



Vitamin B₁₂

Do you need more?

Why do we need vitamin B₁₂?

Vitamin B₁₂ is important to every cell in the body because it contributes to our genetic material, DNA. It also works with other B vitamins, namely folate and vitamin B₆, to help cells divide and multiply. More specifically it ensures we have healthy blood and a well-functioning nervous system.

Who needs more?

- Pregnant and breastfeeding women
- Older people
- Vegetarians, particularly vegans
- Those with disorders of the stomach or small intestine, e.g. coeliac disease, Crohn's disease, atrophic gastritis or who have had surgery
- People on certain long-term medications which reduce the amount of vitamin B₁₂ used from food. Your doctor or nurse will advise if you are taking one of these.

People short of vitamin B₁₂ may not have any symptoms, so those listed above should have their blood levels checked by their doctor or nurse.

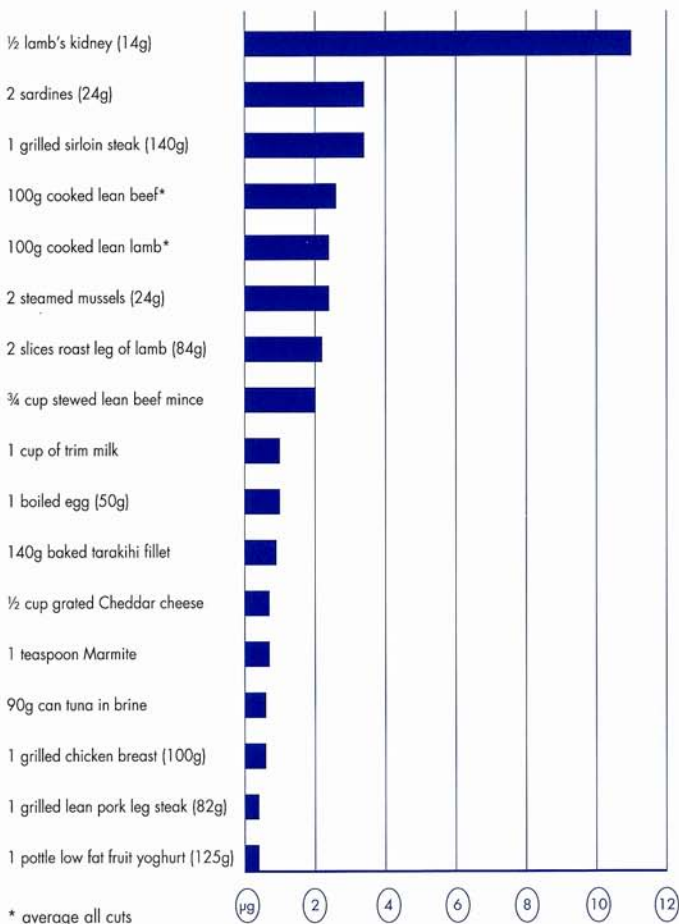


If we don't have enough vitamin B₁₂ in our blood, we:

- feel tired
- look pale
- have little appetite
- lose weight
- can experience, over a longer period of time, tingling in the hands and feet, a sore tongue and possibly memory loss, confusion and depression.

Where is it?

Vitamin B₁₂ is found in meat, fish, eggs, milk and dairy products. There isn't any vitamin B₁₂ in fruit and vegetables. Some soy products and a few yeast extracts have vitamin B₁₂ added – check the ingredients list to ensure vitamin B₁₂ is included.



How much do we need?

These are the amounts of vitamin B₁₂ recommended by the Ministry of Health.

	µg vitamin B ₁₂ per day
0 – 6 months	0.4
7 – 12 months	0.5
1 – 3 years	0.9
4 – 8 years	1.2
9 – 13 years	1.8
14 + years	2.4
Pregnancy	2.6
Breastfeeding	2.8

We don't need much vitamin B₁₂ each day, but what we do need is essential. Here are some examples of everyday meals which provide vitamin B₁₂:

