

COOKING SKILLS

Cooking Skills: Bread 2

Pre-ferments, sourdough, enriched doughs, pizza, laminated breads and other grains

8 Chapters | Philip Osztromok | Generated with Claude

COOKING SKILLS: BREAD 2

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Cooking Skills: Bread 2

Chapter 1 · Pre-ferments

SKILL GOAL

Make and use a pre-ferment to give a loaf more flavour, a better crust and a longer life.

Shopping list for this chapter

The basics

Flavour in bread comes from time. A **pre-ferment** is a small portion of the dough (a bit of the flour and water with a tiny amount of yeast) that you make the day before and let ferment slowly. It adds depth of flavour, a better crust and a loaf that stays fresh longer, without any extra effort on baking day.



Figure 1. A poolish day. The pre-ferment does the slow work overnight, and the dough itself takes only a few hours the next day.

The three pre-ferments in this chapter

PRE-FERMENT	WHAT IT IS	HYDRATION	TIME	FLAVOUR
Old dough	A piece of a previous dough	As the original	Already fermented; use within 2 days	Mild, slightly sour
Poolish	Equal weights flour and water, pinch of yeast	100%	8 to 14 hours at cool room temperature	Sweet, creamy, open crumb
Biga	Stiff mix of flour, about half its weight in water, a little yeast	About 50%	12 to 16 hours	Chewy, nutty

Why they work

- **Flavour:** a long slow ferment makes organic acids and aroma compounds that a quick rise can't.
- **Crust and crumb:** the enzymes in a pre-ferment break starch into sugars that brown better, and the dough is stretchier.
- **Keeping:** the acids in a pre-ferment slow staling, so the loaf keeps a little longer.
- **Little extra work:** mixing a poolish takes 5 minutes.

Using a pre-ferment

1. **Count it in the recipe:** the flour and water in the pre-ferment are part of the total, so reduce the main dough to match.
2. **Judge it by looks, not just time:** a ripe poolish is bubbly, domed and just starting to sink back, smells of sweet yeast and beer, and may be a bit sour.
3. **Mix it with the dough ingredients** (the poolish into the water first, biga torn in pieces).
4. **Reduce the yeast** in the main dough, because the pre-ferment brings its own.

> **PRE-FERMENT SAFETY**
>
> **Pre-ferments are safe to leave out overnight** because they are only flour, water and a pinch of yeast: cover the bowl with a plate or a lid (not tight) and keep it somewhere cool to normal room temperature. Don't taste the raw mixture, and wash your hands and bowl after handling it. If a pre-ferment smells of anything other than yeast, beer or mild sourness, or has mould, throw it away and start again.

Try it

LEVEL 1 · START HERE

A loaf with old dough

2 hours 30 minutes | 1 loaf (12 slices) | using a little leftover dough to deepen flavour

The simplest pre-ferment is a piece of dough saved from the last bake. It is already fermented, so it adds flavour and a slightly better crust. Tear it into small pieces so it mixes in.

INGREDIENTS (12 PORTIONS)

150 g	old dough (a plain dough made with flour, water, yeast and salt, from Cooking Skills: Bread 1, chapter 1 or 2)
400 g	strong white bread flour
1 tsp	fast-action dried yeast (about 1 tsp)
8 g	fine salt
280 ml	lukewarm water

1. Tear the old dough into small pieces and put it in a bowl with the water. Squeeze it with your fingers until it breaks down into a milky mixture.
2. Add the flour, yeast and salt and mix to a dough. Knead for 8 to 10 minutes until smooth and elastic.
3. Prove in an oiled bowl for about **1 hour**, until doubled. Shape into a loaf and place in an oiled 900 g tin. Prove for 30 to 45 minutes.
4. Bake at 220°C (200°C fan) for **30 to 35 minutes** until golden and hollow underneath. Cool on a rack. Save 150 g of your next dough for the next loaf.

OLD DOUGH

Keeping old dough: keep a piece of plain dough (flour, water, yeast and salt only) covered in the fridge for up to about 2 days, or freeze it in a bag for a few weeks and defrost it in the fridge. Don't use dough that has milk, egg or other perishable fillings.

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only

> by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

LEVEL 2 · WET PRE-FERMENT

A poolish white loaf

10 minutes the night before; 3 hours the next day | 1 loaf (12 slices) | mixing a poolish and using it

A poolish is equal weights of flour and water with a pinch of yeast, left overnight until it is bubbly and smells slightly sweet and yeasty. It gives a more flavourful, open-crumbed loaf with a crisper crust.

INGREDIENTS (12 PORTIONS)

200 g	strong white bread flour (for the poolish)
200 ml	cool water (for the poolish)
a pinch	fast-action dried yeast (a good pinch, for the poolish)
300 g	strong white bread flour (for the dough)
8 g	fine salt
130 ml	lukewarm water
½ tsp	fast-action dried yeast (for the dough)

1. **The night before:** in a bowl, stir the 200 g flour, 200 ml water and pinch of yeast to a thick batter. Cover and leave at cool room temperature for **8 to 14 hours**, until it is bubbly, domed and just beginning to sink back.
2. Add the dough flour, salt, lukewarm water and yeast to the poolish and mix to a dough. Knead for 8 minutes.
3. Prove for **1 hour to 1 hour 30 minutes**, until nearly doubled. Shape and place in a tin or on a tray. Prove for 45 minutes.
4. Bake at 220°C (200°C fan) for **30 to 35 minutes**. Cool on a rack.

PRE-FERMENT SAFETY

Pre-ferments are safe to leave out overnight because they are only flour, water and a pinch of yeast: cover the bowl with a plate or a lid (not tight) and keep it somewhere cool to normal room temperature. Don't taste the raw mixture, and wash your hands and bowl after handling it.

> If a pre-ferment smells of anything other than yeast, beer or mild sourness, or has mould, throw it away and start again.

LEVEL 2 · STIFF PRE-FERMENT

A biga loaf

10 minutes the day before; 4 hours the next day | 2 rustic loaves | using a stiff Italian pre-ferment

A biga is a stiff pre-ferment (about 50% water). It ferments more slowly than a poolish and gives a chewy crumb and a mild, nutty flavour. It is the traditional start for ciabatta.

INGREDIENTS (8 PORTIONS)

250 g	strong white bread flour (for the biga)
125 ml	cool water (for the biga)
¼ tsp	fast-action dried yeast (for the biga)
250 g	strong white bread flour (for the dough)
10 g	fine salt
250 ml	lukewarm water
¼ tsp	fast-action dried yeast (for the dough)

1. **The day before:** mix the biga flour, water and yeast to a stiff, shaggy dough (it won't be smooth). Cover and leave at cool room temperature for **12 to 16 hours**, until it has risen, has a domed top and smells sweet and a little sour.
2. Tear the biga into pieces in a large bowl, add the dough flour, salt, water and yeast and mix. Rest for 30 minutes, then stretch and fold 3 times over the next 1 hour 30 minutes.
3. Flour the surface generously, tip the dough out gently and cut into 2 pieces. Stretch each into a rough oblong, place on floured baking paper and rest for 30 minutes.
4. Bake at 230°C (210°C fan) on a hot tray with a roasting tin of boiling water on the bottom shelf for **22 to 25 minutes**. Cool on a rack.

PRE-FERMENT AND STEAM

Pre-ferments are safe to leave out overnight because they are only flour, water and a pinch of yeast: cover the bowl with a plate or a lid (not tight) and keep it somewhere cool to normal room temperature. Don't taste the raw mixture, and wash your hands and bowl after handling it. If a pre-ferment smells of anything other than yeast, beer or mild sourness, or has mould, throw it away and start again.

Hot ovens, trays and steam: use dry oven gloves, pull the shelf out rather than reaching in,

> and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

LEVEL 3 · SHAPING

Poolish baguette-style sticks

10 minutes the night before; 3 hours 30 minutes the next day | 3 sticks

shaping a long loaf from a pre-ferment dough

Combine the poolish with the shaping skills from Cooking Skills: Bread 1, chapter 3, and you get a long, crisp-crusted loaf with a lovely open crumb.

INGREDIENTS (3 PORTIONS)

150 g	strong white bread flour (for the poolish)
150 ml	cool water (for the poolish)
a pinch	fast-action dried yeast (a pinch, for the poolish)
350 g	strong white bread flour (for the dough)
10 g	fine salt
190 ml	lukewarm water
½ tsp	fast-action dried yeast (for the dough)
1 tbsp	semolina or flour for the tray

1. **The night before:** mix the poolish (150 g flour, 150 ml water, a pinch of yeast), cover and leave for 10 to 14 hours.
2. Mix the poolish with the dough flour, salt, water and yeast. Knead for 8 minutes. Prove for about 1 hour.
3. Divide into 3, shape each into a stick about 30 cm long (see Cooking Skills: Bread 1, chapter 3) and place on a floured or semolina-dusted tray. Prove for 30 minutes.
4. Slash each stick. Bake at 230°C (210°C fan) with a roasting tin of boiling water for **20 to 25 minutes**, until deep golden. Cool on a rack. Best the same day.

> **PRE-FERMENT, BLADES AND STEAM**
>
> **Pre-ferments are safe to leave out overnight** because they are only flour, water and a pinch of yeast: cover the bowl with a plate or a lid (not tight) and keep it somewhere cool to normal room temperature. Don't taste the raw mixture, and wash your hands and bowl after handling it. If a pre-ferment smells of anything other than yeast, beer or mild sourness, or has mould, throw it away and start again.

> **Hot ovens, trays and steam:** use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Experiments

EXPERIMENT

With or without

The pre-ferment effect.

1. Make the Cooking Skills: Bread 1, chapter 1 white tin loaf and the poolish white loaf on the same day, same flour, same oven. Taste both after cooling.

Look for: The poolish loaf has more flavour, a more open crumb and a crisper crust. The plain loaf is milder and more even.

EXPERIMENT

Poolish age

Young, ripe or old.

1. Make three small poolishes (50 g flour, 50 ml water, a tiny pinch of yeast) and use one after 4 hours, one after 12 and one after 24 hours at room temperature, each in a small loaf.

Look for: The young poolish adds little flavour. The ripe one is best. The 24-hour one is sour and may make a slack dough, because the gluten has been broken down.

EXPERIMENT

Poolish or biga

Wet or stiff.

