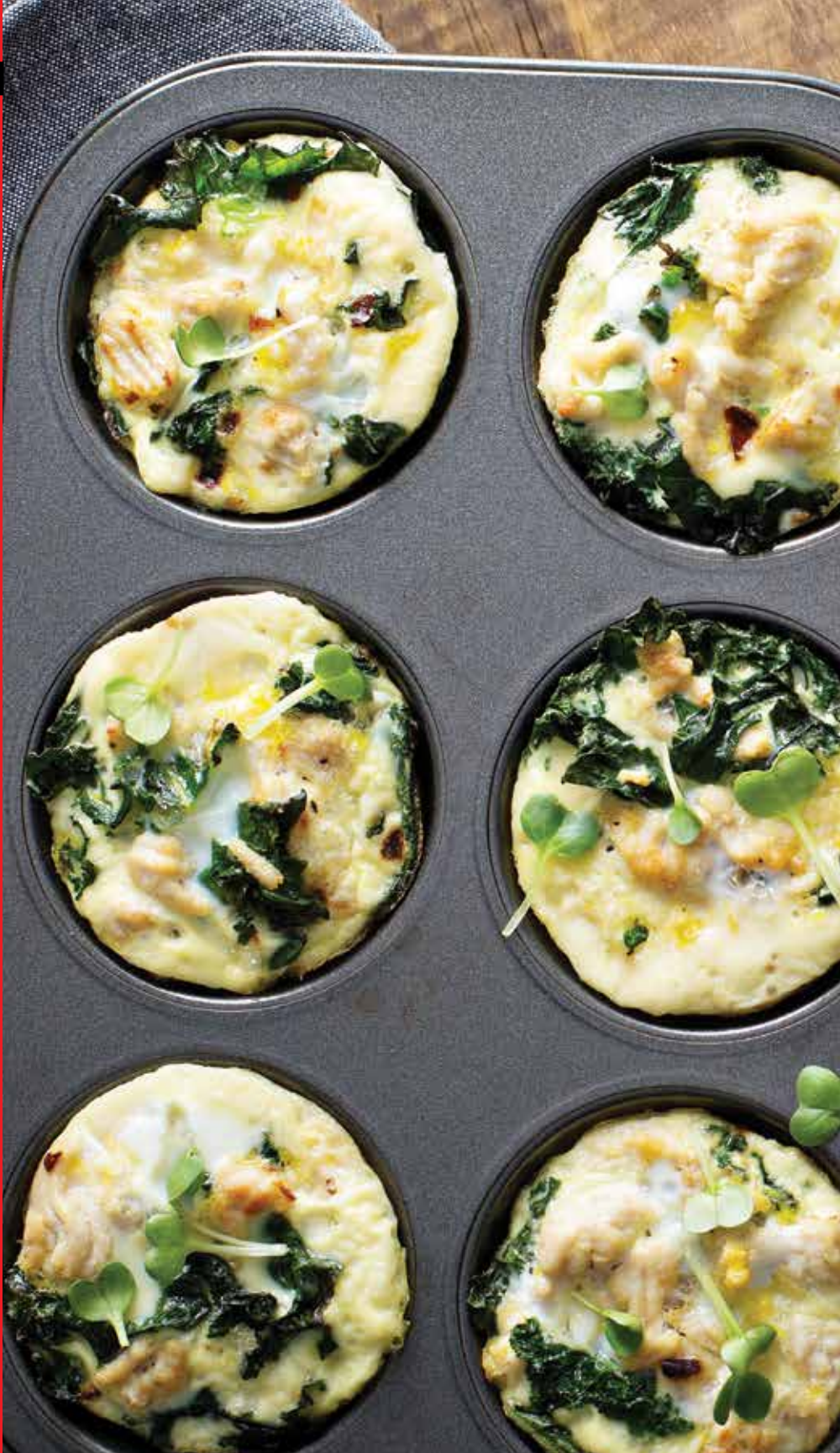


FITNESS

20 WAYS TO

GET YOUR



20G PROTEIN HIT



## We all know that protein builds muscle, but how many of us get the recommended five servings a day? Anita Bean steps in with 20 ways to hit your optimum daily intake

**G**etting enough protein in your diet is important for everyone – but especially for cyclists. Along with

helping you feel fuller for longer, this macronutrient helps build and repair your muscles, cartilage and ligaments after a tough workout. It also makes skin, bones, hair and lots of other tissues as well as enzymes, hormones and antibodies for your immune system. Although most of the energy used during exercise comes from carbohydrate and fat, protein also contributes to the fuel mixture, to the tune of two to five per cent – and even more if you're low on carbohydrate.

