

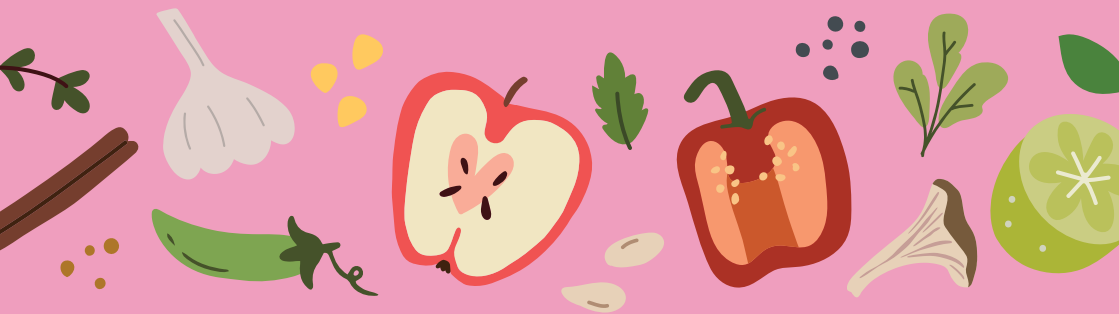
# Flavour & Nutrition

A RECIPE BOOK FOR THOSE EXPERIENCING  
TASTE CHANGES AS A RESULT OF CANCER



World  
Cancer  
Research  
Fund

Life   
Kitchen 



World  
Cancer  
Research  
Fund

Life!   
Kitchen! 

A WORLD CANCER RESEARCH FUND  
AND LIFE KITCHEN COLLABORATION

Dear reader,

Thank you for choosing the Flavour & Nutrition recipe book, a collaboration between World Cancer Research Fund and Life Kitchen.

This recipe book is for people who are living with cancer whose sense of taste and enjoyment of food has been affected.

Life Kitchen is a not-for-profit organisation for people living with cancer; focused on helping people with cancer rediscover and revive their love of food, and improving their quality of life. We believe that food is a big part of recovery – emotionally and physically.

We both founded Life Kitchen after we lost our mothers to cancer. We saw that one of the biggest issues for our mothers during their treatment was that they weren't able to enjoy food. We work with Professor Barry Smith, founder of the Centre for the Study of the Senses at University of London, to create recipes to help people enjoy food again.

During chemotherapy, radiation and other cancer treatments, like many patients, you may have lost or experienced changes to your sense of taste. This can be a really difficult side-effect that can make mealtimes isolating and unenjoyable.

Often during treatment, food can seem unappealing and many people lose their appetite altogether. There are also other nutritional and dietary complications that people with cancer can experience during treatment. This is why we have worked together with World Cancer Research Fund to create this recipe book focused on nutrition and flavour. The recipes have also been designed to follow World Cancer Research Fund's healthy eating guidelines, making them suitable for everyone.

We hope these recipes help you to enjoy food again. Please share them with your friends, family and carers, and help World Cancer Research Fund spread their important messages.

Best wishes,

**Ryan and Kim**  
Life Kitchen Founders

# About World Cancer Research Fund

World Cancer Research Fund is one of the world's leading cancer prevention charities, and the only UK charity solely dedicated to funding life-changing research into the prevention and survival of cancer through diet and lifestyle. We champion the latest and most authoritative global scientific research on cancer prevention and survival through diet, weight, and physical activity.

## Nutrition

Our nutrition information is calculated by qualified nutritionists and is based on readily available products that contain the lowest possible amount of fat, sugar, and salt. This information should be used as a guide and may vary depending on what products you use.

While we include healthier foods such as wholegrains, pulses, fruit and vegetables in our recipes to help boost the nutritional quality of the dishes, there may be times during your treatment where you may want to include food that may not be considered as healthy, such as choosing full-fat products.

We offer tips and suggestions at the bottom of our recipes so you can adapt them to meet your nutritional needs. Please note that if you adjust the recipes using our top tips or serving suggestions, the nutrition information will no longer be accurate.



# Flavour & Nutrition

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# Our five principles of flavour

Life Kitchen focuses on five principles when creating recipes to help people overcome and deal with changes to their sense of taste:

## Umami

Along with sweet, salty, sour and bitter flavours, umami is our fifth taste. We use this as the base of many of our recipes. Lots of people who have issues with their taste and smell because of treatment are still able to taste these base flavours.

Roughly translated from Japanese, umami means 'savouriness'.

Umami is interesting because boosting the umami flavours in foods helps to also boost the sweet, salty, bitter and sour parts of our palate.

In our recipes, we try to create synergistic umami; this is where other umami-rich ingredients are added to boost the umami and other flavours.

## Stimulating the trigeminal nerve

The trigeminal nerve connects your ears, nose and mouth, and is responsible for feelings such as the cooling and warming effect that eating certain spices or other food can have.

If your sense of taste and smell has changed, stimulating the trigeminal nerve with things like mint, chilli, wasabi, cinnamon and mustard can excite your senses even if your ability to taste has been affected.

Equally, even if you're not living with taste changes, adding these ingredients can make food more exciting to the senses.

## Smell

80% of what we *think* we taste is actually what we smell. Smell is also very important in stimulating appetite.

At Life Kitchen, we like to create a recipe in the same way a perfumier makes a perfume: adding top notes like citrus, basil and vinegar, with base notes like black pepper, vanilla and cinnamon to help make food appetising before, during and after eating.

## Texture

We may not think about it often, but texture is a very important way of making food interesting and palatable. Mixing different food textures can often mean the difference between a good and a bad dish.

For us, no soup is complete without a crunchy slice of bread for dipping or a range of different textures to give the eater a sense of excitement in the mouth when eating.

## Layering

The culinary skill of building flavour into food. It can be mixing hot and cold, along with something crunchy and smooth or even balancing sweet and salty flavours. When we create a recipe we always think carefully about layering.

For example, in our Miso chicken with pickled cucumber tzatziki wraps recipe, the umami-rich miso chicken is served hot on top of cool, refreshing pickled cucumber tzatziki yoghurt, which stimulates the trigeminal nerve.

These contrasting elements can make eating a more exciting flavour and sensory experience.

# Apple and ginger compote with yoghurt

## Flavour

Ginger is an ingredient that has long been used as a traditional remedy for nausea, something that lots of people going through cancer treatment have.

Although there isn't strong scientific evidence to back up the claim that ginger is an effective remedy, we've used it here for its flavour and aroma.

Apples are an excellent base for a compote because of their high pectin levels, which is a natural thickener and provides silkiness. The mellow flavour of apple also allows the ginger to really zing.

We like to serve the hot compote with cold yoghurt to make this recipe exciting for the senses. Adding the granola also adds an interesting and varied texture. Any leftover compote can be stored in the fridge for up to 3 days.

## Nutrition

Apples are not only a good source of fibre, but they also contain a range of different antioxidants, vitamins and minerals that are important for our health.