1. Make the poolish loaf and the biga loaf with the same total flour and compare crumb.

Look for: The poolish gives a softer, more open crumb and the biga a chewier, slightly denser one.

EXPERIMENT

Fridge or room

Slowing the pre-ferment.

1. Keep one poolish at room temperature and another in the fridge overnight, then use them in two loaves.

Look for: The fridge poolish is less bubbly and milder; it rises less in the loaf, so give it extra time. Pre-ferments in the fridge are good for a weekday.

Tasting notes

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Loaf with old dough				
Poolish white loaf				
Biga loaf				
Poolish sticks				
With or without				
Poolish age				
Poolish or biga				
Fridge or room				

Troubleshooting

PROBLEM	LIKELY CAUSE	WHAT TO DO
Poolish hasn't bubbled	Too cold, or old yeast	Give it longer somewhere warmer; check the yeast date
Poolish collapsed and smells sharp	Left too long	Use it sooner next time; use a little less yeast; keep it cooler
Dough too slack	Pre-ferment over-ripe, or water not reduced	Count the pre-ferment water; use a younger one
Loaf too sour	Over-long ferment	Shorten or cool the pre-ferment
Dense loaf	Not enough rise after mixing	Give the dough its full rise; use the poke test
No difference in flavour	Pre-ferment too young or too small	Ferment for 12 hours; use 30 to 40% of the flour in it

FLOUR, HEAT AND ALLERGENS

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

Hot ovens, trays and steam: use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Allergens: bread contains wheat (gluten). Check the recipe for milk, butter, egg, sesame and other seeds, and nuts, and label them if you share the bread. Gluten-free bread uses different flours and methods and isn't covered in this course.

CHECKPOINT: CAN YOU DO THIS NOW?

☐ I can make and judge a poolish and a biga.

☐ I can count the flour and water in a pre-ferment as part of the recipe.

☐ I can use old dough to improve a loaf.

☐ I know how to slow a pre-ferment in the fridge.

☐ I can taste the difference a pre-ferment makes.

NEXT CHAPTER

Cooking Skills: Bread 2, chapter 2 is Making a Sourdough Starter: growing, feeding and keeping your own wild yeast.

Cooking Skills: Bread 2

Chapter 2 · Making a Sourdough Starter

SKILL GOAL

Make a wild-yeast starter, keep it healthy and know when it is ready to bake with.

Shopping list for this chapter

The basics

A sourdough starter is a **living mixture of flour and water**, home to wild yeasts and friendly bacteria. Instead of packet yeast, you use a spoonful of starter to raise your bread. It also gives sourdough its tang. Making one takes about a week or two of daily feeding, and it can then live for years.

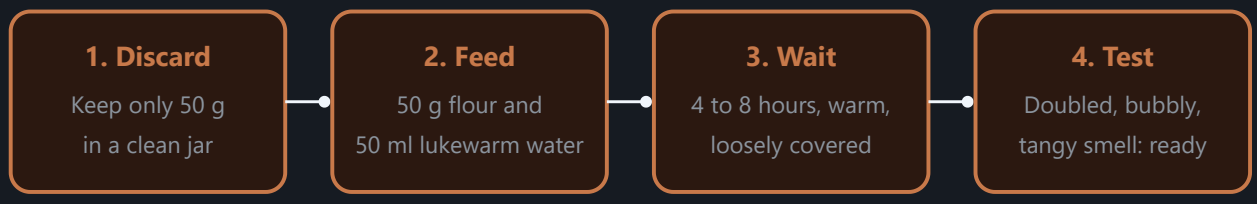


Figure 2. The feeding cycle. Repeat it once a day while the starter is young, and before every bake.

What you need

- A **clean glass jar** (about 500 ml) so you can see the bubbles and mark the level.
- **Flour:** wholemeal or rye to start (more wild yeast), then strong white.
- **Lukewarm water.** If your tap water is heavily chlorinated and the starter is slow, try water that has been left out for an hour.
- **A warm spot:** around 20 to 25°C works best. A cold kitchen means a slower starter.
- **Scales,** so you can feed in equal weights.

Feeding ratios

RATIO (STARTER : FLOUR : WATER)	RISES AND PEAKS IN	USE
1 : 1 : 1 (50 g : 50 g : 50 ml)	About 4 to 8 hours (warm room)	Standard daily feed
1 : 2 : 2	About 8 to 12 hours	Overnight at room temperature, or a lazier schedule
1 : 5 : 5	About 12 hours or more	A long gap, or a hot kitchen

These are guides: starters differ. Watch your own: when it has doubled, is domed and starts to sink, it has peaked and is hungry.

Is it ready?

- **It doubles** within 4 to 8 hours of a feed, repeatedly, for several days.
- **It is bubbly all through,** with a domed or slightly wrinkled top.
- **It smells pleasantly tangy,** not rotten.
- **The float test** (a spoonful dropped into water floats) is often quoted, but it isn't reliable: a starter that has begun to sink can still raise bread. Trust the doubling.

> **STARTER SAFETY**
>
> **Is my starter safe?** A healthy starter smells tangy, yeasty or a little like vinegar, nail polish remover or beer, and may have a clear or grey liquid on top (often called hooch), which is harmless and can be stirred in or poured off. **Fuzzy mould (white, green, blue or black) or pink or orange streaks mean throw it away** and start again. Use clean jars and utensils and water that is safe to drink. This is general baking guidance: I haven't found an official UK rule on starters.
>
> **Sourdough is not gluten-free.** Fermenting breaks down some gluten, but sourdough made from wheat, rye or spelt is not safe for people with coeliac disease.

Try it

LEVEL 1 · START HERE

A starter, day by day

5 minutes a day for 7 to 10 days | 1 starter | growing a wild-yeast culture from flour and water

A sourdough starter is flour and water in which wild yeasts and bacteria live. You make it by feeding it daily until it is strong enough to raise bread. It takes patience, and it will look uninteresting for the first few days.

INGREDIENTS (1 PORTION)

50 g	wholemeal flour (wheat or rye), for day 1
50 ml	lukewarm water, for day 1
50 g per feed	strong white bread flour for each feed from day 3
50 ml per feed	lukewarm water for each feed from day 3
1	clean glass jar (about 500 ml) and a loose lid or a cloth and rubber band

1. **Day 1:** in a clean jar, stir 50 g wholemeal flour and 50 ml lukewarm water to a thick paste. Cover loosely (not airtight) and leave at room temperature (around 20 to 25°C).
2. **Day 2:** stir it and leave it. There may be a few bubbles or none, and that is normal.
3. **Day 3:** discard all but 50 g of the mixture. Feed with 50 g strong white flour and 50 ml lukewarm water, stir well and cover loosely.
4. **Days 4 to 7 (or longer):** repeat the discard-and-feed every 24 hours. Mark the level with a rubber band on the jar to see how much it rises. It may smell odd and go quiet around day 4 or 5, then wake up again.
5. **When it is ready** (usually day 7 to 14): it doubles in size within 4 to 8 hours of a feed, is full of bubbles, has a domed top and smells pleasantly tangy. Then you can bake with it.

> **STARTER SAFETY**
>
> **Is my starter safe?** A healthy starter smells tangy, yeasty or a little like vinegar, nail polish remover or beer, and may have a clear or grey liquid on top (often called hooch), which is harmless and can be stirred in or poured off. **Fuzzy mould (white, green, blue or black) or pink or orange streaks mean throw it away** and start again. Use clean jars and utensils and

water that is safe to drink. This is general baking guidance: I haven't found an official UK rule on starters.

LEVEL 1 · ROUTINE

Keeping a starter: daily or weekly

5 minutes | 1 starter | choosing a feeding routine to match how often you bake

A starter needs regular feeding. Choose a routine to suit how often you bake: daily at room temperature, or weekly in the fridge.

INGREDIENTS (1 PORTION)

1	ripe starter, fed 4 to 8 hours ago
50 g	strong white flour per feed
50 ml	lukewarm water per feed
1	clean jar with a loose lid

1. **If you bake every day or two:** keep the starter at room temperature and feed it every 12 to 24 hours (discard to 50 g, then feed 50 g flour and 50 ml water).
2. **If you bake once a week:** after a feed, let the starter sit at room temperature for 1 to 2 hours until it begins to bubble, then put it in the fridge. Feed it once a week: take it out, discard all but 50 g, feed it and return it to the fridge after an hour or two.
3. **Before baking:** take the starter out of the fridge and feed it once or twice at room temperature, 4 to 12 hours apart, until it doubles within 4 to 8 hours. Use it when it is at its peak (domed and bubbly), before it sinks.
4. **Stir in or pour off** any liquid on top. If the starter has been neglected for a few weeks, stir, discard most of it and feed twice before using it.

DON'T THROW ALL THE DISCARD AWAY

The discard is perfectly good to cook with (see the next two recipes), and 50 g of starter feeds well on 50 g of flour. You can also keep the amount smaller (for example 20 g starter, 40 g flour and 40 ml water per feed) so less is wasted.

LEVEL 2 · USE THE DISCARD

Sourdough discard pancakes

20 minutes | 6 pancakes | using discard instead of wasting it

Discard adds a gentle tang and tenderness to batter. These pancakes are quick, forgiving and a good way to use up what you throw away.

INGREDIENTS (3 PORTIONS)

100 g	sourdough discard (unfed starter)
100 g	plain flour
1	Lion-marked egg
150 ml	milk
1 tsp	baking powder
1 tbsp	sugar
1 pinch	salt
1 tbsp	butter or oil for the pan

1. Whisk the discard, egg and milk together in a bowl. Stir in the flour, baking powder, sugar and salt until just combined (a few lumps are fine).
2. Heat a little butter in a frying pan over a medium heat. Pour in a ladleful of batter and cook for about **2 minutes**, until bubbles form on the top and the underside is golden.
3. Flip and cook for another 1 to 2 minutes until cooked through. Keep warm and repeat.

> **HOT PAN, EGG AND ALLERGENS**
>
> **Hot dry pans:** a pan hot enough to cook flatbread is hot enough to burn. Never leave it unattended, keep the handle turned in, and use a dry cloth to lift lids. Flatbreads puff with hot steam inside, so open them away from your face.
>
> **Allergens:** wheat, egg and milk. Wash your hands after handling raw egg.