Even if you hit the recommended guidelines, you may not be getting enough protein to recover fully from your workouts. According to the International Society of Sports Nutrition, cyclists need more protein than the average person, and it recommends consuming between 1.4g and 2g of protein per kilogram a day. For a 70kg cyclist, this equates to 98-140g of protein per day – or at least five 20g servings (see below). This is needed to repair muscle fibres damaged during training and improve recovery as well as to build mitochondrial proteins, the powerhouses of the muscle cells that make energy.

How much protein you should consume per serving is a subject of debate by scientists. Most believe that around 0.25g of protein per kilo of body weight per serving is the optimal amount for building muscle mass – up to an absolute amount of 20g of protein per meal or snack. A serving greater than this won't give you any performance advantage, since muscle protein synthesis is maxed out around 20g of protein 'in one hit' – instead, it would be used for energy or

excreted in urine. As a rule of thumb, it's a good idea to consume 20g of protein ASAP after training and in each of your meals and snacks. Here are 20 ways to hit the 20g mark at breakfast, lunch and dinner, as well as in your snacks.

### HIGH-PROTEIN INGREDIENTS

#### EGGS

There are between 5.2 and 7.5g of protein in an egg, depending on size. So if you whisk up two of them into a pan with 25g of crumbled feta cheese and a handful of spinach, you've got a tasty frittata with **20g protein**.

#### GREEK YOGURT

A 200g serving of plain Greek yogurt provides **20g protein**. Top it off with some strawberries – or fruit of your choice – and chopped nuts for some added sweetness and crunch.



#### FISH

A 120g fillet of haddock has 21g of protein, while a 100g of wild salmon has 22g. Put a fillet of fish in the middle of a 30cm square of foil. Season with salt and pepper, then add a handful each of sliced tomatoes, onion slices and red pepper strips. Drizzle with a little olive oil and a squeeze of lemon. Fold and seal the foil to make a parcel, place on a baking tray then bake at 180 degrees for 20 minutes.

**Protein = 21g**

#### EDAMAME BEANS

Edamame beans are young soya beans and, unlike most plant proteins, provide high levels of all nine essential amino acids your body needs. A 100g serving contains 13g of protein. Combine with half a packet (125g) of cooked quinoa, a handful of tenderstem broccoli, half a chopped avocado, a little olive oil and a squeeze of lemon. **Protein = 20g**

### 6 QUICK PROTEIN-RICH RECIPES

#### PERFORMANCE PORRIDGE

Cook 50g porridge oats with 300ml milk (dairy or soya) for four to five minutes. Top with a handful of fresh or frozen raspberries and one tablespoon of almond butter. **Protein = 21g**

#### BLACK BEAN AND ROASTED VEGETABLE LUNCHBOX

Toss a diced sweet potato with a shallot (quartered), a few chunks of red pepper and courgette and enough olive oil to coat, scatter over some dried Italian herbs, salt and black pepper and roast in a 200°C oven for 25 minutes. Combine with half a tin of black beans (drained), a handful of cherry tomatoes, a squeeze of lime and 25g crumbled goat's cheese or tofu. **Protein = 20g**

#### HALLOUMI RAINBOW SKEWERS

Cut 50g halloumi into 2.5cm cubes and thread on to two bamboo skewers with

## FITNESS

wedges of onion, red and yellow peppers, courgette slices and button mushrooms. Brush with olive oil and one tablespoon of sesame seeds, and cook on a hot griddle pan or barbecue on a medium heat for five minutes each side.

**Protein = 20g**



Avocado and cottage cheese on toast: delectable muscle-building food

is useful for eating on the go, as it requires no refrigeration.