The yoghurt in this dish provides a really good source of protein as well as being naturally rich in calcium. Foods containing live bacteria may also help your gut health.

### Nutrition information (per serving):



SERVES 4



CALORIES: 257



PROTEIN: 12.8g



FAT: 3.1g



SUGAR: 25.6g



SALT: 0.3g



5 A DAY: 1







# Apple and ginger compote with yoghurt

## SERVES 4

3 large apples, peeled and chopped  
into small pieces; pink ladies are  
our favourite

1 tsp vanilla bean paste

1½ tbsp sugar

A 3cm piece ginger, grated

500g fat-free Greek yoghurt

100g granola, to serve

- ① Place the diced apples into a medium saucepan, add the vanilla and sugar, along with 5 tablespoons of water. Stir everything together and bring to a gentle simmer for 10 minutes. Once the apples have softened and become translucent, add the grated ginger. Stir well and cook for a further 2 minutes. Turn off the heat and allow the apple to cool for 10 minutes.
- ② To serve, split the yoghurt between 4 bowls and spoon over a couple of tablespoons of apple compote. Finish with a sprinkling of your favourite granola. We use the granola from our “Caramelised banana porridge with nutty granola banana” recipe (see page 15).

**TOP TIP:** If you are trying to keep your weight up, you can use full-fat Greek yoghurt instead to increase the calories of the dish. Experiment with different types of yoghurt to see what you like – natural, Greek, kefir. Each has different nutritional values, so check the label to make sure it's meeting your needs.

# Curried tomatoes on toast

## Flavour

Cinnamon is a spice that creates sensations on the tongue and at the bridge of the nose.

If your sense of taste has changed, these types of sensations can help to make food more interesting, alongside things like texture and using umami (like the tomatoes in this recipe).

The vinegar in the recipe adds sourness and can also be felt in the nose, making eating these simple but delicious tomatoes on toast interesting for the mouth and the senses.

## Nutrition

Tomatoes are naturally rich in a compound called lycopene; it's what gives tomatoes their red colour and may have health benefits.

Not only this, but tomatoes contain a number of different minerals and vitamins, including vitamin C and vitamin A, both of which are important for a healthy immune system.

### Nutrition information (per serving):



SERVES 2



CALORIES: 250



PROTEIN: 10.7g



FAT: 6.7g



SUGAR: 3.2g



SALT: 1g



5 A DAY: 1







# Curried tomatoes on toast

## SERVES 2

### FOR THE BUTTER:

1½ tbsp butter or spread, softened

¼ tsp cinnamon

½ tsp coriander powder

1 tsp malt vinegar

100g baby-leaf spinach

Ground black pepper, to taste

### FOR THE TOMATOES:

1 tsp olive oil

10 mixed coloured cherry tomatoes,  
halved

1 tsp medium curry powder

### TO SERVE:

4 slices wholegrain sourdough or  
other wholegrain bread of your choice

- 1 Make the butter first by placing the butter or spread and cinnamon into a small bowl and mix well until combined.
- 2 Place a frying pan onto a medium-high heat and add the oil and tomatoes. Fry for 4–5 minutes until they begin to soften. Add the spices and cook for a further minute, stirring occasionally with a wooden spoon to stop them from burning.
- 3 Add the vinegar and cook for 2 minutes and then add the spinach, along with 50ml of cold water. Place a lid on the pan and allow the spinach to wilt. Once the spinach has wilted, remove the lid from the pan and cook everything for 5–6 minutes until the water has evaporated. Season to taste.
- 4 Toast your bread and spread on the cinnamon butter before topping with the tomatoes and spinach.

**SERVING SUGGESTION:** For an extra boost of protein, you can also serve with a poached egg.

# Texture

**CRUNCHY**  
**CHEWY**  
**CRISPY**

**SILKY**  
**FIRM**

**SMOOTH**



# Caramelised banana porridge with nutty granola

## Flavour

For most of us, flavour plays an important role in the enjoyment of food. However, textures are also key to making a successful dish and not often thought about when planning a meal.

Adding different textures to your food can help to make mealtimes more enjoyable, especially if your ability to taste and smell has been affected by cancer treatment.

This porridge has the smoothness of milky oats, the silkiness of banana, and the crunch from the granola, which help to give the senses plenty to think about.

## Nutrition

This recipe contains healthier fats from the nuts and is full of slow-release energy from the oats.

Not only this, nuts, oats and fruit like banana are great sources of fibre which is important for a healthy digestive system.

Oats are also a wholegrain – something that many of us should try to eat more of as part of a healthy, balanced diet.

### Nutrition information (per serving):



SERVES 2



CALORIES: 447



PROTEIN: 14.2g



FAT: 13.2g



SUGAR: 21.9g



SALT: 0.1g



5 A DAY: 0.5









# Caramelised banana porridge with nutty granola

## SERVES 2

### FOR THE GRANOLA:

10g unsalted cashew nuts

10g unsalted peanuts

60g rolled oats

2 tsp sesame seeds

½ tsp ground cinnamon powder

1 tsp vanilla bean paste

3 tsp honey/maple syrup

1 tsp olive oil

1 banana, sliced

Tahini (optional)

### FOR THE PORRIDGE:

60g rolled oats

200ml skimmed milk/oat milk

1 tsp honey (optional)

- 1 Preheat the oven to 200°C/Fan 180°C.
- 2 In a small bowl, mix together the cashews, peanuts, 60g rolled oats, sesame, cinnamon, vanilla, honey (or maple syrup), and oil. Mix well until the mixture is slightly sticky and clusters together.
- 3 Place a sheet of greaseproof paper onto a baking tray and spread the granola mix onto the tray in an even layer. Pop the mix into the oven for 8–10 minutes until browned. Don't worry if the mix is a little soft when you take it out; it will firm up as it cools.
- 4 To make the porridge, add the remaining 60g of rolled oats into a medium saucepan and add 200ml skimmed milk or oat milk – as well as the honey if you're using it – and bring them to a gentle simmer. Once the porridge has thickened to your preferred consistency, turn off the heat and serve into bowls. Top with sliced banana, a sprinkling of the granola, and a drizzle of tahini if you're using it.

**TOP TIP:** Any leftover granola can be kept in an airtight container for 7 days, and is a great addition to a fruit crumble or to natural yoghurt. You can also add extra fruit for an extra 5 A DAY portion, or different nuts in your cupboard like pecans or walnuts, or seeds such as linseeds and chia to increase the nutrient content of the dish.

# Toasted coconut, shiitake and broccoli soup

## Flavour

This soup uses ginger and garlic to create a beautifully aromatic base flavour. Mushrooms add umami depth, and the chilli stimulates the trigeminal nerve. However, you can remove the chilli if spice isn't your thing.








## Nutrition

When you're going through treatment, you may find that you experience dehydration – this might be if you aren't drinking enough, feel nauseated or have diarrhoea (loose poo). This can mean that you lose fluid as well as electrolytes (sodium, potassium, magnesium and chloride). These minerals help to regulate nerve and muscle function and help to hydrate the body.

