

# Low Energy Cooking Guide

Low-energy cooking appliances help households save money while reducing the carbon footprint of everyday meals.





## The Air Fryer

Air fryers are a popular and versatile cooking appliance that can help reduce energy use when compared with a conventional oven. They work by circulating hot air around food in a compact space, allowing meals to cook more quickly and efficiently.

A typical air fryer uses around 1.4–1.7 kW while operating, compared with 2–3 kW for an electric oven. Because cooking times are often up to 50% shorter, the total energy used per meal is usually lower, particularly when cooking small to medium portions.

Air fryers are especially useful for households cooking for one or two people, or for preparing side dishes and quick meals without heating a full oven. They also require little oil, which can support healthier cooking.



### Do use the air-fryer to cook...

- Potatoes, chips and wedges
- Muffins, cakes and baked treats
- Fritters and breaded foods
- Bacon, chicken and sausages
- Tofu and fish fillets



### Don't use the air-fryer to cook...

- Loose cheese (it can melt and drip)
- Popcorn
- Very wet batters
- Sauces or liquids

# Air Fryer Recipes

## Nachos

### Ingredients

For the salsa

- 2 ripe tomatoes
- 1 small red onion
- 1 tsp olive oil
- Juice of ½ lime
- Pinch of chilli powder (optional)
- Salt, to taste

For the nachos

- 1 x 400g tin black beans, rinsed and drained
- 1 tsp fajita or Cajun-style seasoning
- Juice of ½ lime
- 200g tortilla chips
- 75g grated cheddar
- 100g mozzarella, grated or torn
- Small handful of chopped coriander

### Method

- Finely chop the tomatoes into a bowl, discarding the skins. Chop in the onion, then stir in the olive oil, lime juice, chilli and a pinch of salt. Set aside.
- In a separate bowl, lightly mash the black beans with the seasoning and remaining lime juice.
- Line the air fryer basket with baking parchment. Add a layer of tortilla chips, followed by half the beans and half the cheese. Repeat to create a second layer.
- Air fry at 200°C for 8–10 minutes, until the cheese is melted and golden.
- Lift out carefully using the parchment. Spoon over some of the salsa, scatter with coriander if using, and serve with extra salsa on the side.

## Baked sesame and honey feta

### Ingredients

- 1 tbsp sesame seeds, lightly toasted
- 200g block feta
- 2 tbsp runny honey, plus extra to finish
- 1 tsp dried or fresh oregano, roughly chopped
- Olive oil, for drizzling
- Warm pitta breads, to serve

### Method

- Preheat the oven to 200°C (180°C fan) or heat the air fryer to 180°C.
- Brush the feta all over with honey, then gently press it into the sesame seeds until evenly coated.
- Place the feta into a small ovenproof or air-fryer-safe dish. Sprinkle over the oregano, add a pinch of salt, and drizzle lightly with olive oil.
- Bake for 15–20 minutes in the oven, or around 15 minutes in the air fryer, until the feta is soft and warmed through.
- Finish with an extra drizzle of honey and serve with warm pitta bread.



# Air Fryer Recipes

## Double chocolate muffins

### Ingredients

- 1 medium egg
- 75g Greek-style natural yoghurt
- 50ml milk
- 75ml vegetable oil
- ½ tsp vanilla extract
- 75g caster sugar
- 100g self-raising flour
- 30g cocoa powder
- pinch of salt
- 100g dark chocolate chips, some reserved
- Sturdy muffin cases

### Method

- Preheat the air-fryer to 160°C.
- Whisk egg, yoghurt, milk, oil, vanilla, and sugar until combined.
- Sift in flour and cocoa, add salt, and most of the chocolate chips. Stir until smooth
- Spoon batter into muffin cases, and top with reserved chocolate chips.
- Place filled muffin cases in the air-fryer basket and bake 12-15 mins until risen and springy.
- Cool on a wire rack for 15 mins before serving.
- Note: Check air-fryer capacity; you may need 2 batches.

## Roast Potatoes

### Ingredients

- 1kg potatoes, peeled and cut
- 2-3 sprigs of fresh rosemary
- 2-3 whole garlic cloves, unpeeled
- 2 tbsps oil of choice
- generous pinch of salt

### Method

- Preheat the air-fryer to 160°C.
- Whisk egg, yoghurt, milk, oil, vanilla, and sugar until combined.
- Sift in flour and cocoa, add salt, and most of the chocolate chips.
- Stir until smooth.
- Spoon batter into cake cases, top with reserved chocolate chips.
- Place filled cake cases in the air-fryer basket,
- Bake 12-15 mins until risen and springy.
- Cool on a wire rack before serving.
- Note: Check air-fryer capacity; may need 2 batches.





## The Microwave

Microwaves heat food directly, rather than warming the surrounding air, which means food cooks much faster and with significantly less energy than in a conventional oven.

A typical microwave uses around 700–1,200 watts (0.7–1.2 kW) while in operation, compared with 2,000–3,000 watts (2–3 kW) for an electric oven. Because cooking times are usually much shorter, the total energy used per meal is often very low, making microwaves a cost-effective option for everyday cooking tasks.

