geographic region. Before making an appointment with one of these specialists, ask if the doctor diagnoses and treats balance system disorders. Ask if they do the tests listed in #6. Some specialists are more experienced in diagnosing and treating vestibular disorders than others.

6. Standard tests and procedures used to diagnose vestibular damage

Balance specialists use a range of unique tests and equipment to diagnose and assess vestibular damage. MRIs, CAT scans, blood tests, and x-rays do not pinpoint such damage.

Here is a partial list of tests you should expect from a vestibular specialist. Each of them looks at a different kind of damage. A battery of various tests will produce the most accurate diagnoses.

1. Posturography booth
2. Rotational or spin chair – a test for balance system damage **
3. [Vestibulo-Ocular Reflex \(VOR\)](#)
4. Optokinetic (OKN) Testing
5. [Vestibular Autorotation Test \(VAT\)](#)
6. [Vestibular Evoked Myogenic Potentials \(VEMP\)](#)
7. Neurotologic examination, including Tandem, Romberg, and Fukuda tests
8. Audiogram; immittance testing
9. Speech testing and central auditory processing testing
10. Auditory brainstem response testing
11. Otoacoustic emissions with and without suppression
12. Posturography
13. Electronystagmography (ENG).

** The rotational chair can show a false negative if the patient has bilateral damage.

“Taken As Directed”

*A documentary about the adverse effects of Lariam (mefloquine)
See film clip and purchase DVD at www.takenasdirected.com*

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