The coconut in this dish provides a really good source of potassium – an essential mineral that, alongside sodium, helps to keep water balance in the body. This recipe is not only a source of electrolytes but is packed full of wholesome flavours to help get the goodness back into the body.



### Nutrition information (per serving):

	SERVES 2
	CALORIES: 476
	PROTEIN: 17g
	FAT: 19g
	SUGAR: 13.5g
	SALT: 1.5g
	5 A DAY: 2.5

**Note:** Make sure you get in touch with your health professional if symptoms such as diarrhoea are ongoing or worrying you, or if you have a temperature (fever).



# Toasted coconut, shiitake and broccoli soup

## SERVES 2

1 tbsp rapeseed oil	1 red chilli, sliced
4 tsp dried desiccated coconut	¼ tsp white pepper (optional)
6 tsp ginger paste	1 x 200ml can light coconut milk
6 tsp garlic paste	1 head broccoli, florets only
6 spring onions, thinly sliced	3 tsp maple syrup
10 shiitake mushrooms, sliced	1 tsp rapeseed oil
1 green chilli, finely chopped	Ground black pepper, to taste

- 1 Preheat the oven to 200°C/Fan 180°C.
- 2 Place a medium-sized saucepan over a medium heat and add in the oil and coconut. Allow to brown lightly for a few moments, then add the ginger, garlic, spring onions, mushrooms, both chillies, white pepper (if using), and mix well.
- 3 Cook until the spring onions begin to soften, about 5–6 minutes, then add in the coconut milk. Fill the coconut can to the top with water and add that into the pan. Stir well to make sure nothing is stuck to the bottom of the pan and simmer on a low heat for 20 minutes.
- 4 In the meantime, chop the broccoli into large florets and place them into a mixing bowl. Drizzle over the maple syrup and oil and season to taste. Then tip them onto a baking tray and bake in the centre of the oven for 20 minutes until tender and cooked through.
- 5 To serve, ladle the soup into bowls, place the broccoli on top, and enjoy.

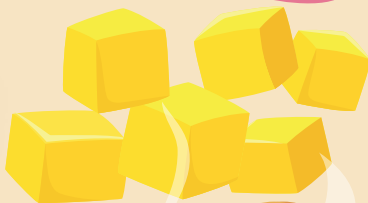
**TOP TIP:** If you want to boost the energy content of the dish you can use full-fat coconut milk. You can also serve over jasmine rice, or for added fibre try brown rice. To increase the protein content you could add some tofu or leftover roast chicken.

# Layering



**PINK ONIONS:**  
vinegar is stimulating  
to the nose and  
provides sensation

**POTATOES:** served  
warm to contrast  
the coolness, with  
sweetness of mango  
and warming garam  
masala spices



**MINT:** stimulates the trigeminal nerve,  
producing sensations of coolness  
we feel in our airwaves



**AVOCADO CHUTNEY:**  
cold, smooth textured



# Sticky mango potatoes with mint and avocado

## Flavour

One of the most common mistakes we all make when it comes to cooking is throwing all the ingredients into one pan and cooking them at the same time. Sometimes, it can yield something beautiful, but often it means we're unable to distinguish the different flavours and textures of a dish.

Layering can be about putting together hot and cold foods to create something more interesting for your senses.

This recipe has hot, cold, sweet, salty, tangy, and spicy elements, all added to help boost flavour and make eating more pleasurable.

## Nutrition

Avocados are well known for being a good source of heart-healthy unsaturated fats. This nutritional powerhouse is also rich in fibre, and contains a wide range of different vitamins and minerals, such as vitamin E, a number of B-vitamins and potassium. It's also a great energy-rich food.

The mango in the recipe provides additional fibre which is important for a healthy digestive system. They also contain antioxidants and are especially rich in vitamins A and C – both of which help to support our immune system.

### Nutrition information (per serving):



SERVES 2



CALORIES: 407



PROTEIN: 6.5g



FAT: 18.8g



SUGAR: 15.8g



SALT: 0.6g



5 A DAY: 1







# Sticky mango potatoes with mint and avocado

## SERVES 2

### MANGO POTATOES:

12 new potatoes

1 tbsp vegetable oil

½ tsp roasted garam masala (a blend of roasted spices)

2 tbsp mango chutney

½ fresh mango, diced into small pieces

### AVOCADO CHUTNEY:

1 small avocado

2 tbsp soured cream

1 lime, zest and juice

1 green chilli

A few coriander leaves

A few mint leaves – keep a few for sprinkling over the top

Ground black pepper, to taste

### TO SERVE:

Pink pickled onions

- 1 Preheat the oven to 200°C/Fan 180°C.
- 2 Place the potatoes onto a large baking tray, drizzle over the oil and a sprinkle of pepper. Place into the middle of the oven to roast for roughly 25–30 minutes, until golden brown and tender.
- 3 In the meantime, add the ingredients for the avocado chutney into a food processor and blend until smooth. If you don't have a processor, you can use a fork to mix together the soured cream and avocado and finely chop in the other ingredients. Then pop into the fridge to keep cool.
- 4 Once the potatoes are cooked, add the garam masala and lightly crush the potatoes with the back of a fork. Then add in the mango chutney and fresh mango. Mix well to coat the potatoes.
- 5 Spread the avocado chutney on a serving plate and place the potatoes on top. Finish with a sprinkle of mint.

**SERVING SUGGESTION:** This is ideal on its own (or as a side dish), or for a bigger meal serve with a portion of protein such as a chicken or turkey breast, or for a plant-based protein, add a portion of pulses (beans, peas or lentils).



# Miso sweetcorn soup with harissa butter toast

## Flavour

Miso is one of the Life Kitchen team's favourite ingredients to boost umami while adding rich, bold flavours.

In this recipe, the sweetness of the sweetcorn is boosted by the rich and savoury umami to make a balanced and comforting soup.

The white pepper is a great trigeminal stimulant (which is why it makes you sneeze!), and also adds a mild heat.

## Nutrition

Sweetcorn adds a welcome addition of fibre – not only important for our overall health, but it can also help to keep us feeling fuller and supports a healthy digestive system.

This recipe is a good source of vitamin B1, which helps to break down food to turn it into energy, and vitamin C which helps to support our immune system.