**Protein = 21g**

### CLIF BUILDER'S PROTEIN BAR (£2.35/ 68G)

Highly rated for taste and texture, this protein bar made from soy protein has added vitamins and minerals. **Protein = 20g**

### EASY STEAK FAJITAS

Rub 75g sirloin steak (cut into thin strips) with one teaspoon cajun seasoning; then fry in a hot pan over a medium heat for two to three minutes. Add a finely sliced onion and red pepper and cook for a further two minutes. Warm a tortilla in the oven, then fill with the steak mixture and top with salsa, guacamole, lettuce and soured cream. **Protein = 23g**

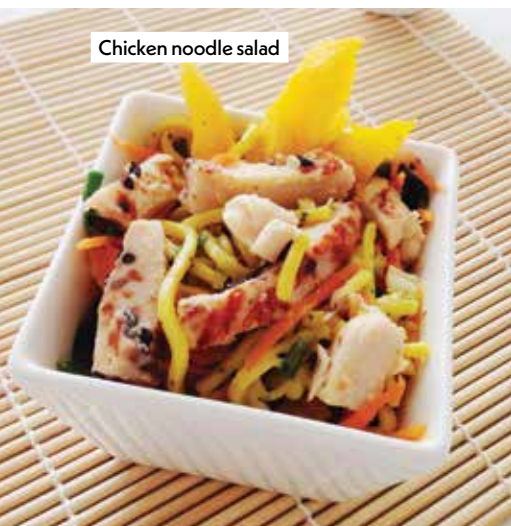
### CHICKEN NOODLE SALAD

Combine 150g cooked rice noodles with one tablespoon sweet chilli sauce, 75g sliced cooked chicken breast, a handful of halved cherry tomatoes, a handful of sugar snap peas and (fresh or frozen) and a squeeze of lime. **Protein = 23g**

### STRAWBERRY CHIA POTS

Put 25g chia seeds, one tablespoon maple syrup or honey, one-quarter teaspoon vanilla extract, 60ml milk and 75g plain Greek yogurt in a jar with a lid. Put the lid on, shake together and leave in the fridge overnight to set. In the morning top with some chopped strawberries and one tablespoon flaked almonds.

**Protein = 20g**



Chicken noodle salad

## 6 HIGH-PROTEIN SNACKS

### BERRY AND YOGURT SHAKE

Place a handful of frozen berries, 200ml milk, three tablespoons plain Greek yogurt and one heaped teaspoon almond butter in a blender and blitz until smooth.

**Protein = 21g**

### ROASTED CHICKPEAS

Toss one tin (400g) drained chickpeas with one tablespoon olive oil, two teaspoons curry powder, salt and pepper, spread out on a baking tray and roast at 190°C for 20-25 minutes, giving the tray a shake halfway through, until crispy.

**Protein = 20g**

### AVOCADO TOAST WITH COTTAGE CHEESE

Toast two slices of wholegrain or rye bread and top each one with one tablespoon (40g) plain cottage cheese, a quarter of an avocado and one teaspoon chia seeds. **Protein = 20g**

### SIS WHEY 20 (£27.50 FOR 12)

With a texture more akin to yogurt than energy gels, this dairy-based protein gel gives you 20g of protein comprising branched-chain amino acids – which may help reduce muscle breakdown during intense exercise when you're low on carbs. **Protein = 20g**

### JOHN WEST MEXICAN-STYLE TUNA LUNCH ON THE GO (£2.50)

A tastier upgrade from a tin of tuna, this handy pot of tuna, beans and sweetcorn

## 4 PROTEIN-RICH RECIPES

### UDON NOODLES AND CRUNCHY VEGETABLES WITH CRISP TOFU

**Preparation time:** 10 minutes

**Cooking time:** 10 minutes

**Serves:** 4

**You will need:**

- 200g (7oz) dried udon noodles or 2x 150g (5oz) packets straight-to-wok udon noodles
- 2 tbsp light olive or rapeseed oil
- 1 onion, thinly sliced



Udon noodles with crunchy veg and tofu





Mix chickpeas with grains to cover your essential amino acid needs

- 1 yellow or red pepper, deseeded and sliced
- 100g (3 ½oz) sugar snap peas
- 150g (5oz) pak choi (Chinese cabbage), sliced
- 150g (5oz) shiitake mushrooms, thickly sliced
- 400g (14oz) extra-firm tofu, cut into 1cm (½in) thick slices

#### For the sauce:

- 2 tbsp sriracha chilli sauce
- 2 tbsp soy sauce
- 2 tbsp rice wine vinegar
- Juice of 1 lime
- 1 tbsp chopped coriander
- 2 tsp toasted sesame seeds

#### To serve:

- 2 tbsp toasted sesame seeds

#### Method:

- Cook the udon noodles (if using

dried) in a saucepan – follow packet instructions. Drain; place in a large bowl.