LEVEL 2 · CRACKERS

Sourdough discard crackers

50 minutes | about 30 crackers | rolling thin and baking until crisp

Discard makes excellent crackers: crisp, a little tangy and good with cheese (see Cooking Skills: Cheese and Party Snacks 1, chapter 2). Roll them very thin so they snap.

INGREDIENTS (8 PORTIONS)

100 g	sourdough discard
60 g	plain flour, plus extra for dusting
40 g	butter, melted, or 3 tbsp olive oil
½ tsp	fine salt
1 tsp	chopped rosemary, or seeds (optional)
1 pinch	flaky salt for the top

1. Heat the oven to 180°C (160°C fan). Line two baking trays with baking paper.
2. Mix the discard, flour, melted butter, salt and rosemary to a soft dough. Knead for 1 minute.
3. Roll out very thin (about 2 mm) on a lightly floured surface between sheets of baking paper. Cut into squares, prick with a fork and sprinkle with flaky salt.
4. Bake for **15 to 20 minutes**, until golden and crisp, turning the tray halfway. Cool on a rack. Go for gold, not dark brown, because very brown starchy foods contain more acrylamide.

HOT TRAYS AND ALLERGENS

Hot ovens, trays and steam: use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Allergens: bread contains wheat (gluten). Check the recipe for milk, butter, egg, sesame and

> other seeds, and nuts, and label them if you share the bread. Gluten-free bread uses different flours and methods and isn't covered in this course.

Experiments

EXPERIMENT

Flour type

What does the starter prefer.

1. Start three small starters (20 g flour and 20 ml water each) with wholemeal, rye and white flour, side by side. Feed each daily and watch which is bubbly first.

Look for: Wholemeal and rye starters usually wake up sooner than white because the bran carries more wild yeast and nutrients.

EXPERIMENT

Feeding ratio

A short or a long feed.

1. Feed one jar at 1 : 1 : 1 and another at 1 : 5 : 5. Mark the level and note when each peaks.

Look for: The 1 : 1 : 1 starter peaks sooner and sinks sooner. The 1 : 5 : 5 starter peaks later and holds its peak longer.

EXPERIMENT

Temperature

Warm or cool.

1. Keep one fed starter in a warm spot (about 25°C, for example near the oven) and another in a cool room or the fridge door. Compare after 6 hours.

Look for: The warm starter is bubbling and risen; the cool one is slow. Warm speeds fermentation and cold slows it.

EXPERIMENT

Doubling or floating

How to judge ripeness.

1. Drop a spoonful of starter into water at its peak, an hour after the peak and 3 hours after. Note whether it floats.

Look for: Floating often fails once the starter has begun to sink, even though it is still active. This is why the float test shouldn't be your only judge.

Tasting notes

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Day-by-day starter				
Feeding routine				
Discard pancakes				
Discard crackers				
Flour type				
Feeding ratio				
Temperature				
Float test				

Troubleshooting

PROBLEM	LIKELY CAUSE	WHAT TO DO
No bubbles after 5 days	Too cold or too little flour	Move somewhere warmer (about 24°C); use wholemeal or rye; keep feeding
Bubbled, then went quiet on day 4 or 5	A normal lull as the bacteria change	Keep feeding daily; it usually revives
Liquid on top (hooch)	Hungry starter	Stir it in or pour it off; feed more often or use a bigger feed
Smells of nail polish remover	Very hungry	Discard and feed; feed more often
Mould or pink/orange streaks	Contamination	Throw it away and start again with a clean jar
Rises then sinks quickly	Fed too little or too warm	Increase the feed ratio; use it at its peak

SAFETY AND ALLERGENS

Is my starter safe? A healthy starter smells tangy, yeasty or a little like vinegar, nail polish remover or beer, and may have a clear or grey liquid on top (often called hooch), which is harmless and can be stirred in or poured off. **Fuzzy mould (white, green, blue or black) or pink or orange streaks mean throw it away** and start again. Use clean jars and utensils and water that is safe to drink. This is general baking guidance: I haven't found an official UK rule on starters.

Sourdough is not gluten-free. Fermenting breaks down some gluten, but sourdough made from wheat, rye or spelt is not safe for people with coeliac disease.

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

Hot dry pans: a pan hot enough to cook flatbread is hot enough to burn. Never leave it unattended, keep the handle turned in, and use a dry cloth to lift lids. Flatbreads puff with hot steam inside, so open them away from your face.

CHECKPOINT: CAN YOU DO THIS NOW?

- ☐ I can make a starter from flour and water.
- ☐ I know what a healthy starter looks and smells like, and when to throw it away.
- ☐ I can feed it daily or weekly.
- ☐ I can tell when it is ripe to bake with.
- ☐ I use the discard rather than waste it.

NEXT CHAPTER

Cooking Skills: Bread 2, chapter 3 is Your First Sourdough: mixing, folding, shaping and baking a loaf with your starter.

Cooking Skills: Bread 2

Chapter 3 · Your First Sourdough

SKILL GOAL

Bake sourdough with your own starter: fold, rise, shape, proof and bake, judging by the dough.

Shopping list for this chapter

The basics

Sourdough uses your starter instead of packet yeast. The method is slow rather than difficult: you mix gently, **fold the dough at intervals** to build strength, let it rise until it feels airy, shape it and bake it hot. Most of the time is waiting.

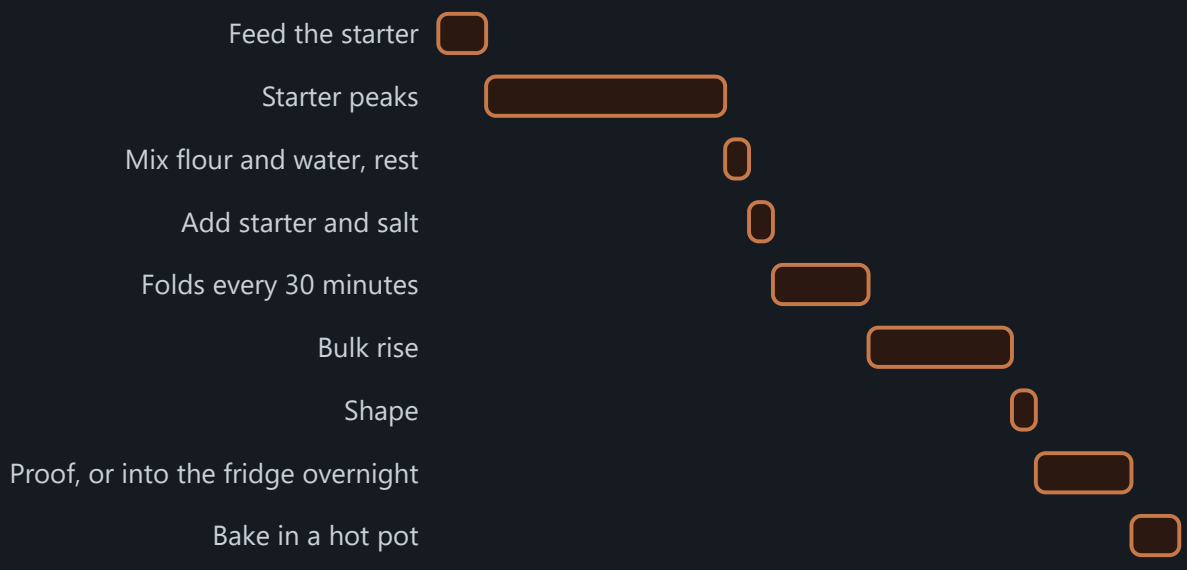


Figure 3. A sourdough timeline. The hours move with your kitchen's temperature: watch the dough, not the clock.

The sourdough steps

1. **Feed the starter** and use it at its peak.
2. **Autolyse:** mix just the flour and water and rest 30 minutes.
3. **Add the starter and salt** and mix well.
4. **Fold** every 30 minutes for 2 hours.
5. **Bulk rise** until grown by about half, jiggly and domed.
6. **Shape** and put in a floured bowl or basket.
7. **Proof** at room temperature for 1 to 2 hours, or in the fridge overnight.
8. **Bake** hot, in a lidded pot or with steam.

Reading the dough

STAGE	IT LOOKS AND FEELS LIKE
Just mixed	Shaggy and sticky
After folds	Smoother, holds its shape a little, stretchier
Bulk risen	About 50% bigger, domed top, bubbles at the edges, wobbles like jelly
Properly proofed	A floured finger dent springs back slowly
Over-proofed	Slack, flat, sticky and sour, dent stays

Why not just count the hours?

Warm kitchens speed everything up and cold ones slow it down. A starter in summer can take half the time it takes in winter. **Time is a guide: the dough tells you.** Write down the room temperature and how long each stage took, so that next time you know.

POT AND FRIDGE DOUGH

A pot at 240°C: a preheated cast-iron or ceramic lidded pot is extremely hot, and the lid knob and rim burn instantly. Use thick, dry oven gloves, lower the dough in on baking paper, lift the lid away from your face (steam), and leave the pot on a heatproof surface to cool. Check that your pot and its lid knob are safe to 240°C.

Dough in the fridge: shaped sourdough can prove in the fridge for 8 to 14 hours. Cover it well so the surface doesn't dry out, bake it straight from the fridge, and don't taste raw dough.

Try it

LEVEL 1 · START HERE

A simple sourdough loaf

About 14 hours, mostly waiting (45 minutes of work) | 1 loaf (12 slices)

mixing, folding, shaping and baking a sourdough

Sourdough is bread with a slower clock. The steps are the same as Cooking Skills: Bread 1: mix, build the gluten, rise, shape, rise, bake. Fold the dough gently rather than kneading it.