Microwaves are particularly useful for reheating leftovers, cooking single portions, and preparing simple meals quickly.



### Do use the microwave to...

- Reheat leftovers efficiently
- Steam vegetables
- Cook rice, pasta or porridge
- Heat soups, sauces and drinks



### Don't use the microwave to cook:

- Whole raw eggs (they can explode)
- Whole fruits with skins (they may burst)
- Food in non-microwave-safe containers

# Microwave Recipes

## Microwave Biryani

### Ingredients

- knob of butter
- 2 spring onions, finely sliced
- 1 garlic clove, crushed
- 1 seeds from cardamom pod
- Pinch of chilli flakes
- 140g rice
- 400ml vegetable or chicken stock
- ¼ tsp turmeric
- ¼ tsp ground cumin
- pinch of cinnamon
- 1 tbsp raisins
- 200g vegetables of your choice, finely chopped or grated
- small handful of coriander or mint leaves, to serve

### Method

- In a large microwaveable bowl, combine the butter, chopped onions, minced garlic, cardamom and chilli.
- Microwave on High for 30 seconds.
- Add the rice, vegetable stock, turmeric, cumin, cinnamon, and raisins to the bowl.
- Stir well and cover.
- Microwave on High for 2 minutes
- Remove the bowl, give it a good stir, and let it stand for 1 minute.
- Repeat the microwave process 2-3 more times until the rice is just cooked. The last time, add your finely chopped or grated vegetables to the bowl and stir through.
- Garnish with fresh coriander or mint before serving.

## Blueberry Cobbler in a Mug

### Ingredients

- 85g blueberries
- ½ lemon, juiced
- 1 tbsp butter
- 1 tbsp maple syrup or honey
- 4 tbsp self-raising flour
- 1 tbsp milk
- pinch flaked almonds
- scoop vanilla ice cream or cream

### Method

- Put the blueberries in a microwave-safe mug and stir in the lemon juice.
- In another microwave-safe mug, microwave the butter on low until melted.
- Mix in the syrup or honey, then add the flour and milk. Stir until well combined.
- Spoon the cobbler mixture on top of the blueberries and scatter the slivered almonds over the top.
- Microwave on medium for 3 minutes or until the cobbler has puffed up.
- Allow it to cool for 2 minutes.
- Top with a scoop of vanilla ice cream.

# Microwave Recipes



## Sweet & sour chicken

### Ingredients

- 9 tbsp tomato ketchup
- 3 tbsp cider vinegar
- 3–4 tbsp dark brown sugar
- 2 garlic cloves, finely crushed
- 4 skinless, boneless chicken breasts, cut into bite-sized pieces
- 1 small onion, roughly chopped
- 2 red peppers, deseeded and chopped
- 1 x 227g tin pineapple pieces in juice, drained
- 100g sugar snap peas, sliced
- Small handful of roasted cashew nuts (optional)

### Method

- Place the ketchup, vinegar, sugar and garlic into a large microwave-safe dish and stir well to combine. Add the chicken, onion and peppers and mix until everything is well coated in the sauce.
- Microwave uncovered on high for 8 minutes, stirring once halfway through, until the sauce is bubbling and the chicken is mostly cooked.
- Add the pineapple pieces and sugar snap peas, then return the dish to the microwave for a further 3–5 minutes, until the chicken is fully cooked through.
- Allow the dish to stand for a few minutes before serving. Stir through the cashew nuts if using.

## Minestrone

### Ingredients

- 1 red onion, finely chopped
- 1 carrot, peeled and diced
- 2 garlic cloves, crushed
- 1 tbsp olive oil
- 1 x 400g tin chickpeas, rinsed and drained
- 100g dried spaghetti, snapped into short lengths
- 2 tbsp tomato purée
- 1 tsp dried Italian-style herbs
- 1.2 litres hot vegetable stock
- Salt and black pepper, to taste
- Finely grated hard cheese, to serve (optional)

### Method

- Place the onion, carrot, garlic and olive oil into a large microwave-safe bowl. Season lightly, cover, and microwave on high for 3 minutes, until the vegetables begin to soften.
- Stir in the chickpeas, broken pasta, tomato purée and dried herbs. Pour over the hot vegetable stock and mix well.
- Microwave uncovered on high for 10 minutes, stirring once halfway through, until the pasta is cooked and the soup has thickened slightly.
- Taste and adjust seasoning if needed. Serve hot with a sprinkle of grated cheese and freshly ground black pepper.



## The Slow cooker

Slow cookers are one of the most energy-efficient cooking appliances found in many homes. They use gentle, steady heat over a longer period of time, making them ideal for preparing nutritious meals with very low electricity use.

Because slow cookers operate at a low temperature, they are well suited to cooking meals ahead of time. This can reduce the need for peak-time cooking in the evening.