- Make the spicy udon sauce by combining the chilli sauce, soy sauce, rice wine vinegar, lime juice, coriander and sesame oil in a small bowl.

- Heat half of the oil in a wok over a medium-high heat until it is hot, add the onion and stir-fry for two minutes.

- Add the remaining vegetables and continue stir-frying for four minutes. Transfer to a separate bowl.

- For the tofu, wipe out the wok with absorbent kitchen paper. Heat the remaining oil over a high heat, add the tofu and fry for about two minutes on each side until they are crisp and brown. Remove to a plate.

- Add the vegetables and fried tofu to the noodles and toss with the sauce. Serve sprinkled with sesame seeds.

**Protein = 22g per serving**

## PRE-PACKED EAAs Do you need protein supplements?

The International Association of Athletic Federations recommends whole-food sources of protein rather than supplements. Not only are they generally less expensive, but they can offer a range of other nutrients. What's more, studies have shown that food sources such as dairy or soya milk are just as effective for muscle recovery as protein supplements. Specifically, the interaction of the other nutrients contained within the food matrix may actually increase the use of protein for muscle repair.

Despite the attractive claims, there's no evidence that consuming more protein than you need will lead to bigger muscles or greater strength gains. However, protein shakes and bars are useful if you're training or competing in an environment where there's no opportunity to store or prepare foods, and may be helpful if you find it difficult to meet your protein quota from food alone.

Of the animal-based supplements, whey is a good post-exercise choice, as it is digested and absorbed rapidly, while casein taken before bedtime may help promote muscle recovery, as it is absorbed at a slower rate. Vegan protein foods tend to be bulkier and more filling, making it harder to meet daily protein needs. Another limitation is that most plant-based proteins fall short of one or two essential amino acids (EAAs), so won't promote muscle building as effectively as animal-based proteins unless two or more plant proteins are combined. Soy protein is your best option, as it has more leucine (an EAA thought to trigger muscle building) but pea and rice blends are also good.



## PLANT V ANIMAL

## Where should your protein come from?

Although meat is a concentrated source of protein, you can easily obtain enough protein from other foods. Dairy, beans, lentils, tofu and eggs, for example, are all excellent sources of protein, so it's not difficult to get your daily quota. When we talk about protein, we are really talking about amino acids – the building blocks of proteins that are combined in many different ways by your body to make hundreds of different proteins, each with specific roles. Nine of these cannot be created in the body and are called 'essential amino acids' (EAAs). These must be provided by the diet.

It is the amount of these EAAs in foods that determines how useful the protein is to the body. Foods containing high levels of all EAAs are regarded as 'high quality' or 'complete' proteins. These include meat, dairy, eggs and soya. On the other hand, plant sources such as beans, lentils, nuts, seeds and grains are lacking in one or more essential amino acids, so are not as 'complete' or useful on their own. This makes them less efficient than animal proteins at building muscle. However, you can compensate for the lower anabolic properties of plant protein by eating bigger quantities to get higher amounts of EAAs or by combining more than one source to produce a more balanced amino acid profile, e.g. beans and rice. Maastricht University researchers showed that consuming 20g plant protein typically results in submaximal muscle protein synthesis (MPS) but consumption of a greater amount and/or combining more than one plant protein augments the MPS response.