INGREDIENTS (12 PORTIONS)

100 g	ripe starter, fed 4 to 8 hours ago and at its peak
450 g	strong white bread flour
50 g	wholemeal flour
325 ml	lukewarm water
10 g	fine salt
1 tbsp	rice flour or flour for the banneton or bowl

1. **Feed the starter** the evening before or in the morning, and use it at its peak (domed and bubbly, 4 to 8 hours later).
2. **Autolyse:** mix the flours and water until no dry flour is left, cover and rest for 30 minutes. This lets the flour soak and the gluten start to form.
3. Add the starter and salt, and squeeze them in with wet hands until they are mixed through. Cover.
4. **Fold:** every 30 minutes for the next 2 hours (4 times), wet your hand, stretch one side of the dough up and fold it over the middle, turn the bowl and repeat 4 times.
5. **Bulk rise:** leave the dough covered for another 2 to 4 hours (depending on the room temperature) until it has grown by about half, feels airy and jiggles when you shake the bowl. It will not double like a yeast dough.
6. **Shape** into a tight ball (see Cooking Skills: Bread 1, chapter 3) and place seam side up in a floured bowl or basket. Cover and either prove for 1 to 2 hours or put it in the fridge for **8 to 14 hours**.
7. Heat the oven to 240°C (220°C fan) with a lidded pot inside for 30 minutes. Turn the dough onto baking paper, score it, lower it into the pot and bake with the lid on for **20**

minutes.

8. Remove the lid, reduce to 220°C (200°C fan) and bake for **20 minutes** until deep golden. Cool on a rack for at least 1 hour.

> **POT, FLOUR AND FRIDGE**
>
> **A pot at 240°C:** a preheated cast-iron or ceramic lidded pot is extremely hot, and the lid knob and rim burn instantly. Use thick, dry oven gloves, lower the dough in on baking paper, lift the lid away from your face (steam), and leave the pot on a heatproof surface to cool. Check that your pot and its lid knob are safe to 240°C.
>
> **Dough in the fridge:** shaped sourdough can prove in the fridge for 8 to 14 hours. Cover it well so the surface doesn't dry out, bake it straight from the fridge, and don't taste raw dough.
>
> **Raw flour:** flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

LEVEL 2 · TIN

A sourdough tin loaf

About 12 hours (40 minutes of work) | 1 loaf (12 slices) | using a tin to support a wetter dough

A tin makes sourdough easier: no shaping on a flat tray, a regular slice for sandwiches and no pot needed. A good place to start while you learn to read the dough.

INGREDIENTS (12 PORTIONS)

100 g	ripe starter, at its peak
500 g	strong white bread flour
350 ml	lukewarm water
10 g	fine salt
1 tbsp	oil for the tin

1. Mix the flour and water and rest for 30 minutes. Add the starter and salt and mix. Do 4 sets of folds, 30 minutes apart, then leave for the bulk rise for 2 to 4 hours, until grown by about half.
2. Shape into a loaf (flatten, fold, roll up) and place in an oiled 900 g tin, seam side down. Cover and prove for **1 to 2 hours**, or chill overnight, until the dough has risen just above the rim.
3. Heat the oven to 230°C (210°C fan). Bake for 20 minutes, then reduce to 210°C (190°C fan) and bake for another **20 to 25 minutes**, until deep golden and hollow underneath.
4. Cool on a rack for at least 1 hour before slicing.

> **FLOUR AND HEAT**
>
> **Raw flour:** flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.
>
> **Hot ovens, trays and steam:** use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

LEVEL 2 · SMALL

Sourdough rolls

About 8 hours (40 minutes of work) | 8 rolls | dividing and shaping sourdough

Rolls prove and bake faster than a loaf, and they are great for practising shaping. Weigh the pieces.

INGREDIENTS (8 PORTIONS)

100 g	ripe starter, at its peak
400 g	strong white bread flour
270 ml	lukewarm water
8 g	fine salt
25 g	softened butter or olive oil

1. Mix the flour and water, rest for 30 minutes, then add the starter, salt and butter and mix. Fold 4 times at 30-minute intervals, then leave for the bulk rise until grown by half (2 to 4 hours).
2. Divide into 8 equal pieces (about 100 g each) and shape each into a tight ball. Place on a lined tray, 3 cm apart, cover and prove for **1 hour 30 minutes** (or chill overnight).
3. Heat the oven to 230°C (210°C fan). Score the tops and bake for **20 to 25 minutes**, until deep golden and hollow underneath. Cool on a rack.

> **FLOUR AND HEAT**
>
> **Raw flour:** flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.
>
> **Hot ovens, trays and steam:** use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

LEVEL 3 · SEEDS

A seeded sourdough

About 14 hours (45 minutes of work) | 1 loaf (12 slices) | adding soaked seeds to sourdough

Soaking the seeds keeps them from drawing water out of the dough. Fold them in at the second set of folds so they spread evenly.

INGREDIENTS (12 PORTIONS)

100 g	ripe starter, at its peak
400 g	strong white bread flour
100 g	wholemeal flour
60 g	mixed seeds (sunflower, pumpkin, linseed)
60 ml	boiling water for soaking the seeds
340 ml	lukewarm water
10 g	fine salt

1. Soak the seeds in the boiling water and leave to cool. Mix the flours with the lukewarm water and rest for 30 minutes. Add the starter and salt.
2. At the second set of folds, add the soaked seeds (and their water) and fold them through. Continue folding every 30 minutes for 2 hours, then bulk rise for 2 to 4 hours.
3. Shape, place in a floured bowl or basket and chill overnight (8 to 14 hours).
4. Bake in a hot lidded pot as for the simple sourdough: 240°C (220°C fan) for 20 minutes with the lid on, then 220°C (200°C fan) for 20 to 25 minutes lid off.

POT, SEEDS AND ALLERGENS

A pot at 240°C: a preheated cast-iron or ceramic lidded pot is extremely hot, and the lid knob and rim burn instantly. Use thick, dry oven gloves, lower the dough in on baking paper, lift the lid away from your face (steam), and leave the pot on a heatproof surface to cool. Check that your pot and its lid knob are safe to 240°C.

Allergens: bread contains wheat (gluten). Check the recipe for milk, butter, egg, sesame and other seeds, and nuts, and label them if you share the bread. Gluten-free bread uses different

> flours and methods and isn't covered in this course. Seeds, especially sesame, are a common allergen.

Experiments

EXPERIMENT

Starter strength

Peak, past peak or unfed.

1. Make three small doughs (100 g flour, 70 ml water, 2 g salt, 20 g starter): one with a starter at its peak, one 4 hours past its peak (sunken), and one unfed from the fridge. Compare after 6 hours.

Look for: The peak starter makes the dough rise best. The sunken one is slower and more sour. The cold unfed one barely moves. Always use a fed, domed starter.

EXPERIMENT

Bulk rise time

Under, ready or over.

1. Divide one dough into three after the folds. Shape one after 2 hours of bulk rise, one after 4 and one after 7. Bake all three.

Look for: The first is dense with big holes at one side, the second is well risen and even, and the third is flat and sour. This is why we watch the dough.

EXPERIMENT

Fridge or room proof

Where to prove.

1. Shape two loaves from one dough. Prove one for 1 hour 30 minutes at room temperature and the other overnight in the fridge. Bake both.

Look for: The fridge loaf is more sour, has a blistered crust and is easier to score. The room-temperature loaf is milder.

EXPERIMENT

Scoring

Cut or uncut.

1. Bake two identical loaves, one scored and one left unscored.

Look for: The scored loaf opens along the cut. The unscored one may burst at the weakest point.

Tasting notes

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Simple sourdough loaf				
Tin loaf				
Sourdough rolls				
Seeded sourdough				
Starter strength				
Bulk rise time				
Fridge or room				
Scoring				

Troubleshooting

PROBLEM	LIKELY CAUSE	WHAT TO DO
Dense, small loaf with a gummy crumb	Under-proofed, or weak starter	Wait for the bulk rise; use a starter at its peak
Flat loaf that spreads	Over-proofed or too wet	Shorten the proof; chill before baking; use a tin
Very sour	Long, warm proof	Shorten the proof or use the fridge; feed the starter more often
Dough very sticky	High hydration, or not enough folds	Wet hands, more folds; reduce the water by 20 ml next time
Pale crust	Pot not hot enough, lid left on	Preheat for 30 minutes; remove the lid after 20 minutes
Burnt base	Pot too hot or too thin	Put a tray beneath the pot; lower the oven

HEAT, FLOUR AND GLUTEN

A pot at 240°C: a preheated cast-iron or ceramic lidded pot is extremely hot, and the lid knob and rim burn instantly. Use thick, dry oven gloves, lower the dough in on baking paper, lift the lid away from your face (steam), and leave the pot on a heatproof surface to cool. Check that your pot and its lid knob are safe to 240°C.

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

Allergens: bread contains wheat (gluten). Check the recipe for milk, butter, egg, sesame and other seeds, and nuts, and label them if you share the bread. Gluten-free bread uses different flours and methods and isn't covered in this course.

CHECKPOINT: CAN YOU DO THIS NOW?

- ☐ I can mix, fold, shape and bake a sourdough loaf.
- ☐ I can tell when the dough has finished its bulk rise.
- ☐ I can prove in the fridge and bake straight from it.
- ☐ I can use a lidded pot safely at 240°C.
- ☐ I keep notes of times and room temperature.

NEXT CHAPTER

Cooking Skills: Bread 2, chapter 4 is Enriched Doughs: milk bread, brioche, a plaited loaf and cinnamon rolls.

Cooking Skills: Bread 2

Chapter 4 · Enriched Doughs

SKILL GOAL

Make dough richer with milk, butter, eggs and sugar, and handle it so it stays light.

Shopping list for this chapter

The basics

An **enriched dough** has extra ingredients beyond flour, water, salt and yeast: milk, butter, oil, eggs, sugar. These make the bread softer, richer and golden, and keep it fresh longer. They also slow the yeast, so enriched doughs need longer to rise and more kneading.

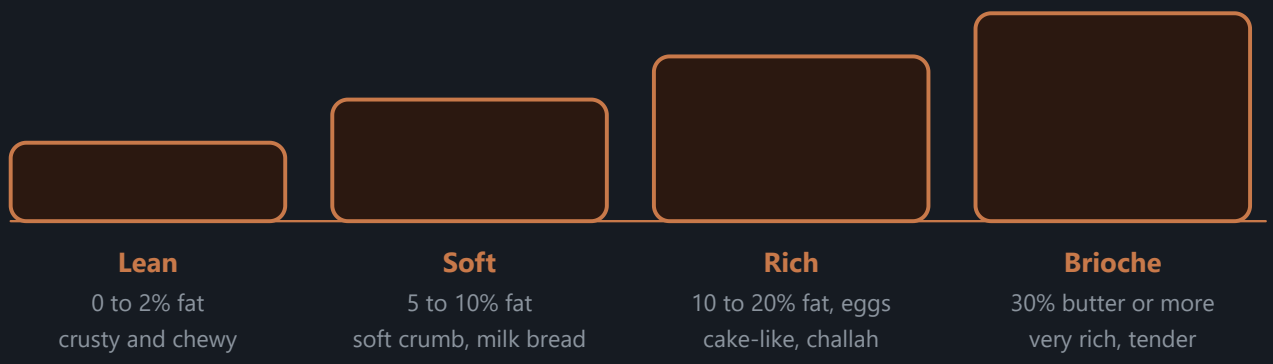


Figure 4. Fat as a percentage of the flour weight. The richer the dough, the softer and more cake-like the bread.