### Nutrition information (per serving):



SERVES 4



CALORIES: 280



PROTEIN: 7.4g



FAT: 10.1g



SUGAR: 7.5g



SALT: 1g



5 A DAY: 1





# Miso sweetcorn soup with harissa butter toast

## SERVES 4

### FOR THE SOUP:

1 x 340g can sweetcorn, drained (or you can use frozen and defrosted sweetcorn)

2 tsp white miso

1 tsp butter or spread

500ml boiling water

½ tsp white pepper

### FOR THE TOAST:

4 slices wholegrain sourdough

2 tbsp rose harissa paste

2 tbsp butter or spread, softened

### TO SERVE:

2 tbsp dukkha (optional)

*NOTE: Dukkha is a traditional Egyptian spice blend of roasted nuts and mixed spices.*

- 1 Preheat the oven to 200°C/Fan 180°C.
- 2 Place all the ingredients for the soup into a large saucepan, bring to a boil, and then turn down to simmer for 5 minutes. Use a stick blender to blend the corn until smooth; be careful as it's very hot and may spit. Or, carefully tip the soup into a food processor and blend until smooth.
- 3 If you like, you can pour the soup through a sieve for a smoother consistency; however, we like it as it is.
- 4 To make the harissa butter, add the harissa and butter (or spread) into a small bowl and mix together until smooth and fully combined. Spread onto freshly toasted bread.
- 5 To serve, spoon the soup into bowls and sprinkle over the dukkha, if you're using it, and serve with the harissa toast.

**TOP TIP:** You can also use wholemeal bread instead of sourdough bread. For an added nutrient boost you can also sprinkle seeds over such as chia – a great way to increase the fibre and protein content of the dish.

# Red Thai curry lentils

## Flavour

Thai red curry paste is an instant hit of deeply aromatic flavours like lemongrass and ginger. It also has spices and chilli that stimulate the trigeminal nerve, giving this recipe lots of things for your senses to get excited about.

The soy sauce gives this recipe umami, which we think balances the natural sweetness of the squash and the slight bitterness of the kale. For us, a food dish is all about balancing the five tastes: sweet, sour, salty, bitter and umami.

## Nutrition

The lentils in this recipe are an excellent source of plant-based protein. Protein is essential for the growth and repair of the body, and for good health.

Lentils are also naturally high in fibre – this recipe provides over half of your recommended daily intake of fibre.

An 80g serving of lentils also counts as one of your 5 A DAY. However, they only count once, no matter how much you eat.

### Nutrition information (per serving):



SERVES 2



CALORIES: 502



PROTEIN: 26.4g



FAT: 20.7g



SUGAR: 15.3g



SALT: 3.2g



5 A DAY: 4







# Red Thai curry lentils

## SERVES 2

1 small squash, peeled, deseeded and diced into large pieces

4 tbsp Thai red curry paste

1 tsp olive oil

Spray oil

1 small piece fresh ginger, peeled and finely diced

5 cloves garlic, finely chopped

20g cashew nuts, unsalted

2 tbsp desiccated coconut

A large handful of curly kale, washed, roughly chopped

2 tbsp reduced-salt soy sauce

100ml light coconut milk

1 head broccoli, florets removed

1 x 250g packet pre-cooked puy lentils

## TO SERVE:

2 spring onions, sliced into rounds

- 1 Preheat the oven to 200°C/Fan 180°C.
- 2 Place the squash pieces onto a baking tray. Combine 2 tablespoons of the red curry paste and the olive oil and mix well, then drizzle it over the squash pieces and place them into the oven to roast for 30 minutes.
- 3 In the meantime, place a pan onto a medium-high heat and add 3 sprays of spray oil. Add the ginger, garlic, remaining 2 tablespoons of red curry paste, and half of the cashew nuts and fry them for 1–2 minutes until the cashews take on a light golden colour. Then add the coconut and cook for a further 1 minute to lightly brown it. Add the curly kale, along with the soy sauce and 100ml of water, and allow the kale to wilt for 4 minutes, then add the lentils and stir well. Add in the coconut milk and stir everything well to combine. Simmer on a low heat for 10 minutes.
- 4 After 30 minutes, remove the squash from the oven. Add the remaining cashews to the tray along with the broccoli and place back into the oven for 10 minutes until the broccoli is lightly browned and the cashew nuts are deeply golden.
- 5 To serve, spoon the lentils into a bowl and top with the cashew nuts, broccoli, roasted squash pieces and the spring onion.

**TOP TIP:** To increase the energy content, you can use full-fat coconut milk. Or add some sesame seeds for extra nutrients.

# Roasted garlic dal

## Flavour

Garlic is one of Life Kitchen's favourite ingredients, for its simplicity and adaptable flavour.

The main flavour that we recognise as garlic comes from the chemical alliin and the enzyme alliinase mixing together when the garlic is pressed or crushed. This creates the unmistakable flavour of fresh garlic and is why the smaller you dice garlic, the more pungent and intense it becomes. So, for spicy fresh garlic, go for a super-fine chop; but for mellow flavour, try adding whole cloves lightly crushed to dishes.

By roasting the garlic in this recipe low and slow for a long time, you're allowing the sugars in the garlic to caramelise and give a mellow sweeter flavour than fresh garlic, which we think is in harmony with the mild flavour of lentils.

The miso in this recipe adds a delicious umami base and the caramelised onions give another note of fragrant sweetness.

## Nutrition

Lentils are a highly nutritious food, high in both fibre and plant-based protein. This recipe provides over half of our recommended daily intake of protein.

Lentils also have a range of different vitamins and minerals, and are particularly high in iron and folate, which are essential for forming healthy cells, especially red blood cells, which help carry oxygen around the body.

### Nutrition information (per serving):



SERVES 2



CALORIES: 478



PROTEIN: 27.4g



FAT: 11.2g



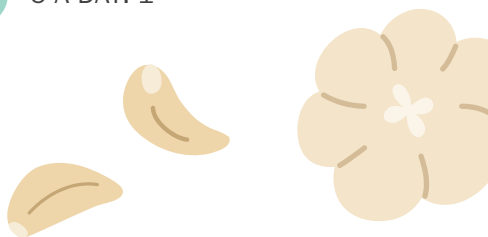
SUGAR: 5.7g



SALT: 1.1g



5 A DAY: 1









# Roasted garlic dal

## SERVES 2

2 heads garlic

1 tbsp olive oil

2 small onions, thinly sliced into  
half moons

180g dried yellow lentils, rinsed  
(red, orange and black lentils also work)

1 tbsp brown miso

TO SERVE:

2 wholemeal flatbreads

- ① Preheat the oven to 200°C/Fan 180°C.
- ② Wrap both heads of garlic in tin foil and place them onto a baking tray. Bake them in the oven for 45 minutes or until they're soft and aromatic. They should be soft enough for the cloves to be easily squeezed out of their skins.
- ③ In the meantime, place a medium-sized saucepan on a medium-low heat and add the oil. Add the onions and fry them gently until they are very soft and sweet-smelling – don't add any salt to the onions as this will stop the lentils from cooking.
- ④ Once the onions have softened, add the lentils to the pan and then fill the pan with 300ml water and bring to the boil. Boil the lentils for 10 minutes then reduce to simmer and cover for 30 minutes or until the lentils have completely softened. If the lentils are looking a little dry, top up the pan with boiling water.
- ⑤ Once the lentils are completely soft, squeeze all the soft cooked garlic into the pan and stir through well. Add in the miso, stir well and allow the lentils to gently simmer for another 10 minutes.
- ⑥ Serve hot or cold with flatbreads.