### ROASTED CARROTS, CHICKPEAS AND GRAINS WITH PECANS

**Preparation time:** 10 minutes

**Cooking time:** 20 minutes

**Serves:** 4

#### You will need:

- 250g (9oz) carrots, cut into batons
- 1 red and 1 yellow pepper, deseeded and cut into 2cm strips
- 1 red onion, cut into 8 wedges
- 2 tbsp light olive or rapeseed oil
- 1 tsp za'atar (Middle Eastern herbs from most supermarkets) or dried thyme
- 125g (4oz) quinoa and bulgur (cracked) wheat mixture or 250g (8oz) packet cooked quinoa
- 500ml water
- 2x 400g (14oz) tins chickpeas, rinsed and drained
- 50g (2oz) pecans, toasted

- A small handful of fresh coriander or parsley, chopped, plus extra to serve
- Juice of ½ lemon
- Salt and freshly ground black pepper
- 100g (3½oz) soft goat's cheese, crumbled (optional)

#### Method:

- Preheat the oven to 200°C/fan 180°C/gas mark 6.
- Toss the carrots, peppers and onions, oil, za'atar and seasoning in a roasting tin. Make sure the tin is large enough so the vegetables are in a single layer. Roast in the oven for about 20 minutes until the vegetables are slightly charred on the outside and tender in the middle.
- Meanwhile, cook the quinoa and bulgur wheat in water for 20 minutes until tender.
- Toss the roasted vegetables into the warm grains. Fold in the chickpeas,

Veggie chilli is hard to beat for a spicy protein-packed treat







Green Spanish tortilla: healthy, hearty and easy to prepare

pecans, coriander or parsley and lemon juice, then season to taste. Mound onto a plate, top with a little extra coriander and crumbled goats' cheese, if using.

**Protein = 21g per serving**

**QUICK VEGETARIAN CHILLI**

**Preparation time:** 10 minutes

**Cooking time:** 15 minutes

**Serves:** 4

**You will need:**

- 1 tbsp light olive or rapeseed oil
- 1 large onion, finely chopped
- 2-3 garlic cloves, crushed
- 1 tsp chilli powder, or to taste
- 1 tbsp sweet paprika
- ½ tsp dried oregano
- 1 tsp ground cumin
- 400g (14oz) can chopped tomatoes
- 1 tbsp tomato purée
- 2x 400g (14oz) cans red kidney beans, drained and rinsed
- 200g (7oz) can sweetcorn, drained
- 100g (3½oz) fresh or frozen spinach
- A handful of fresh parsley (optional)

- Salt and freshly ground pepper
- 125g (4oz) Cheddar, grated

**Method:**

- Heat the oil in a large non-stick pan over a medium heat.
- Add the onion and fry for three to four minutes until translucent. Add the garlic, chilli powder, paprika, oregano and cumin and cook for a further minute.
- Add the tomatoes, tomato purée, kidney beans and sweetcorn and bring to the boil. Reduce the heat and simmer for 10 minutes until the sauce has thickened.
- Season with salt and black pepper, then stir in the spinach and parsley. Turn off the heat let the spinach wilt.
- Divide between four bowls and scatter over grated cheese.

**Protein = 20g per serving**

**GREEN SPANISH TORTILLA**

**Preparation time:** 10 minutes

**Cooking time:** 20 minutes

**Serves:** 4

- 300g (11oz) new potatoes, peeled and

- cut into medium slices
- 150g (5oz) green beans, halved
- 200g (7oz) frozen peas
- 200g (7oz) baby spinach
- 1 tbsp light olive or rapeseed oil
- 1 onion, finely chopped
- 2 garlic cloves, crushed
- 3 sprigs of thyme, leaves picked, or ½ tsp dried
- 2 handfuls of flat-leaf parsley, chopped
- 8 large eggs
- Salt and freshly ground black pepper

**Method:**

- Cook the potatoes in a large steamer or pan of boiling water for six minutes or until they turn tender.
- Add the green beans, peas and spinach for the last three minutes. Remove from the heat and set aside.
- Heat the oil in an ovenproof frying pan over a medium-low heat. Add the onion and fry for three minutes, until softened.
- Add the garlic, thyme, salt and pepper, mix well and cook for a further minute.
- Add the potato-vegetable mixture plus the parsley.
- Preheat the grill to medium.
- In a large bowl, beat the eggs, then add to the pan. Swirl the pan and cook over a gentle heat for four to five minutes until the mixture starts to set.
- Transfer to the grill and cook for two to three minutes or until the top of the top of the tortilla is golden and the middle no longer runny. Slide onto a board and serve with crusty bread and a tomato salad.



Recipes are extracted from *Vegetarian Meals in 30 Minutes: More than 100 delicious recipes for Fitness* by Anita Bean (Bloomsbury)