What each ingredient does

INGREDIENT	EFFECT
Milk	Softer crumb, golden crust, a little sweetness
Butter or oil	Tenderness and softer keeping; coats the gluten so the crumb is less chewy
Eggs	Richness, colour, a tender cake-like crumb

INGREDIENT	EFFECT
Sugar	Feeds the yeast a little (a lot slows it), browns the crust, keeps the crumb moist
Honey	As sugar, with flavour, and keeps the loaf moist

Working with enriched dough

- **Knead for longer:** fat gets in the way of the gluten, so 10 to 15 minutes by hand, or use a mixer.
- **Add a lot of butter late:** build the gluten first, then work the butter in gradually.
- **Resist adding flour:** the dough is soft and sticky; it firms up as it kneads and chills.
- **Be patient with the rise:** expect about 1 hour 30 minutes for the first rise.
- **Chill rich doughs** before shaping, because cold butter makes them easier to handle.
- **Bake cooler:** sugar and egg brown fast, so use about 180 to 190°C (160 to 170°C fan) and cover with foil if needed.

EGGS, ICING AND ALLERGENS

Eggs and glazes: use eggs with the British Lion mark, wash your hands after handling raw egg, and make sure the buns are baked through. Don't taste raw dough or batter.

Cream cheese icing: use pasteurised cream cheese, keep iced buns covered in the fridge, eat within **2 days** and don't leave them out for more than a couple of hours in a warm room.

Allergens: wheat (gluten), milk, butter and egg. Label them if you share the bread. Nuts, seeds and dried fruit may be added in some variations.

Try it

LEVEL 1 · START HERE

Soft milk bread

2 hours 45 minutes (30 minutes of work) | 1 loaf (12 slices) | adding a little fat and sugar for a soft crumb

The gentlest enriched dough: milk instead of water, a little butter and a little sugar. It stays soft for longer and is lovely toasted.

INGREDIENTS (12 PORTIONS)

500 g	strong white bread flour
1 sachet (7 g)	sachet fast-action dried yeast
8 g	fine salt
50 g	caster sugar
40 g	butter, softened
300 ml	lukewarm whole milk
1 tbsp	milk for brushing

1. Mix the flour, yeast, salt and sugar. Rub in the butter, then add the milk and mix to a soft dough. Knead for 10 to 12 minutes until smooth and elastic. It will be slightly sticky: don't add much flour.
2. Prove in an oiled bowl for about **1 hour 15 minutes**, until doubled (enriched dough is slower than lean dough).
3. Shape into a loaf in an oiled 900 g tin and prove for **45 minutes to 1 hour**, until it has risen above the rim. Brush with milk.
4. Bake at 190°C (170°C fan) for **30 to 35 minutes**, covering with foil if it browns too fast. Cool on a rack.

ALLERGENS AND FLOUR

Allergens: wheat (gluten), milk, butter and egg. Label them if you share the bread. Nuts, seeds and dried fruit may be added in some variations.

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only

> by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

LEVEL 2 · RICH

Brioche buns

About 5 hours with a chill (40 minutes of work) | 10 buns | adding a lot of butter to a dough

Brioche has about 30% butter. The trick is to build the gluten first, then add the butter slowly. The dough is soft and sticky: chill it before shaping so it is easy to handle.

INGREDIENTS (10 PORTIONS)

500 g	strong white bread flour
1 sachet (7 g)	sachet fast-action dried yeast
10 g	fine salt
60 g	caster sugar
3	Lion-marked eggs
60 ml	lukewarm milk
150 g	butter, softened and cut into cubes
1	egg beaten with 1 tbsp milk, for glazing

1. Mix the flour, yeast, salt and sugar. Add the eggs and milk and mix to a sticky dough. Knead for 8 to 10 minutes until it begins to pull away from the bowl and stretch.
2. Add the butter a few cubes at a time, kneading until each addition is absorbed. Knead for another 5 to 10 minutes until the dough is glossy and stretches thin (it will be soft and a little sticky).
3. Prove in an oiled bowl for about **1 hour 30 minutes**. Then chill, covered, for **1 hour or overnight**.
4. Divide into 10 pieces (about 90 g each), shape into tight balls and place on lined trays, 4 cm apart. Prove for **1 hour 15 minutes** until puffy. Brush with the egg glaze.
5. Bake at 190°C (170°C fan) for **18 to 20 minutes**, until deep golden. Cool on a rack.

> EGGS AND RAW DOUGH
>
> **Eggs and glazes:** use eggs with the British Lion mark, wash your hands after handling raw egg, and make sure the buns are baked through. Don't taste raw dough or batter.

> **Allergens:** wheat (gluten), milk, butter and egg. Label them if you share the bread. Nuts, seeds and dried fruit may be added in some variations.

LEVEL 2 · PLAIT

A plaited challah-style loaf

3 hours (40 minutes of work) | 1 loaf (12 slices) | an oil-and-egg dough with no dairy

A challah-style loaf has eggs and oil but no milk or butter, which gives a golden, tender crumb and a shiny crust. Make a three-strand plait as in Cooking Skills: Bread 1, chapter 3.

INGREDIENTS (12 PORTIONS)

500 g	strong white bread flour
1 sachet (7 g)	sachet fast-action dried yeast
10 g	fine salt
50 g	honey or caster sugar
2 eggs + 1 yolk	Lion-marked eggs, plus 1 yolk
60 ml	vegetable oil
150 ml	lukewarm water
1 tbsp	poppy or sesame seeds (optional)

1. Mix the flour, yeast and salt. Add the honey, eggs, extra yolk, oil and water and mix to a dough. Knead for 10 minutes until smooth.
2. Prove for about **1 hour 15 minutes**, until doubled. Divide into 3 equal pieces and roll into ropes about 40 cm long.
3. Plait loosely, tuck the ends under and place on a lined tray. Prove for **45 minutes**. Brush with the leftover egg white beaten with a little milk and scatter with seeds.
4. Bake at 180°C (160°C fan) for **30 to 35 minutes**, until deep golden. If it browns too fast, cover with foil. Cool on a rack.

EGGS AND ALLERGENS

Eggs and glazes: use eggs with the British Lion mark, wash your hands after handling raw egg, and make sure the buns are baked through. Don't taste raw dough or batter.

Allergens: bread contains wheat (gluten). Check the recipe for milk, butter, egg, sesame and

other seeds, and nuts, and label them if you share the bread. Gluten-free bread uses different flours and methods and isn't covered in this course. Contains egg and (if used) sesame.

LEVEL 3 · SWIRL

Cinnamon rolls

3 hours 30 minutes (45 minutes of work) · 12 rolls · rolling, filling and cutting an enriched dough

Soft, buttery spirals with a cinnamon filling and a tangy cream cheese icing. Roll the dough into a tight spiral and use a thread or a very sharp knife to cut clean slices.

INGREDIENTS (12 PORTIONS)

500 g	strong white bread flour
1 sachet (7 g)	sachet fast-action dried yeast
8 g	fine salt
80 g	caster sugar
50 g	butter, softened
1	Lion-marked egg
250 ml	lukewarm milk
75 g	soft butter, for the filling
100 g	soft light brown sugar, for the filling
2 tbsp	ground cinnamon, for the filling
100 g	pasteurised full-fat cream cheese, for the icing
40 g	butter, softened, for the icing
100 g	icing sugar, for the icing
1 tsp	vanilla extract, for the icing

1. Make the dough: mix the flour, yeast, salt and sugar. Rub in the 50 g butter, then add the egg and milk and mix. Knead for 10 minutes until smooth. Prove for about **1 hour 15 minutes** until doubled.
2. Roll the dough out to a rectangle about 30 x 40 cm. Spread with the soft butter, then scatter with the brown sugar and cinnamon, leaving 2 cm clear along one long edge.
3. Roll up tightly from the long edge opposite the clear strip, finishing seam side down. Cut into 12 slices with a sharp knife or unflavoured dental floss.

4. Place cut side up in a lined or greased 30 x 20 cm tin or tray, 1 cm apart. Cover and prove for **45 minutes**, until puffy.
5. Bake at 190°C (170°C fan) for **20 to 25 minutes**, until golden and the middle roll is cooked through. Cool for 15 minutes.
6. Beat the cream cheese, butter, icing sugar and vanilla until smooth, and spread over the warm (not hot) rolls.

> EGG, ICING AND HOT SUGAR
>
> **Eggs and glazes:** use eggs with the British Lion mark, wash your hands after handling raw egg, and make sure the buns are baked through. Don't taste raw dough or batter.
>
> **Cream cheese icing:** use pasteurised cream cheese, keep iced buns covered in the fridge, eat within **2 days** and don't leave them out for more than a couple of hours in a warm room.
>
> **Allergens:** wheat (gluten), milk, butter and egg. Label them if you share the bread. Nuts, seeds and dried fruit may be added in some variations.
>
> **Hot filling:** the melted sugar inside a cinnamon roll is very hot straight from the oven. Let them cool for 15 minutes before eating.

Experiments

EXPERIMENT

Lean or enriched

The butter effect.

1. Make half the quantity of the Cooking Skills: Bread 1, chapter 1 white loaf dough. Split it in two and knead 20 g of soft butter into one half. Bake both.

Look for: The enriched half is softer, has a finer crumb and a golden crust. The lean half is chewier with a crisper crust.

EXPERIMENT

Butter early or late

When to add the fat.

1. Make two small brioche doughs. In one, add all the butter at the start; in the other, knead first and add the butter gradually.

Look for: The late-butter dough develops more gluten and rises better; the early one is slack and slow, with a denser crumb.

EXPERIMENT

Sugar and yeast

How much sugar is too much.

