



## Home B12 Injections

B12 can help with low energy levels (improves mitochondrial functioning), and methylation (for improved healing capacity). A trial of injections has been recommended but as our clinic is now operating online we have had to change some of our standard procedures.

For patients who are happy to self-administer their own B12 at home, we advocate a subcutaneous injection technique and are happy to teach this in the clinic via Video-link. However, the first injection of any new form of B12 needs to be performed under trained supervision (in case of the rare incidence of anaphylactic reaction to the medicine).

We advise finding a local clinic to help with this. There are many places which offer B12 shots privately – look for beauty parlours and wellness spa's. Do shop around as prices can vary wildly.

Please make sure your chosen clinic offers **Hydroxocobalamin injections** (not Methylcobalamin or Cyanocobalamin), as these are the ones we are recommending, and it is important you have the same type of shots from the clinic and at home.

### Injection Technique

Once you have had the 1<sup>st</sup> injection in a clinic environment, we are happy for you to self-administer at home. You can use the simple teaching video from the Pernicious anaemia society:

<https://www.youtube.com/watch?v=oApunBiGh0c&t=5s>

You are also welcome to book a 15-minute appointment with Dr Sarah for online teaching.

### Dose:

The recommended dose is 1mg alternate days for 6 injections, followed by one 'as often as is felt to be of benefit'. Spread them out slowly, if no benefits felt then they can be stopped, or retained as 1 every month. Alternatively, if the injections make you feel worse, then stop them and contact the clinic.

### Sourcing B12:

We are very happy to offer a prescription from the clinic which you can request here: <https://functional-nexus.co.uk/prescriptions/>

The clinics who administer the shots privately are also able to provide them when you attend.

### Sourcing Equipment:

Needles and syringes and a sharps bin need to be purchased separately. Please note, these are not available from UK pharmacies. We use Medisave which is very cheap – unfortunately it is not possible to source the items in small quantities. Before starting self-injection, you will need the following items:

- Blunt filter needles (to draw up the B12). Eg: <https://www.medisave.co.uk/bd-blunt-filter-needle-with-filter-18g-x-1-5-sterile-pack-of-100.html>
- Yellow needles (for subcutaneous injection, we recommend 30g, 0.5" Eg: <https://www.medisave.co.uk/terumo-agani-needle-30g-yellow-x-1-5-x-100.html>
- 2 or 2.5ml syringes Eg: <https://www.medisave.co.uk/bd-emerald-hypodermic-syringe-luer-slip-concentric-2ml.html>

- Small sharps box Eg: <https://www.medisave.co.uk/sharpsguard-yellow-1-ltr-sharps-bin-single-p-102124.html>

Please let us know if you have any problems (the website does change from time to time so links may need updating). Variants on the above suggestions will also be no problem.

## FAQ's:

### How Frequently should I have B12 injections?

Frequency of B12 injection is generally a loading dose of 6-10 injections on alternate days. Subsequent injections should be based on need and this should be discussed with Dr Sarah. For NHS patients the frequency is usually every three months but we find this is insufficient for many of our patients with B12 metabolism problems or Chronic fatigue.

As there is no toxicity with B12 injections, those who find them useful can inject as often as this is found to be of benefit. If you have been advised you have methylation problems or a history of neurological symptoms (hand numbness, memory loss), then we would not usually advise reducing the frequency below one per month. Most patients quickly are able to 'feel' when they need another injection. Feeling much improved after an injection suggests you have left it too long.

### Are there any side effects?

**Allergy** or anaphylaxis to B12 is exceedingly rare but because there is a small risk, you need to attend a clinic which is equipped to deal with such eventualities for the 1<sup>st</sup> injection. After this, allergies are unlikely to develop – hence it is safe to continue injections at home.

Some patients may experience and acne flare during the loading doses – this usually quickly settles when the injections become less frequent.

**Histamine Release:** Patients with histamine sensitivity may experience temporary worsening of symptoms as B12 is a histamine 'releaser'. The usual side effects for these patients will be a red flush at the injection site and potentially further flushing on face and neck. Itching may be triggered and the patient's usual histamine-induced symptoms may flare.

Taking an OTC antihistamine may be helpful, but in general these reactions are short lived. They are not to be confused with anaphylaxis or severe allergy. However, breathing problems, tongue swelling or dizziness must be reported urgently to a health professional should they occur.

**Sulphur sensitivity:** A tiny minority of patients may find that with B12 injections they notice no effect or may even feel better initially, but after a few doses headaches or general malaise may develop.

This is usually to do with either some form of 'detox' reaction (B12 speeds up many chemical processes), or may be due to the patient not tolerating the increased rate of methylation. If this occurs, then stop your injections and discuss the options with Dr Sarah. Feeling unwell with B12 may sometimes be caused by sulphur sensitivity (rare but needs to be identified).

However, despite the above, please do remember, that the vast majority of patients find the injections of real benefit to their health and wellbeing. For some the effects are amazingly effective at reducing fatigue and many other symptoms.

### I am histamine sensitive, should I avoid B12 injections, I am worried about the rash.

The joy of B12 injections is that although they can release histamine, they also speed up histamine processing in many B12 deficient patients. Therefore, although the skin reactions may be troublesome during the loading doses, this usually wears off and histamine sensitivity is often rapidly diminished with increasing B12 use.

If you are very itchy or uncomfortable, over the counter Cetirizine, Loratadine or other antihistamine should help. Also avoid hot baths and showers and keep cool while the reaction fades.

**What kind of B12 does the clinic use?**

We usually use hydroxocobalamin as a first line option for all patients and avoid cyanocobalamin as this is an inferior form of the Vitamin (although it is effective for most patients and will do no harm).

Some patients with specific metabolism issues with B12, may see additional benefits from using more active forms of the injection such as methylcobalamin or adenosylcobalamin. However, methylcobalamin can have more side effects than hydroxocobalamin and both of these forms can be made from the Hydroxocobalamin readily in most patients. The vast majority of our patients stay with Hydroxocobalamin (which is much cheaper and more readily available than the others).