**SERVING SUGGESTION:** For an extra portion of fruit and vegetables, serve alongside some wilted spinach.

# Umami broth minestrone

## Flavour

Sometimes, when your sense of taste has changed and you don't feel like experimenting, you need food that gives simple comfort.

Although this dish is rich in umami, the flavour is mellow and deep. Garlic, mushrooms, tomatoes, oyster sauce, soy sauce and chicken stock are all umami-rich foods and there's also a hint of sweetness from the leek and tomatoes that make a balanced flavour.

To make this recipe go further, make a double batch (before adding the pasta), remove half the stock mixture, cool it down and then store it in the fridge for up to 3 days. You can enjoy in the following days with rice noodles in place of pasta for a bit of variety.

## Nutrition

This nutrient-rich dish is particularly high in potassium, which is needed for the nervous system to function normally.

This dish also provides over a third of your recommended daily amount of vitamin C. Not only this, but it also provides a good source of protein and fibre.

### Nutrition information (per serving):



SERVES 2



CALORIES: 299



PROTEIN: 10.6g



FAT: 8.6g



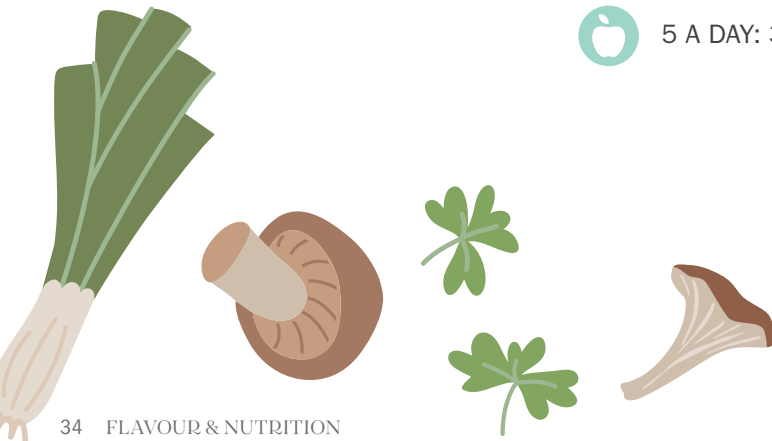
SUGAR: 8.3g



SALT: 2.7g



5 A DAY: 3





# Umami broth minestrone

## SERVES 2

2 tsp rapeseed oil

1 leek, chopped

2–3 tbsp garlic puree

10 shiitake or mixed mushrooms,  
chopped

2 large tomatoes, diced

1 tsp oyster sauce

1 tbsp reduced-salt soy sauce

500ml reduced-salt chicken stock

100g small wholewheat pasta  
(we prefer hoops or macaroni)

Fresh parsley to serve

Ground black pepper, to taste

- 1 Place a large pot on a medium-high heat, add in the oil, and allow it to slightly warm. Then add the leek, garlic, and mushrooms and cook, stirring occasionally, until the mushrooms are softened, and the leeks are translucent. Add the diced tomatoes and allow them to soften, then add the oyster sauce, soy sauce, and chicken stock and bring to a gentle simmer.
- 2 Allow everything to simmer for 10 minutes, then add your pasta and cook following the packet instructions or until the pasta is cooked to your liking.
- 3 Serve by ladling into bowls with a flourish of fresh parsley.

**TOP TIP:** Serve with a couple of slices of wholemeal bread to increase the calories and to make the dish more filling. You can also add in some shredded cooked chicken or beans – a great way to boost the protein content.

# Soured cream, pea and mint baked potatoes

## Flavour

If you have ulcers or soreness in your mouth because of your treatment, it can make eating a challenge.

In this recipe, we've used soothing soured cream, silky-soft potatoes, and mild but umami-rich peas to make a comforting type of dauphinoise.

If you don't fancy the mint, feel free to leave it out and remember, all recipes can be adapted.

Sometimes, hot food can be difficult, so we've made sure that this recipe is also delicious when cold. It's almost like a Spanish omelette. Just allow it to cool slightly before popping it in the fridge for an hour to firm up.

## Nutrition

While potatoes are not normally thought about as a source of vitamin C, this dish provides almost a quarter of your recommended daily intake of vitamin C. Vitamin C is important for the immune system and helps to protect the health of our cells.

This dish is also particularly high in potassium, an essential mineral that helps our muscles to function properly.

### Nutrition information (per serving):



SERVES 6



CALORIES: 257



PROTEIN: 6.1g



FAT: 6.7g



SUGAR: 6.3g



SALT: 0.1g



5 A DAY: 0.5







# Soured cream, pea and mint baked potatoes

## SERVES 6

5 large potatoes, thinly sliced

1 large onion, diced

3 cloves garlic (optional), chopped

1 tsp ground black pepper

200ml soured cream

400ml water

Spray oil

2½ tbsp cornflour

12 mint leaves, 2 reserved for the top, chopped

80g garden peas

½ tsp salt (optional)

- 1 Preheat the oven to 220°C/Fan 200°C.
- 2 Use the spray oil to grease the inside of an 8-inch cake tin. If you don't have one, you can use a high-sided square baking tin.
- 3 Place a frying pan over a medium heat and add a couple of sprays of oil, then add in the onions and garlic (if using) and cook for 8–10 minutes until softened. Add the black pepper and cook for a further minute. Add in the soured cream and stir well.
- 4 Mix the cornflour into the water and stir well, trying to beat out any lumps, then pour into the pan with the soured cream mixture and mix well until everything is combined. Allow the mixture to come to a boil, stirring occasionally. It's OK if it begins to thicken; this is what we're looking for.
- 5 Once the liquid is boiling, turn off the heat, add the salt (if using), peas and mint.
- 6 Place two layers of the sliced potatoes into the baking dish, allowing them to overlap slightly so there aren't any large gaps. Pour in one-third of the soured cream mixture. Add another two layers of potato on top and repeat until you have no potatoes left. Make sure you keep enough soured cream to pour over the top layer.
- 7 Place into the centre of the oven to cook for 35–45 minutes until the potatoes are cooked through. If you like, you can cool the potatoes slightly and then run a knife along the edge of the baking dish to serve. Finish with a sprinkling of mint.

**TOP TIP:** For added energy, you can increase the amount of soured cream you use. Or for a more complete meal, serve with roasted fish or as a side to a Sunday roast.

# Miso chicken with pickled cucumber tzatziki wraps

## Flavour

Marinating the chicken in this recipe packs in some serious flavour; the longer you leave it, the more the chicken will soak up the delicious miso and pickle flavours.

Miso has a super high concentration of umami flavour making the chicken deeply savoury and, importantly, mixing the chicken and miso creates synergistic umami giving a deep and rich savoury flavour.

The mint in this recipe stimulates the trigeminal nerve, giving a cooling sensation in the mouth that we think works very well with the yoghurt.

## Nutrition

This recipe is not only high in protein, but it is also a good source of phosphorus and zinc, which help build and support strong bones. Zinc is also needed to make new cells and to support our immune system.