1. Make three small doughs with 0%, 10% and 30% sugar (of the flour weight), the same yeast. Compare how long each takes to double.

Look for: Moderate sugar helps; a lot slows the rise a lot. This is why very sweet doughs need more yeast and more time.

EXPERIMENT

Glaze

Egg, milk, or sugar syrup.

1. Brush identical buns with egg wash, milk or a sugar syrup (1 tbsp sugar dissolved in 1 tbsp hot water) before baking.

Look for: Egg gives the deepest, glossiest finish. Milk gives soft gold. The sugar syrup gives a thin sweet shine and browns quickly.

Tasting notes

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Soft milk bread				

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Brioche buns				
Challah-style plait				
Cinnamon rolls				
Lean or enriched				
Butter early or late				
Sugar and yeast				
Glaze				

Troubleshooting

PROBLEM	LIKELY CAUSE	WHAT TO DO
Dough very sticky	Normal for rich dough	Knead longer; chill it; use a scraper instead of more flour
Slow rise	Lots of sugar and fat	Allow more time; use a warm place; add a little extra yeast
Buns brown too fast	Sugar and egg burn	Lower the temperature; cover with foil
Buns greasy, not fluffy	Butter added too fast or melted	Add soft butter gradually; keep the dough cool
Cinnamon rolls unwind	Rolled loosely or not sealed	Roll tightly; finish seam side down
Dense, heavy loaf	Under-kneaded or under-proved	Knead until it stretches; prove until puffy

EGGS, HOT SUGAR AND ALLERGENS

Eggs and glazes: use eggs with the British Lion mark, wash your hands after handling raw egg, and make sure the buns are baked through. Don't taste raw dough or batter.

Cream cheese icing: use pasteurised cream cheese, keep iced buns covered in the fridge, eat within **2 days** and don't leave them out for more than a couple of hours in a warm room.

Hot ovens, trays and steam: use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Allergens: wheat (gluten), milk, butter and egg. Label them if you share the bread. Nuts, seeds and dried fruit may be added in some variations.

CHECKPOINT: CAN YOU DO THIS NOW?

- ☐ I know what milk, butter, eggs and sugar do to a dough.
- ☐ I can knead a rich dough and add butter gradually.
- ☐ I can chill a rich dough to make it easier to shape.
- ☐ I can roll, fill and cut a spiral.
- ☐ I store iced buns safely.

NEXT CHAPTER

Cooking Skills: Bread 2, chapter 5 is Pizza and Friends: stretching, topping and baking at the hottest oven heat.

Cooking Skills: Bread 2

Chapter 5 · Pizza and Friends

SKILL GOAL

Make pizza dough, stretch it by hand and bake it hot so the base is crisp and the rim puffy.

Shopping list for this chapter

The basics

Pizza is bread dough made to be stretched thin and baked **as hot as your oven goes**. Everything that matters follows from that: a dough that stretches without tearing, toppings that are light enough not to make the middle soggy, and a very hot tray to crisp the base.

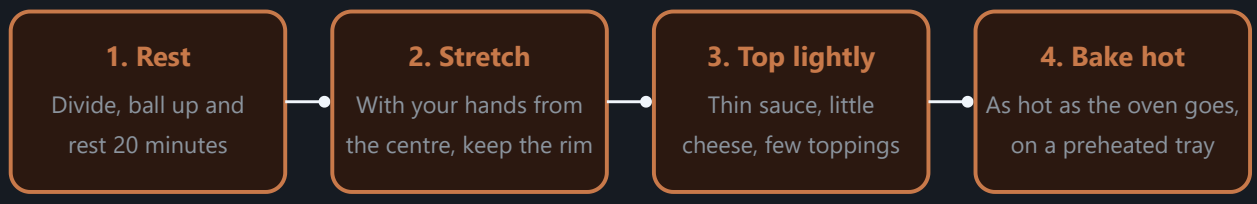


Figure 5. Pizza in four steps. Light toppings and a very hot oven make a crisp base and a puffy rim.

Pizza dough

- **Hydration about 65%:** 325 ml water to 500 g flour is soft but handleable.
- **Strong flour,** or Italian 00 flour (finely milled) if you can get it.
- **A long, cold rise** in the fridge (24 to 48 hours) gives a more flavourful, blistered crust than a quick rise. Use half the yeast.
- **Rest the balls** for 20 minutes after dividing, because relaxed gluten stretches easily.

Stretching

1. On a floured surface, press a dough ball flat from the centre with your fingertips, keeping a thick rim (the cornicione).
2. Lift it and rotate it over the backs of your knuckles, letting gravity stretch it.
3. If it springs back, rest it for 5 minutes and try again.
4. Avoid a rolling pin, which squeezes the air out of the rim.

The heat

OVEN	SETTING	PIZZA TIME
Domestic oven, tray preheated 30 minutes	250°C (230°C fan) or its highest	8 to 10 minutes
Pizza stone or steel, preheated 45 minutes	250°C (230°C fan)	6 to 8 minutes
Thick tray pizza (not preheated tray)	220°C (200°C fan)	20 to 25 minutes

Less is more: a thin layer of sauce, a modest amount of cheese and two or three toppings. A heavily loaded pizza stays wet and the base goes soggy.

> **HOT OVENS AND LEFTOVERS**
>
> **Very hot oven and trays:** pizza is baked at 230 to 250°C, so a preheated tray or stone is dangerously hot. Use thick, dry oven gloves, slide the pizza on with a peel, board or baking paper rather than reaching in, keep children away, and leave the tray on a heatproof surface to cool. Never use a tray that isn't oven-safe at that heat.
>
> **Leftovers:** cool cooked pizza within 1 to 2 hours, keep it covered in the fridge and eat it within **2 days**. Reheat until steaming hot all the way through, and only once.

Try it

LEVEL 1 · START HERE

Pizza margherita

2 hours 15 minutes (40 minutes of work) | 4 pizzas (about 25 cm)

making pizza dough, stretching it and baking at full heat

The classic: a thin tomato sauce, mozzarella and basil. The skill is in the dough and the heat. Stretch with your hands, not a rolling pin, to keep the airy rim.

INGREDIENTS (4 PORTIONS)

500 g	strong white bread flour (or Italian 00 flour), plus extra for dusting
1 tsp	fast-action dried yeast (about 1 tsp)
10 g	fine salt
325 ml	lukewarm water
1 tbsp	olive oil
400 g	tin of chopped tomatoes (for the sauce)
1	garlic clove, crushed
1 tbsp	olive oil, for the sauce
1 pinch	salt and a few basil leaves
250 g	pasteurised mozzarella, drained and torn
1 handful	fresh basil leaves

1. Mix the flour, yeast, salt, water and oil to a dough. Knead for 10 minutes until smooth. Prove in an oiled bowl for about **1 hour** until doubled (or chill for up to 24 hours: see the experiments).
2. **Make the sauce:** simmer the tomatoes, garlic, oil and salt for 15 minutes, stirring, until thickened. Cool slightly and stir in some torn basil.
3. Put a heavy baking tray (or tray turned upside down) on the top shelf and heat the oven to its highest setting, **at least 230°C (210°C fan) and up to 250°C (230°C fan)**, for 30 minutes.
4. Divide the dough into 4 balls and rest, covered, for **20 minutes**. On a floured surface, press out a ball from the centre with your fingertips, leaving a thicker rim, then lift and

stretch it over your knuckles to about 25 cm.

5. Place on a sheet of baking paper. Spread with 2 to 3 tbsp of sauce, add a quarter of the mozzarella and slide it, still on the paper, onto the hot tray.
6. Bake for **8 to 10 minutes**, until the rim is puffed and charred in spots and the cheese is bubbling. Scatter with basil, cut and serve at once. Repeat with the rest.

> **VERY HOT OVEN AND ALLERGENS**
>
> **Very hot oven and trays:** pizza is baked at 230 to 250°C, so a preheated tray or stone is dangerously hot. Use thick, dry oven gloves, slide the pizza on with a peel, board or baking paper rather than reaching in, keep children away, and leave the tray on a heatproof surface to cool. Never use a tray that isn't oven-safe at that heat.
>
> **Cutting and eating:** a pizza wheel or large knife is sharp, so cut on a board, not on the baking tray. Cheese and filling stay hotter than the crust, so let a calzone cool for 5 minutes and open it away from your face: the steam is scalding.
>
> **Allergens:** wheat (gluten) and milk (mozzarella, cheese). Check toppings for fish (anchovies), egg, nuts (pesto) and sulphites, and label vegetarian pizzas if you share them.

LEVEL 2 · TRAY

A thick tray pizza

2 hours (30 minutes of work) | 1 large tray pizza (8 slices) | a wetter dough proved in the tray

A thick, focaccia-like pizza baked in a tray: fluffy inside and crisp underneath, and easy to feed a crowd. Oil the tray generously.

INGREDIENTS (8 PORTIONS)

500 g	strong white bread flour
1 sachet (7 g)	sachet fast-action dried yeast
10 g	fine salt
350 ml	lukewarm water
4 tbsp	olive oil, divided
200 ml	pizza or passata sauce
200 g	pasteurised mozzarella or cheddar, grated
1	a few toppings: peppers, mushrooms, onion, sweetcorn, cooked ham

1. Mix the flour, yeast, salt, water and 1 tbsp of oil to a sticky dough and knead for 5 minutes (it will be softer than a normal pizza dough). Prove for about 1 hour until doubled.
2. Pour 2 tbsp of oil into a 30 x 40 cm tray. Tip the dough in and press it out to the edges (rest for 10 minutes if it springs back). Cover and prove for **30 to 45 minutes**, until puffy.
3. Heat the oven to 220°C (200°C fan). Spread with the sauce, scatter with the cheese and toppings (cook raw meats first) and drizzle with the rest of the oil.
4. Bake for **20 to 25 minutes**, until the base is golden and crisp when you lift a corner and the cheese is bubbling. Cool for 5 minutes in the tray before cutting.

> **HOT TRAY, TOPPINGS AND LEFTOVERS**
>
> **Hot ovens, trays and steam:** use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Leftovers: cool cooked pizza within 1 to 2 hours, keep it covered in the fridge and eat it within **2 days**. Reheat until steaming hot all the way through, and only once.

Allergens: wheat (gluten) and milk (mozzarella, cheese). Check toppings for fish (anchovies), egg, nuts (pesto) and sulphites, and label vegetarian pizzas if you share them.