Everyday meal ideas

Breakfast	µg vitamin B ₁₂
• Bowl of cereal and milk	1.0
• 2 slices toast with Marmite and a boiled egg	1.7
Lunch	
• Filled roll with lean beef and salad	2.2
• Sardines on toast	3.4
• Pita filled with lean lamb, lettuce, tomato and avocado	2.4
• Jacket potato filled with chilli con carne, topped with cheese and served with salad	2.7
Dinner	
• Steak and kidney casserole with rice and vegetables	14.9
• Lean lamb leg steak stir-fry with vegetables and noodles	3.2
• Pizza topped with tuna and cheese	1.3
• Grilled sirloin steak with wedges and salad	3.4
Tip: <i>Desserts, including dairy products, such as fresh fruit and yoghurt or fruit crumble and custard, will add extra vitamin B₁₂</i>	
Snacks	
• 1 slice of bread and marmite	1.7
• Liver paté on 2 crackers	1.0
• Fruit smoothie with milk and yoghurt	0.9
• A pottle of yoghurt	0.4

Recipes rich in vitamin B₁₂

Meat-za pie

Serves 4

Add some chopped kidneys or lamb's fry* to the mince mixture for an extra vitamin B₁₂ boost.

Base

500g lean beef mince

1/3 cup oat bran or quick-cooking rolled oats

2 tsp minced garlic

1 tsp each dried basil and oregano or 2 tsp dried mixed herbs

1 tsp each paprika, salt and black pepper

1/2 cup beef stock

Topping

1/2 cup tomato sauce

150g mushrooms, sliced

1 green pepper, finely chopped

1 cup grated tasty cheddar cheese

1/2 - 1 tsp dried oregano or dried mixed herbs



Mix together the mince, oat bran or rolled oats, garlic, dried herbs, paprika, salt and pepper with the stock.

Press into a square 20cm cake tin or baking dish.

Use a large wet spoon to smooth mince, making a slightly raised rim. Spread evenly with the tomato sauce, then scatter over the mushrooms, green pepper, cheese and oregano.

Bake at 190°C for 35-40 minutes.

Serve in wedges with salad or vegetables.

*** if pregnant, avoid eating more than 100g of lamb's fry/liver a week.**

Vegetarians/vegans

If you are following a vegetarian diet, dairy products, eggs and/or foods with added vitamin B₁₂ should be eaten every day. Foods with added vitamin B₁₂ include fortified soy products and a few yeast extracts. If you are a strict vegetarian or vegan, you should take a vitamin B₁₂ supplement. This is particularly important if breastfeeding as you are building your baby's vitamin stores as well as your own. Spirulina and other seaweed products are not considered suitable sources of vitamin B₁₂.

Brunch-style Devilled Kidneys

Serves 3-4

12 lamb's kidneys
50g butter
3 Tbsp flour
3-4 tsp Dijon mustard
250g mushrooms, sliced
¾ tsp curry powder
1½ cups beef stock or water}*
¼ cup port }
1 Tbsp tomato paste
1 Tbsp freshly chopped Italian parsley



Halve the kidneys and cut away the core. Slice thinly.

Heat the butter in a frying pan and when hot add the sliced kidneys. As you put them in, spread them quite evenly but do not stir. (Note: if the pan and butter are not really hot when the kidneys are added they will stew, not brown.)

Let the kidneys cook in the butter for 30 seconds. Toss to quickly cook the other side but no longer than 2 minutes in total or they will be tough. Lift the kidneys out with a slotted spoon and set aside.

Reduce the heat and add the flour to the pan, stir well then add the mustard, mushrooms and curry powder. Gradually stir in the beef stock or water, port and tomato paste and continue stirring to make a smooth sauce. Return the kidneys to the pan and simmer for 1-2 minutes. Season with salt and pepper.

Serve over toasted focaccia, ciabatta or French bread, sprinkled with fresh herbs.

*** increase to 1¾ cups beef stock or water if port not included. Pregnant women should avoid alcohol, and during the first month of breastfeeding.**



For more information about nutrition and health, and/or recipes please contact: Beef and Lamb New Zealand, PO Box 33-648, Takapuna, Auckland 0740. Freephone 0800 733 466, or visit www.beeflambnz.co.nz

Health problems may result from an inadequate diet. They may also have a medical basis unrelated to diet. The information on this sheet is only general and is not to be taken as a substitute for medical advice in relation to specific symptoms or health concerns.

April 2009