



Results of the LDN Side Effects Survey

Compiled by Jill Brook, MA



In autumn of 2020, The LDN Research Trust asked its followers to take a brief survey to report any side effects they had ever experienced with LDN. Our goal was to build an exhaustive list of potential side effects, especially since many patients interested in LDN have conditions known to cause hypersensitivity to drugs or excipients.

The survey questioned patients about their age, gender, medical conditions, time on LDN, whether they had experienced 6 common LDN side effects, and duration of any side effects. It then asked them to list any other side effects LDN may have caused.

Below are the results, but there are a few important things to keep in mind:

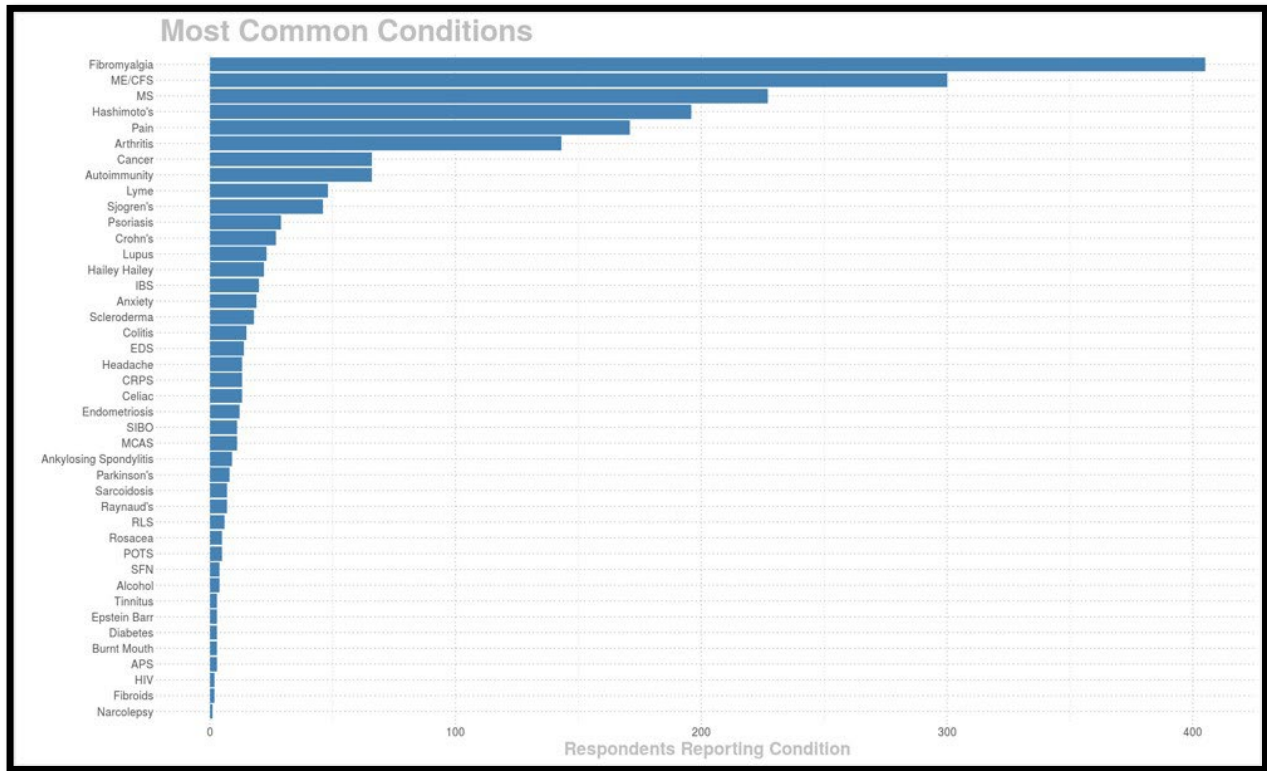
1. This was an online survey, available to anyone who wanted to participate. We don't know whether participants' responses reflect the typical experiences that most people have with LDN.
2. The prevalence of side effects reported here is different than what gets reported in drug trials, where there is a placebo control group. It is widely accepted that many side effects occur with placebo treatments, so side effects listed on drug inserts are typically those that occur above and beyond placebo levels. Since we had no placebo control, we are listing *all* side effects that were mentioned by more than one participant.
3. All medical conditions and "other side effects" are reported as they were listed by patients.