This recipe is also a good source of iron – a mineral that is essential for carrying oxygen around the body. Iron is another mineral that also supports our immune system.

### Nutrition information (per serving):



SERVES 2



CALORIES: 523



PROTEIN: 27.5g



FAT: 20.9g



SUGAR: 16g



SALT: 2g



5 A DAY: 1







# Miso chicken with pickled cucumber tzatziki wraps

## SERVES 2

4 small boneless chicken thighs

1 tsp miso paste

1 tsp smoked paprika

1 tsp mixed herbs

2 tsp garlic paste

3 tbsp pickle brine

Ground black pepper, to taste

¼ fresh cucumber

Jar of pickled cucumbers

Small handful of mint, finely chopped

Handful of dill, finely chopped

4 tbsp kefir yoghurt or low-fat natural yoghurt

Spray oil

### TO SERVE:

2 Greek-style flatbread or wholemeal tortilla wraps

Mint leaves

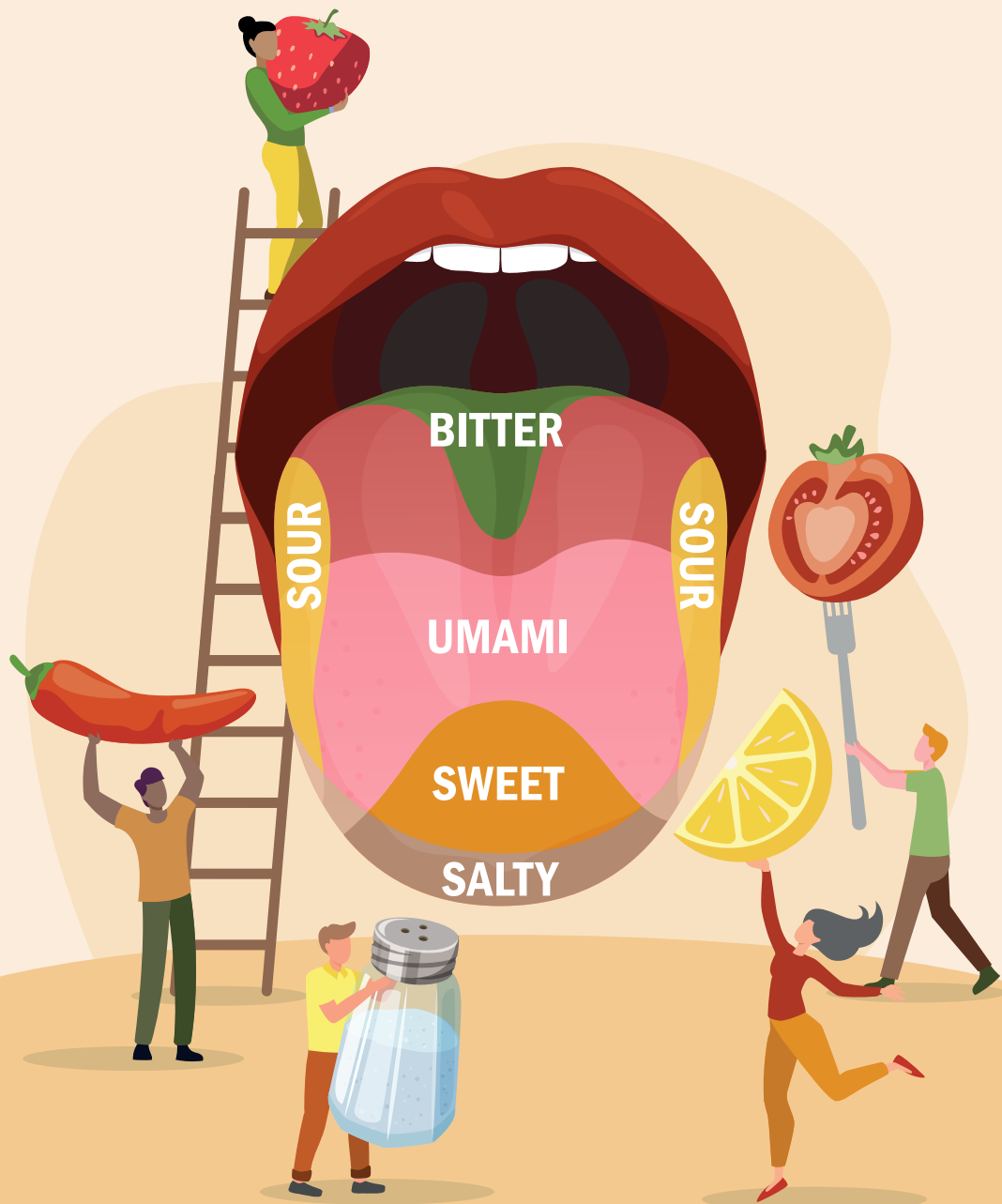
Dill leaves

Pickles

- 1 Cut the chicken thighs into small strips and place them into a mixing bowl. Add in the miso paste, smoked paprika, mixed herbs, and 1 teaspoon of the garlic paste. Then add the pickle brine, season with black pepper, and mix well. Leave to marinate for at least 45 minutes.
- 2 To make the tzatziki, dice the fresh cucumber and 3 pickled cucumbers from the pickle jar into small pieces. Add the chopped herbs, and mix into the kefir yoghurt (or fat-free yoghurt). Add in the final teaspoon of garlic paste and stir well. This can be kept in the fridge for up to 2 days.
- 3 Turn the grill onto a medium-high heat. To cook the chicken, using the spray oil, spray a few sprays onto a baking tray and lay out the chicken into a single layer. Place the tray under the grill and allow the chicken to cook for 7 minutes. Using tongs, flip the chicken over and cook on the other side for 7 minutes. Make sure that the chicken is cooked all the way through before eating.
- 4 To serve, warm the flatbreads under the grill for 1–2 minutes before spooning over the pickled cucumber tzatziki and adding the chicken. Finish with fresh herbs and pickles, and serve.

**SERVING SUGGESTION:** To lower the fat content of the dish, you can remove the skin from the thighs after cooking or use chicken breast if you want. You can also enjoy this dish alongside a mixed salad and/or rice.

# Umami



# Marmite pasta with porcini and lemon breadcrumbs

## Flavour

The deep, rich intensity of umami is key to great-tasting food.

This dish is inspired by a Nigella Lawson classic. It takes the depth of Marmite and transforms it into a luxurious sauce boosted by umami-rich mushrooms and zesty, scent-stimulating lemon breadcrumbs.

The combination of Marmite, mushrooms and parmesan creates synergistic umami (or super-umami). When we layer umami ingredients this way, we create food that is powerfully flavoured and delicious.

## Nutrition

This dish provides a good source of protein, which is important for healthy muscles and bones. It's also high in fibre – something that is really important for our overall health, but is lacking in many of our diets.