LEVEL 2 · FOLDED

Spinach and ricotta calzone

2 hours (45 minutes of work) | 2 calzones | folding and sealing a filled dough

A calzone is a folded pizza. The filling is hot inside, and the seal must hold. Squeeze the spinach dry, or the calzone goes soggy.

INGREDIENTS (2 PORTIONS)

250 g	strong white bread flour (half the pizza dough quantity)
½ tsp	fast-action dried yeast (about ½ tsp)
5 g	fine salt
165 ml	lukewarm water
1 tsp	olive oil
150 g	ricotta
100 g	fresh spinach, wilted and squeezed dry
100 g	pasteurised mozzarella, torn
1 pinch	nutmeg, salt and pepper
1 tbsp	olive oil for brushing

1. Make the dough as for the margherita, using the half quantities. Prove for about 1 hour. Heat the oven to 230°C (210°C fan) with a tray inside.
2. Mix the ricotta, spinach, mozzarella, nutmeg and seasoning. Divide the dough in 2 and stretch each piece into a 25 cm round.
3. Pile the filling on one half of each round, leaving a 2 cm edge. Brush the edge with water, fold the other half over, press to seal and fold the edge over itself, crimping with a fork. Brush with oil and cut a small steam hole in the top.
4. Slide onto the hot tray on baking paper and bake for **15 to 18 minutes**, until golden and puffed. Rest for 5 minutes before cutting.

> **STEAM, HOT FILLING AND ALLERGENS**
>
> **Cutting and eating:** a pizza wheel or large knife is sharp, so cut on a board, not on the baking tray. Cheese and filling stay hotter than the crust, so let a calzone cool for 5 minutes and open it

away from your face: the steam is scalding.

Very hot oven and trays: pizza is baked at 230 to 250°C, so a preheated tray or stone is dangerously hot. Use thick, dry oven gloves, slide the pizza on with a peel, board or baking paper rather than reaching in, keep children away, and leave the tray on a heatproof surface to cool. Never use a tray that isn't oven-safe at that heat.

Allergens: wheat (gluten) and milk (mozzarella, cheese). Check toppings for fish (anchovies), egg, nuts (pesto) and sulphites, and label vegetarian pizzas if you share them.

LEVEL 3 · FLATBREAD

Garlic and herb flatbread

1 hour 30 minutes (30 minutes of work) | 2 flatbreads | a quick topped bread from the same dough

The pizza dough makes a lovely flatbread with garlic butter: fast, and good with soup or as a party snack.

INGREDIENTS (4 PORTIONS)

250 g	strong white bread flour
1 tsp	fast-action dried yeast (about 1 tsp)
5 g	fine salt
160 ml	lukewarm water
1 tbsp	olive oil
40 g	butter, softened
2	garlic cloves, crushed
1 tbsp	chopped parsley
1 pinch	flaky salt

1. Mix the flour, yeast, salt, water and oil and knead for 8 minutes. Prove for about 1 hour. Heat the oven to 230°C (210°C fan) with a tray inside.
2. Divide into 2 and stretch or roll each to about 5 mm thick. Mix the butter, garlic, parsley and salt.
3. Slide onto the hot tray on baking paper and bake for **5 minutes**. Spread with the garlic butter and bake for 3 to 5 minutes more, until golden and bubbling.
4. Cut into pieces and serve warm.

HOT TRAY

Very hot oven and trays: pizza is baked at 230 to 250°C, so a preheated tray or stone is dangerously hot. Use thick, dry oven gloves, slide the pizza on with a peel, board or baking paper rather than reaching in, keep children away, and leave the tray on a heatproof surface to cool. Never use a tray that isn't oven-safe at that heat.

Allergens: bread contains wheat (gluten). Check the recipe for milk, butter, egg, sesame and

> other seeds, and nuts, and label them if you share the bread. Gluten-free bread uses different flours and methods and isn't covered in this course. Contains milk (butter).

Experiments

EXPERIMENT

Resting the dough

Rest or stretch straight away.

1. Divide the dough. Stretch one ball immediately and let another rest for 20 minutes before stretching.

Look for: The unrested ball springs back and tears; the rested ball stretches easily and keeps a thin, even centre.

EXPERIMENT

Stretching or rolling

Hands against the pin.

1. Shape one pizza by stretching with your hands and one with a rolling pin. Bake together.

Look for: The stretched pizza has a puffy, airy rim. The rolled one is flat and evenly thick, with a crackery edge.

EXPERIMENT

Oven heat and tray

Preheated or cold tray.

1. Bake one pizza on a tray preheated for 30 minutes and another on a cold tray at the same temperature.

Look for: The hot-tray pizza has a crisp, browned base. The cold-tray pizza has a pale, soft base.

EXPERIMENT

Light or heavy toppings

How much is too much.

1. Make one pizza with a thin layer of sauce and cheese and one loaded with sauce, cheese and toppings.

Look for: The light pizza bakes crisp and even; the loaded one has a wet, doughy centre and takes longer.

Tasting notes

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Margherita				
Tray pizza				
Calzone				
Garlic flatbread				
Resting				
Stretching or rolling				
Tray heat				
Toppings				

Troubleshooting

PROBLEM	LIKELY CAUSE	WHAT TO DO
Dough springs back	Gluten tight	Rest 5 to 10 minutes; let it relax
Soggy middle	Too much sauce or toppings, oven too cool	Use less; preheat the tray; pre-cook wet toppings

PROBLEM	LIKELY CAUSE	WHAT TO DO
Pale base	Cold tray or low oven	Preheat the tray for 30 minutes; use the top shelf
Tears when stretching	Too thin in places or over-stretched	Keep a thicker rim; patch holes and rest
Pizza sticks to the peel	Not enough flour or semolina	Slide on baking paper
Calzone bursts	No steam hole, or not sealed	Crimp the edge; cut a hole in the top

HEAT, STEAM AND ALLERGENS

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

Very hot oven and trays: pizza is baked at 230 to 250°C, so a preheated tray or stone is dangerously hot. Use thick, dry oven gloves, slide the pizza on with a peel, board or baking paper rather than reaching in, keep children away, and leave the tray on a heatproof surface to cool. Never use a tray that isn't oven-safe at that heat.

Cutting and eating: a pizza wheel or large knife is sharp, so cut on a board, not on the baking tray. Cheese and filling stay hotter than the crust, so let a calzone cool for 5 minutes and open it away from your face: the steam is scalding.

Allergens: wheat (gluten) and milk (mozzarella, cheese). Check toppings for fish (anchovies), egg, nuts (pesto) and sulphites, and label vegetarian pizzas if you share them.

CHECKPOINT: CAN YOU DO THIS NOW?

- ☐ I can make and rest pizza dough.
- ☐ I can stretch a base by hand.
- ☐ I can bake on a preheated tray at full heat.
- ☐ I use light toppings.
- ☐ I fold and seal a calzone.

NEXT CHAPTER

Cooking Skills: Bread 2, chapter 6 is Folded and Laminated Breads: swirls, pull-apart loaves and simplified croissants.

Cooking Skills: Bread 2

Chapter 6 · Folded and Laminated Breads

SKILL GOAL

Fold butter, cheese or filling into dough for layers, and handle butter so it stays in its layers.

Shopping list for this chapter

The basics

Layered breads have thin sheets of butter, or filling, folded into the dough. In the oven the butter melts, the water in it turns to steam and pushes the layers apart, giving a flaky, airy texture. A true laminated dough like a croissant uses a block of butter and several folds. Simple swirled and folded breads use the same idea with fillings.

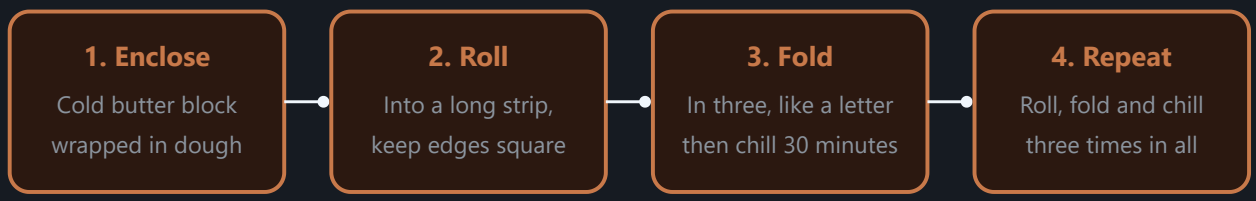


Figure 6. Lamination builds many thin layers of butter and dough. Each fold multiplies the layers.

The layers add up

FOLDS (LETTER FOLDS)	BUTTER LAYERS
After the enclose	1
After 1 letter fold	About 3 to 4
After 2 folds	About 9 to 13
After 3 folds	About 27 to 40

The numbers are approximate: the layers multiply by three with each letter fold.

Rules for laminating

- **Butter and dough must be the same firmness:** cold, but bendy like plasticine. If the butter is harder, it shatters; if softer, it leaks.
- **Work cool and fast:** a cool room, a cold surface and quick hands.
- **Chill between folds:** 30 to 45 minutes in the fridge relaxes the gluten and re-firms the butter.
- **Roll gently,** keeping edges square and thickness even. Dust off excess flour.
- **Sharp cutter:** a dull knife seals the layers. Cut straight down.
- **Proof cool:** if the room is too warm, the butter melts into the dough before baking.

Swirls, stacks and folds

You don't need a butter block to get layers. A **swirl** rolls a filling into spirals, a **stack** piles buttered strips on edge, and a **letter fold with cheese** sandwiches the filling between layers of dough.

> BUTTER, EGGS AND KEEPING
>
> **Butter and the rolling pin:** keep the butter cold but bendy (not hard, not soft), roll gently and chill the dough whenever the butter starts to soften or smear. Hot kitchens make lamination hard: work in a cool room or chill more often.
>
> **Eggs:** use eggs with the British Lion mark, wash your hands after handling raw egg, and bake egg-glazed bread until golden and cooked through. Don't taste raw dough.
>
> **Keeping filled breads:** breads with cheese, garlic butter or egg glaze are best eaten within about 2 days. Keep them covered, in the fridge if the room is warm, and reheat until steaming hot.