Respondents

1809 participants completed the survey: 213 males and 1596 females, with a mean age of 53.9 years (standard deviation of 12.4 years) and an age range from 8 to 88 years old.

Participants listed over 40 different medical conditions for which they take LDN. The most common were fibromyalgia, ME/CFS, multiple sclerosis, Hashimoto's thyroiditis, pain, arthritis, cancer and autoimmune conditions. Participants could list more than one condition. Figure 1 displays the full list.

Figure 1. Conditions for which participants were taking LDN

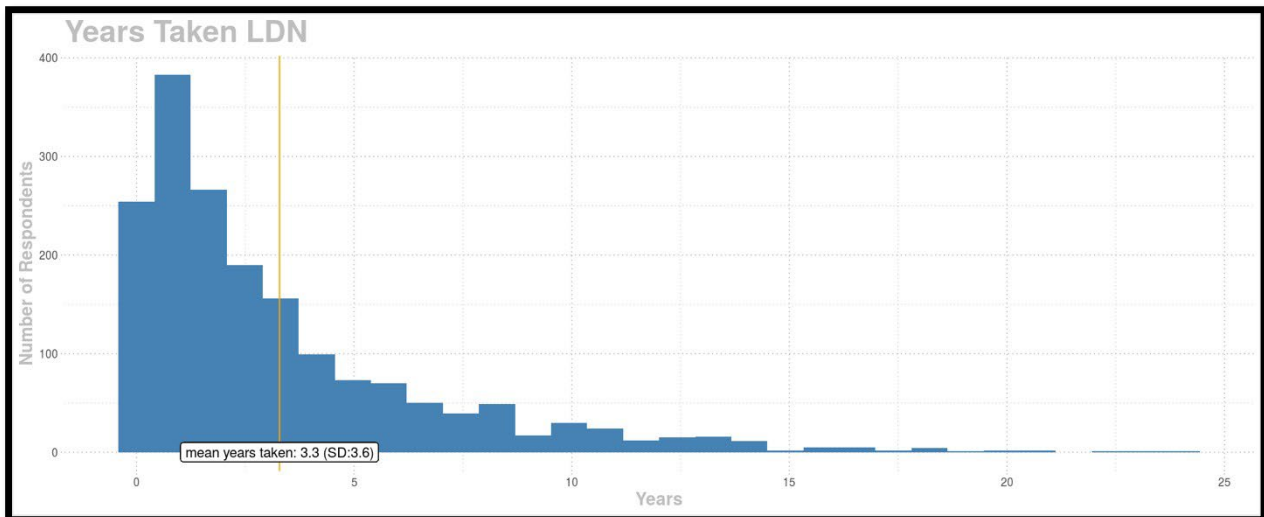


Abbreviations: ME/CFS myalgic encephalopathy/chronic fatigue syndrome, MS multiple sclerosis, EDS Ehlers-Danlos Syndrome, CRPS chronic regional pain syndrome, SIBO small intestinal bacterial overgrowth, MCAS mast cell activation syndrome, RLS restless legs syndrome, POTS postural orthostatic tachycardia syndrome, SFN small fiber neuropathy, APS antiphospholipid syndrome, HIV human immunodeficiency viruses.

Time on LDN

Participants had been on LDN for 3 days to 24 years, with a mean of 3.3 years (standard deviation of 3.6 years). Figure 2 shows the range.