Adding Marmite (a yeast extract) provides a good source of vitamin B12 – an essential vitamin that helps to form normal red blood cells and which helps to carry oxygen and nutrients around our bodies. Yeast extract is one of the few foods suitable for vegans that provide a good source of B12.

### Nutrition information (per serving):



SERVES 2



CALORIES: 465



PROTEIN: 21.2g



FAT: 14.8g



SUGAR: 4g



SALT: 1.2g



5 A DAY: 1









# Marmite pasta with porcini and lemon breadcrumbs

## SERVES 2

150g wholemeal pasta

20g butter or spread

1 tbsp Marmite

150g spinach

3 tbsp wholemeal breadcrumbs

A small handful of dried porcini mushrooms

1 lemon, zest and juice

20g parmesan

Ground black pepper, to taste

- 1 Preheat the oven to 200°C/Fan 180°C.
- 2 In a medium pan, cook your pasta following packet instructions.
- 3 In a small saucepan, melt the butter (or spread) and Marmite over a medium heat. Add in the spinach until just wilted and set aside. Whizz the breadcrumbs in a food processor with the dried mushrooms and lemon zest. Spread evenly onto a baking tray and toast in the oven or under the grill until golden brown.
- 4 Once the pasta is cooked, drain, keeping a ladleful of the pasta water. Add the ladleful of pasta water into the Marmite butter sauce and stir to combine. Then add in the pasta and mix well until it is covered in the silky-smooth sauce.
- 5 Transfer to a plate and serve with a large sprinkle of the breadcrumbs. Finish with a sprinkle of parmesan and lemon juice.

**TOP TIP:** Instead of dried mushrooms you can also use finely chopped fresh mushrooms.

# Smell



# Basil and mushroom cannelloni with harissa ricotta

## Flavour

Eugenol synthase is the compound responsible for basil's wonderfully powerful smell. When we cook food, the process can release something called "volatile molecules". These molecules travel through the air to our noses to bring us smell.

Some foods have molecules that reach us more easily than others because they can evaporate more quickly. Basil is one of these; citrus fruits are another.

This is the science that perfumiers use to make your favourite perfume or aftershave. They add different-sized scent molecules – heavy might be woody cedar, then mid notes of cardamom or black pepper, and top notes such as mint, lemon, and eucalyptus – to build up scent profiles that reach your nose at different times, creating the scents we smell.

This is something we can also apply to the food we eat to make it more appetising. In this case, basil really is the star of the show!

## Nutrition

This recipe provides a good source of protein and is also high in fibre.

This dish contains a vegetable called cavolo nero, which is similar to kale. Not only does it contribute towards your 5 A DAY, it is also full of nutrients such as vitamins A and C, B-vitamins such as folate, and vitamin K.

This dish also provides a good source of calcium and phosphorus – both important for strong bones.

### Nutrition information (per serving):



SERVES 2



CALORIES: 666



PROTEIN: 25.2g



FAT: 12.9g



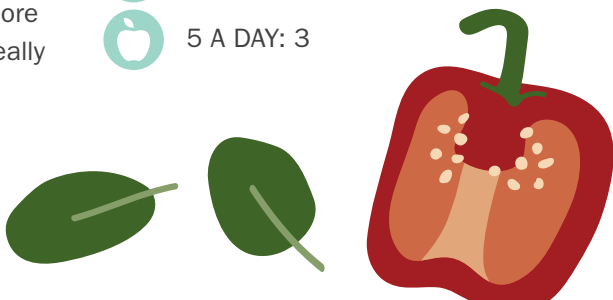
SUGAR: 17.7g



SALT: 0.3g



5 A DAY: 3





# Basil and mushroom cannelloni with harissa ricotta

## SERVES 2

1 tbsp extra-virgin olive oil

1 onion, finely sliced

1 red chilli, chopped

10 cloves of garlic,  
chopped

1 red pepper, finely sliced

8 stalks cavolo nero kale,  
finely sliced

1 large portobello  
mushroom or

3 small mushrooms

1 tsp tomato paste

12 stems of basil, roughly  
chopped – reserve a  
tablespoon for the top

4 tbsp ricotta

1 tbsp harissa paste

8 cannelloni tubes

250g passata

1 lemon, zested

Ground black pepper,  
to taste

**TOP TIP:** You can cook  
in some dried red lentils  
with a splash of extra  
water for a fibre and  
protein boost.

- ① Preheat the oven to 200°C/Fan 180°C.
- ② Place a large frying pan onto a medium-high heat. Add the oil, onions, chilli, and garlic and cook for 3–4 minutes until the garlic begins to brown and you can smell it. Season to taste, then add 1 tablespoon of water along with the pepper, cavolo nero, and mushrooms and cook for 10–15 minutes until everything has softened. Add another 2 tablespoons of water if the mix becomes too dry.
- ③ Add the tomato paste, half the basil, and 100ml of water and cook for a further 5 minutes.
- ④ In the meantime, mix together the ricotta and the harissa.
- ⑤ Once the filling is cooked, turn off the heat and allow it to cool slightly. Place the cannelloni tubes into a high-sided baking dish, and – one at a time – use a small spoon (or your fingers) to push the mixture into the tubes, laying them flat once you have done so. Once you've finished filling the pasta, place any remaining filling you have into the mixing bowl with the passata and 100ml of water, then pour over the pasta. Spoon the ricotta on top of the cannelloni and spread it out lightly to cover them all.
- ⑥ Place the baking dish into the centre of the oven for 30–35 minutes until the pasta is cooked through and the ricotta is golden.
- ⑦ To finish, sprinkle over the remaining basil and the lemon zest.



# Stimulating the trigeminal nerve

THIS IS THE  
NERVE THAT MAKES  
YOU CRY WHEN YOU'RE  
CHOPPING ONIONS

OPHTHALMIC  
BRANCH

SUPERIOR  
ALVEOLAR  
NERVE

LINGUAL  
NERVE



# Piccalilli chicken

## Flavour

The trigeminal nerve is the nerve that connects your nose, eyes and mouth. It is responsible for the nose-tingly sensation you get when you eat ingredients such as mustard, mint, wasabi and horseradish.

Although stimulating the trigeminal nerve doesn't directly affect flavour, it carries sensory information from the tongue to the brain and is important to our overall enjoyment of food. When we chew and swallow our food, we can "unlock" different flavours as the scent molecules from our food travel along our airways.

This recipe includes mustard in two different forms, along with vinegar and chilli, which are all great at stimulating the trigeminal nerve!

## Nutrition

The chicken in this recipe makes this dish particularly high in protein. Protein is really important in helping to maintain our muscle mass. As cancer can cause a loss of muscle mass, focusing on protein-rich foods can be particularly beneficial.

Chicken is also a really good source of vitamin B6, which helps the body to use the energy from protein and carbohydrates in food.