Most slow cookers use a low-wattage heating element, typically around 150–200 watts (0.15–0.2 kW). By comparison, an electric hob or oven can use 2,000–3,000 watts (2–3 kW).



### Do use the slow cooker to cook...

- Stews, soups, chilli, curries
- Tough or cheaper cuts of meat
- Beans, lentils and pulses
- Batch cooking for multiple meals



### Don't use the slow cooker to cook...

- Delicate seafood
- Leafy green vegetables
- Quick-cooking vegetables
- Dairy added at the start of cooking

# Slow Cooker Recipes



## Beef Stew

### Ingredients

- 1 onion, chopped
- 2 celery sticks, finely chopped
- 2 tbsp oil
- 3 carrots, chopped
- 2 bay leaves
- ½ pack thyme
- 2 tbsp tomato purée
- 2 tbsp Worcestershire sauce
- 2 beef stock cubes or stock pots
- 900g beef for braising
- 2 tsp cornflour
- ½ small bunch parsley, chopped

### Method

- Sauté onion, celery, carrots, bay, and thyme in 1 tbsp oil.
- Add purée, Worcestershire sauce, water, and stock cubes. Season with pepper.
- Transfer to a slow cooker.
- Brown beef in batches in remaining oil, then add to the slow cooker.
- Cook on low for 8-10 hrs or high for 4 hrs.
- To thicken, mix cornflour with a splash of cold water. Stir in
- Cook on high for 30 mins.
- Add parsley and season.
- Serve with mash, if desired.

## Homemade Yoghurt

### Ingredients

- 2l whole milk
- 100ml live yogurt, either shop bought or from a previous homemade batch

You'll also need a food-grade thermometer

### Method

- Heat the milk in the slow cooker to 82°C (this will take several hours).
- Turn off the slow cooker and allow the milk to cool to 43°C (2-3 hours).
- Add the live yoghurt to the slow cooker and stir well.
- Cover and wrap in the slow cooker in a towel and let it sit undisturbed for 9-12 hrs.
- Store in the fridge for up to 2 weeks.



## The Pressure cooker

Pressure cookers are a highly energy-efficient way to prepare meals quickly. By cooking food in a sealed pot under pressure, they raise the boiling point of water, allowing food to cook much faster than on a hob or in an oven.

Although pressure cookers draw a higher power level for a short time (typically 1–1.5 kW), the significantly reduced cooking time means the total energy used is often lower than traditional methods. Meals that might take an hour on the hob can be ready in 10–20 minutes.

Pressure cookers are ideal for time-poor households and for cooking foods that usually require long simmering. They are particularly effective for batch cooking, helping to save both energy and time across the week.



### Do use the slow cooker to cook...

- Soups, stews and casseroles
- Beans, lentils and pulses
- Tough or cheaper cuts of meat
- One-pot meals and batch cooking



### Don't use the slow cooker to cook...

- Delicate fish or seafood
- Leafy green vegetables
- Recipes that require frequent stirring

# Pressure Cooker Recipes



## Lentil Bolognese

### Ingredients

- 2 tbsp olive oil
- 1 onion, finely chopped
- 1 celery stick & 2 carrots, finely chopped
- 1 cup mushrooms, finely chopped
- 4 garlic cloves, crushed
- 2 tbsp tomato purée
- 80ml red wine
- 1 cup dried lentils, rinsed
- 1 x 400g tin crushed tomatoes
- 180ml water
- 1 bay leaf
- 1 tsp dried thyme
- 2 tsp dried oregano
- Pinch chilli flakes
- 1 tbsp balsamic vinegar
- Salt & black pepper
- Cooked pasta, to serve

### Method

- Using the sauté function, heat the oil and soften the onion, celery and carrots for a few minutes. Add the mushrooms and garlic and cook until softened. Stir in the tomato purée and cook briefly, then add the wine and let it reduce slightly.
- Add the lentils, tomatoes, water, herbs and bay leaf. Seal the lid and cook at pressure for 20 minutes, then allow the pressure to release naturally for 10 minutes.
- Stir in the balsamic vinegar, adjust seasoning, and serve over pasta with grated cheese if desired.

## Sausage and Lentil Casserole

### Ingredients

- 1 tbsp vegetable oil
- 1 large onion, chopped
- 2 carrots, diced
- 1 celery stick, diced
- 12 pork sausages
- 100ml white wine
- 1 tsp dried mixed herbs
- 1 red pepper, chopped
- 2 tbsp tomato purée
- 250g green or brown lentils
- 500ml vegetable stock
- Fresh parsley, to finish

### Method

- Heat a little oil in the pressure cooker and soften the onion, carrot and celery for a few minutes. Remove and set aside.
- Brown the sausages, then deglaze the pan with the wine, scraping up any browned bits.
- Stir in the herbs, red pepper, tomato purée and lentils. Return the vegetables and sausages to the pot and pour over the stock.
- Lock the lid, bring to pressure, then cook for 9 minutes. Allow the pressure to release naturally for 10 minutes before opening.
- Sprinkle with parsley and serve



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