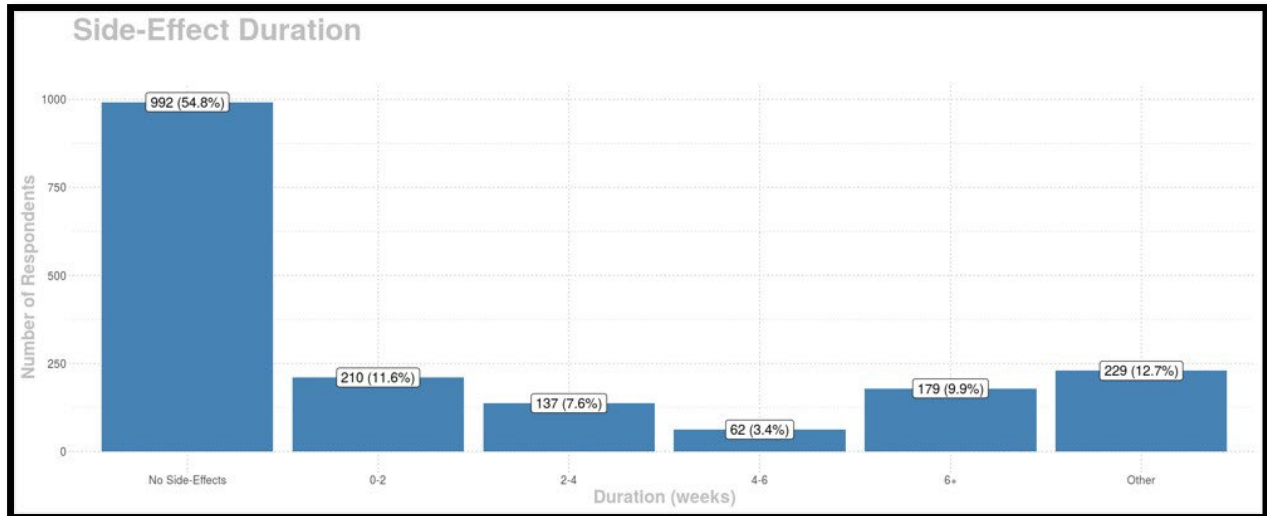
Figure 2. Length of time (in years) that participants had taken LDN



Presence and Duration of Side Effects

Out of 1809 respondents, 992 (54.8%) had no side effects. Those who did have side effects rated how long they lasted. Figure 3 shows the duration of side effects reported by participants.

Figure 3. Duration in weeks of LDN side effects

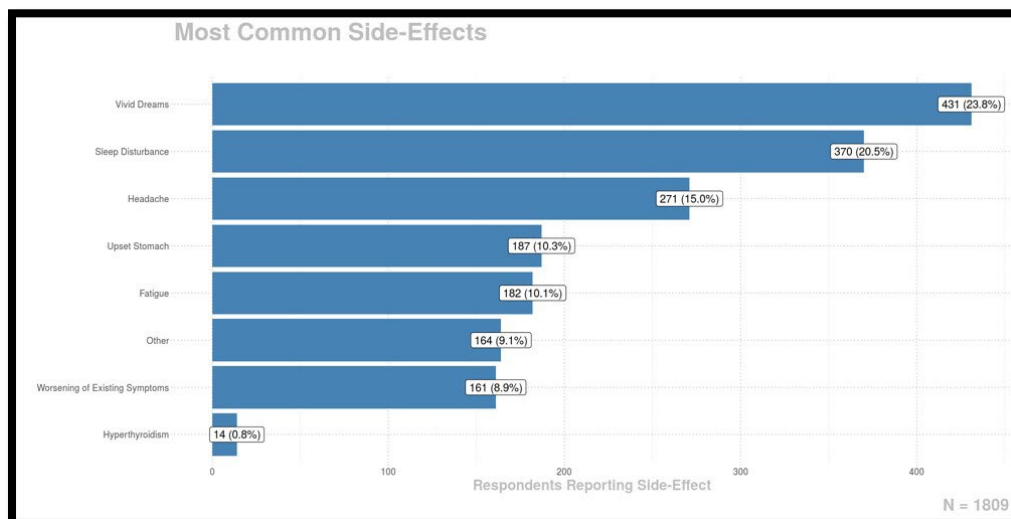


229 participants (12.6%) reported a duration of “other” and wrote in a variety of responses such as side effects being associated with a particular formulation of LDN, increasing doses too quickly or a particular dosing schedule. Other responses included participants not remembering how long side effects lasted, reporting that side effects come and go, that side effects occur for 1-2 hours per day, or other situations.

Most Common Side Effects

The most common side effects were vivid dreams (experienced by 23.8%), sleep disturbance (20.5%), headache (15%), upset stomach (10.3%), fatigue (10.1), other symptoms (9.1%, with more details below), worsening of symptoms (8.9%), and hyperthyroidism (0.8%). Figure 4 shows prevalence of these symptoms.