### Nutrition information (per serving):



SERVES 2



CALORIES: 420



PROTEIN: 46g



FAT: 10.2g



SUGAR: 15.9g



SALT: 0.5g



5 A DAY: 3





# Piccalilli chicken

## SERVES 2

1 onion, halved	1 green chilli (optional)	3 tsp maple/agave syrup
1 head cauliflower, florets removed	1 tsp mustard powder	2 bay leaves
Spray oil	1 tsp turmeric	6 chicken mini fillets or 2 medium chicken breasts sliced into 6 strips
3 tsp cornstarch	1 tsp coriander seeds	180g tenderstem broccoli
3 tsp wholegrain mustard	100ml sherry vinegar	

- 1 Preheat the oven to 200°C/Fan 180°C.
- 2 Take a large baking tray and place the onion and cauliflower florets on it. Spray with oil and place into the oven for 15–20 minutes until the onion is beginning to soften and the cauliflower is lightly golden.
- 3 Meanwhile, boil the kettle. In a jug, mix together the remaining ingredients, except for the chicken and broccoli. Add roughly 100ml of freshly boiled water, and stir well. The mixture should be mustard yellow and glossy.
- 4 After 15 minutes, add the chicken to the baking tray on top of the onion and cauliflower, and pour the sauce over the chicken, coating the onion and cauliflower. Add a couple sprays of oil to the chicken and then place the tray back into the oven for 20 minutes.
- 5 After 20 minutes, carefully remove the tray from the oven and spoon the thickened sauce over the chicken and vegetables to glaze. Add in the broccoli and pop back into the oven for a further 15 minutes.
- 6 Ensure the chicken is properly cooked through by cutting into it with a knife to check if the juices run clear, or check with a thermometer; it should be 75°C. Once the chicken is cooked, leave it to rest for 5 minutes to allow the meat to become tender.

**TOP TIP:** To boost the energy content of this dish, you can use a couple of tablespoons of oil instead of spray oil. You can also enjoy this dish alongside a roasted sweet potato.

# Fish tacos with kimchi guacamole

## Flavour

Fish is one of the best sources of umami, especially fish like anchovies and dried fish. In this recipe we use cod, but you could switch it out for any fish you prefer.

Fermented foods, such as kimchi are also a great source of umami flavour. The combination of two umami-rich ingredients here creates the flavour boosting synergistic umami.

This recipe also relies on lots of different and interesting textures to create sensory excitement. The crunchy hot coating covering the soft fish and cooling smooth silky guacamole makes these tacos super enjoyable.

## Nutrition

The fish not only provides a number of vitamins and minerals, but is also high in protein. White fish is also naturally low in fat, and is a healthier choice over red meat for most of us.

As part of a healthy, balanced diet we should aim to include at least two portions of fish a week, including one serving of oily fish. You can also replace the cod in this recipe with an oily fish such as salmon; rich in heart-healthy omega-3 fats.

This dish is also high in vitamin E. One of its functions is as an antioxidant – a compound that helps to protect our cells.

### Nutrition information (per serving):



SERVES 4



CALORIES: 456



PROTEIN: 22.8g



FAT: 15.3g



SUGAR: 6.3g



SALT: 1.4g



5 A DAY: 1







## SERVES 4

### FOR THE FISH:

6 tbsp buttermilk

1 egg

1 tsp paprika

1 tsp garlic powder  
(optional)

1 tsp onion powder  
(optional)

8 x 20g pieces cod

100g panko  
breadcrumbs

### FOR THE GUACAMOLE:

1 large ripe avocado,  
de-stoned and sliced

1 small red onion,  
finely diced

6 cherry tomatoes,  
roughly chopped

1 lime, zest and juice

Ground black pepper,  
to taste

3 tbsp kimchi

A small bunch of  
coriander, roughly  
chopped

### TO SERVE:

8 small corn tortillas/  
or wholemeal flour  
tortillas

Fresh coriander

Pink pickles (optional)

# Fish tacos with kimchi guacamole

- ① Preheat the oven to 200°C/Fan 180°C.
- ② Place the buttermilk\* and crack the egg into a large mixing bowl. Tip in the paprika and garlic and onion powder if you're using them, and then place in the fish. You can leave it to marinate for a few hours if you wish to get the flavour of the spices through the fish; or, you can also make them straight away.
- ③ To bread the fish, place the breadcrumbs into a bowl, then using tongs or your hands, take one of the pieces of fish lightly shaking off the buttermilk and then place it into the breadcrumbs. Use your hands to cover the fish and make sure that the crumbs stick to the outside. Once the fish is fully coated, place each piece onto a clean plate ready for baking.
- ④ To cook, place the fish onto a baking tray lined with baking paper and place it into the centre of the oven for 15–20 minutes, until the breadcrumbs are lightly browned, and the fish is cooked through.
- ⑤ For the guacamole, mash the avocado with a fork until it is a rough texture. Mix through the onion, tomatoes, lime zest and juice, and season to taste with black pepper. Add the kimchi and the coriander, and mix well with a fork.
- ⑥ To serve, lightly warm your tortillas in the oven, add a couple of spoonfuls of the guacamole, your breaded fish and garnish with chopped coriander and some pink pickled onions if you are using them.

**SERVING SUGGESTION:** This dish is great as it is, but you can also serve with a portion of brown rice. Or how about a serving of black beans or a mixed vegetable salad – a great way of adding in an extra portion of fruit and vegetables to this recipe.

\*If you can't get buttermilk, you can quickly make it at home. In a bowl, mix 5 tablespoons of milk and 1 tablespoon of lemon juice and let the mixture stand at room temperature for 10–15 minutes until slightly lumpy.

# Other resources to help you

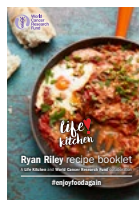
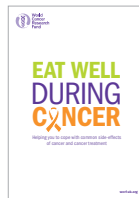
Please also see World Cancer Research Fund's, **Eat Well During Cancer** booklet, helping people who are living with cancer or having cancer treatment cope with the common side-effects of cancer and cancer treatment.

Available at: [wcrf-uk.org/ewdc](http://wcrf-uk.org/ewdc)

For those who have finished their cancer treatment, World Cancer Research Fund's, **Healthy Living After Cancer** guide is full of practical diet and lifestyle advice to keep healthy.

Available at: [wcrf-uk.org/hlac](http://wcrf-uk.org/hlac)

If you would like a copy of our first World Cancer Research Fund and Life Kitchen recipe booklet, you can download or order a copy for free at: [wcrf-uk.org/ryan-riley](http://wcrf-uk.org/ryan-riley)



## Contact us

We're always looking for ways to improve the information we provide. If you have any comments or suggestions about any aspect of this recipe book or our other health information, please contact us at [resources@wcrf.org](mailto:resources@wcrf.org) with your feedback.

## Life Kitchen

For any questions about Life Kitchen you can contact us at:

[online@lifekitchen.co.uk](mailto:online@lifekitchen.co.uk)

You can also reach us on:

**Twitter** @lifekitchen   **Instagram** @lifekitchencoockery   **Facebook** @lifekitchen  
[lifekitchen.co.uk](http://lifekitchen.co.uk)

Photography by Clare Winfield



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