Figure 4. Prevalence of most common side effects



“Other” side effects included a wide variety of symptoms, which are listed in Table 1, along with their prevalence. Any symptom named by 2+ respondents was included. Most side effects were negative, but several were described as positive, such as feelings of wellbeing, reduced appetite, or weight loss.

Table 1. Prevalence of other side effects

Side Effect	Number of mentions	% of respondents
Nausea	30	1.6
Anxiety	30	1.6
Dizziness or vertigo	26	1.4
Hot flashes or sweats	20	1.1
Depression	19	1.1
Constipation	15	.8
Joint pain or stiffness	11	.6
Irritability	11	.6
Dry mouth	9	.5
Diarrhea	9	.5
Pins and needles, electric feeling, or tingling in extremities	8	.4
Heart palpitations	8	.4
Reduced appetite	7	.4
Weight gain	7	.4
Brain fog	7	.4
Muscle pain or tension	6	.3
Muscle weakness	6	.3
Shaking or trembling	6	.3
Itching	6	.3
Feeling of wellbeing	5	.3
Jaw clenching	5	.3
Increased heart rate or heart racing	5	.3
Hallucinations (typically when waking at night)	5	.3
Increased appetite	4	.2
Weight loss	4	.2
Migraine	4	.2
Anger	4	.2
Flu-like symptoms	4	.2
More energy	3	.2
Dehydration	3	.2
Skin breakout	3	.2
Infection	3	.2
Ill feeling	3	.2
Sensitivity to alcohol	3	.2
Increased libido	2	.1
Head pressure	2	.1
Skin rash or hives	2	.1
Sore throat	2	.1
Increased urination	2	.1
Vomiting	2	.1
Tender breasts	2	.1
Menstrual changes	2	.1
Bladder discomfort	2	.1

Foot or leg cramps	2	.1
Shortness of breath	2	.1

Some of the most serious side effects appeared to be mood disturbance, such as depression, anxiety, and anger. *It should be noted that 3 participants mentioned their depression was severe enough to include suicidal ideation.* Among these 3 participants, two saw their side effects pass within several days (one after changing formulations to minimize extra ingredients) and they continued taking LDN without problems. The third participant reported that side effects came back every time she tried LDN, so she discontinued.

Are side effects different between genders or conditions?

As this was not a formal study, we are unable to draw conclusions, however it is noteworthy that 47.4% of females reported side effects but only 28.2% of males reported side effects.

Perhaps not surprisingly, conditions associated with hypersensitivities to drugs or excipients had high rates of side effects. For example 80% of patients with POTS and 82% of those with MCAS had side effects. By comparison, only 24% of those with multiple sclerosis had side effects.

For the most common medical conditions, the percentage of patients reporting side effects were:

- 53% of fibromyalgia patients,
- 57% of ME/CFS patients,
- 24% of multiple sclerosis patients,
- 44% of pain patients,
- 42% of arthritis patients, and
- 32% of cancer patients.

Conclusion

This informal online survey collected patients' experiences with LDN side effects. It was not a placebo-controlled study, but found that 45% of respondents experienced side effects of some kind, most of which subsided within several weeks. The most common side effects were vivid dreams, sleep disturbance, headache, upset stomach, fatigue, and worsening of symptoms. A variety of other side effects were also listed by a minority of participants. The most serious side effects were depression reported by 1.1% of respondents, with 3 participants (0.2%) reporting that their depression included suicidal ideation. Several side effects were described as positive, such as feelings of well-being and improved energy, weight or libido. The LDN Research Trust will use these findings to guide more formal investigations into potential side effects.

Acknowledgments

The LDN Research Trust would like to thank their newsletter and social media subscribers/members who took part in this survey.

Special thanks to the following FB Groups for their help and support in promoting the survey link and to their members who took part:

Low dose Naltrexone (LDN) for chronic illness & infections, LDN Norge, LDN og MS, LDN og kreft, IBD and LDN Chat Group, LDN DK - brugernes erfaringer, Beating Thyroid Disease with LDN, LDN Norway-Low Dose Naltrexone, Hailey-Hailey Disease Worldwide Support Network, Danish LDN Association, Lyfið LDN (Low Dose Naltrexone) á Íslandi