Try it

LEVEL 1 · START HERE

Cinnamon swirl loaf

3 hours (40 minutes of work) | 1 loaf (12 slices) | rolling a filling into spiral layers

A swirl loaf has layers of filling instead of layers of butter. Roll the dough up tightly so the spiral holds together.

INGREDIENTS (12 PORTIONS)

500 g	strong white bread flour
1 sachet (7 g)	sachet fast-action dried yeast
8 g	fine salt
50 g	caster sugar
40 g	butter, softened
1	Lion-marked egg
230 ml	lukewarm milk
30 g	butter, melted, for the filling
60 g	light brown sugar, for the filling
2 tsp	ground cinnamon, for the filling

1. Mix the flour, yeast, salt and sugar. Rub in the 40 g butter, add the egg and milk and knead for 10 minutes. Prove for about **1 hour 15 minutes**.
2. Roll the dough into a rectangle about 25 x 40 cm. Brush with the melted butter and scatter with the sugar and cinnamon, leaving 1 cm clear along one long edge.
3. Roll up tightly from the other long edge, finishing seam side down. Trim the ends and place, seam side down, in an oiled 900 g tin (or cut in half lengthways and twist for a braided look).
4. Prove for **45 minutes** until above the rim. Bake at 180°C (160°C fan) for **35 to 40 minutes**, covering with foil after 20 minutes if it browns fast. Cool in the tin for 10 minutes, then on a rack.

> **EGG, HOT SUGAR AND ALLERGENS**

Eggs: use eggs with the British Lion mark, wash your hands after handling raw egg, and bake egg-glazed bread until golden and cooked through. Don't taste raw dough.

Allergens: wheat (gluten), milk, butter and egg. Label them if you share the bread. Cheese fillings add milk.

Hot filling: the melted sugar in a swirl is very hot. Let the loaf cool before slicing.

LEVEL 2 · STACK

Garlic pull-apart bread

2 hours 45 minutes (35 minutes of work) | 1 loaf (10 pieces) | layering strips of buttered dough

Strips of dough spread with garlic butter, stacked on their sides in a tin, and baked until they pull apart in soft, buttery layers.

INGREDIENTS (10 PORTIONS)

500 g	strong white bread flour
1 sachet (7 g)	sachet fast-action dried yeast
10 g	fine salt
40 g	butter, softened
300 ml	lukewarm milk
80 g	butter, softened, for the garlic butter
4	garlic cloves, crushed
2 tbsp	chopped parsley
100 g	pasteurised mozzarella or cheddar, grated

1. Mix the flour, yeast, salt, 40 g butter and milk. Knead for 10 minutes and prove for about 1 hour until doubled.
2. Mix the 80 g butter with the garlic and parsley. Roll the dough into a rectangle about 30 x 40 cm, spread with the garlic butter and scatter on the cheese.
3. Cut into 5 strips lengthways, stack the strips on top of one another and cut across into 6 stacks. Stand the stacks on their cut edges in an oiled 900 g loaf tin, cut side up.
4. Prove for **45 minutes**. Bake at 190°C (170°C fan) for **30 to 35 minutes**, covering with foil if it browns fast. Cool for 10 minutes and serve warm.

MILK, GARLIC BUTTER AND KEEPING

Allergens: wheat (gluten), milk, butter and egg. Label them if you share the bread. Cheese fillings add milk.

Keeping filled breads: breads with cheese, garlic butter or egg glaze are best eaten within about 2 days. Keep them covered, in the fridge if the room is warm, and reheat until steaming

hot.

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

LEVEL 2 · FOLDED

Cheese-layered rolls

3 hours (40 minutes of work) | 8 rolls | folding a dough around a filling like a simple lamination

A letter fold with cheese between the layers: a first taste of lamination without the butter block. The layers show when you pull the rolls apart.

INGREDIENTS (8 PORTIONS)

500 g	strong white bread flour
1 sachet (7 g)	sachet fast-action dried yeast
10 g	fine salt
30 g	butter, softened
300 ml	lukewarm milk
150 g	mature cheddar, grated
1 tsp	mustard powder
1	egg, beaten, for glazing

1. Mix the flour, yeast, salt, mustard powder, butter and milk. Knead for 10 minutes and prove for about 1 hour.
2. Roll the dough into a rectangle about 25 x 40 cm. Scatter two-thirds of the cheese over two-thirds of the dough (leaving one third bare). Fold the bare third over the middle, then fold the cheesy end over that, like a letter. Roll out again and repeat with the rest of the cheese, folding in 3 again.
3. Roll to about 3 cm thick, cut into 8 squares and place on a lined tray, 3 cm apart. Cover and prove for **30 to 40 minutes**. Brush with egg.
4. Bake at 200°C (180°C fan) for **18 to 20 minutes**, until deep golden. Cool on a rack and eat within 2 days.

EGG, MILK AND KEEPING

Eggs: use eggs with the British Lion mark, wash your hands after handling raw egg, and bake egg-glazed bread until golden and cooked through. Don't taste raw dough.

Allergens: wheat (gluten), milk, butter and egg. Label them if you share the bread. Cheese

fillings add milk.

Keeping filled breads: breads with cheese, garlic butter or egg glaze are best eaten within about 2 days. Keep them covered, in the fridge if the room is warm, and reheat until steaming hot.

LEVEL 3 · LAMINATED

Croissants, simplified

About 9 hours with chilling (1 hour 30 minutes of work), or overnight | 10 croissants | building layers of butter and dough by folding

The real thing, with a few shortcuts: a short mixing, three folds with chilling between, a slow proof and a hot bake. It is a project: take your time, keep everything cold, and expect your first batch to be rustic.

INGREDIENTS (10 PORTIONS)

500 g	strong white bread flour
1 sachet (7 g)	sachet fast-action dried yeast
10 g	fine salt
50 g	caster sugar
280 ml	cold milk
250 g	cold butter (ideally a block with at least 80% fat), in one block
1	egg beaten with 1 tbsp milk, for glazing

1. **Dough:** mix the flour, yeast, salt, sugar and cold milk to a firm dough. Knead for 5 minutes (it needn't be elastic). Wrap and chill for **1 hour**.
2. **Butter block:** place the butter between two sheets of baking paper and flatten with a rolling pin to a 15 cm square. Chill until firm but bendy.
3. **Enclose:** roll the dough to a 30 cm square. Put the butter diamond-wise in the middle, fold the dough corners over it like an envelope and pinch the seams.
4. **Fold 1:** roll out gently to about 20 x 60 cm, fold in three like a letter, wrap and chill for **30 to 45 minutes**. Repeat for **fold 2** and **fold 3** (turn the dough a quarter each time), chilling between each. If butter leaks out, chill sooner.
5. **Shape:** roll to about 5 mm thick, trim the edges and cut into 10 triangles. Make a small cut in the base of each and roll up from the base to the tip. Curve into crescents and place on lined trays, tip underneath.
6. **Proof** for **1 hour 30 minutes to 2 hours** in a cool room (about 22 to 24°C, not warm enough to melt the butter), until puffy and wobbly. Brush with the egg glaze.

7. Bake at 200°C (180°C fan) for **18 to 20 minutes**, until deep golden. Cool on a rack for 15 minutes.

> BUTTER, EGGS AND ALLERGENS
>
> **Butter and the rolling pin:** keep the butter cold but bendy (not hard, not soft), roll gently and chill the dough whenever the butter starts to soften or smear. Hot kitchens make lamination hard: work in a cool room or chill more often.
>
> **Eggs:** use eggs with the British Lion mark, wash your hands after handling raw egg, and bake egg-glazed bread until golden and cooked through. Don't taste raw dough.
>
> **Allergens:** wheat (gluten), milk, butter and egg. Label them if you share the bread. Cheese fillings add milk.

Experiments

EXPERIMENT

Butter temperature

Too cold, right or too warm.

1. Laminate three small bits of dough with butter that is fridge-hard, cold and bendy, and soft (left out for 20 minutes). Roll each out.

Look for: The hard butter cracks into shards and tears the dough; the right butter rolls out in a smooth even sheet; the soft butter smears into the dough and leaks.

EXPERIMENT

Number of folds

Two or three.

1. Make two batches of croissant dough, giving one 2 letter folds and one 3. Bake and compare the layers.

Look for: Three folds give a more even, flaky layered crumb. Two folds make a more open, bready croissant with fewer layers.

EXPERIMENT

Chilling

Rest or press on.

1. Fold one dough straight away and chill another for 45 minutes before the next fold.

Look for: The unchilled dough fights back and tears, and the butter softens. The chilled dough rolls easily.

EXPERIMENT

Proof temperature

Cool or warm.

1. Prove two croissants, one in a cool room (about 22°C) and one in a warm spot (about 30°C).

Look for: The warm one melts butter and leaks and bakes dense and greasy. The cool one stays layered and rises evenly.

Tasting notes

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Cinnamon swirl loaf				

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Garlic pull-apart bread				
Cheese-layered rolls				
Croissants				
Butter temperature				
Number of folds				
Chilling				
Proof temperature				

Troubleshooting

PROBLEM	LIKELY CAUSE	WHAT TO DO
Butter leaks out in the oven	Butter melted before baking, or not sealed	Proof cooler; seal the edges; chill before baking
No layers, bready	Butter blended into the dough, or too few folds	Keep butter cold; chill between folds
Butter shatters when rolling	Butter too cold	Let it warm for a few minutes until it bends
Swirl loaf unwinds	Rolled loosely or not sealed	Roll tightly; seam side down
Greasy, dense croissant	Over-proofed or too warm	Prove cooler, until puffy but not collapsed
Filling burnt on the tray	Sugar leaked	Line the tray; seal edges; use a tin

EGGS, HOT SUGAR AND ALLERGENS

Eggs: use eggs with the British Lion mark, wash your hands after handling raw egg, and bake egg-glazed bread until golden and cooked through. Don't taste raw dough.

Allergens: wheat (gluten), milk, butter and egg. Label them if you share the bread. Cheese fillings add

milk.

Hot ovens, trays and steam: use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Keeping filled breads: breads with cheese, garlic butter or egg glaze are best eaten within about 2 days. Keep them covered, in the fridge if the room is warm, and reheat until steaming hot.

CHECKPOINT: CAN YOU DO THIS NOW?

- ☐ I can roll a filling into a tight swirl.
- ☐ I can fold a dough around cheese or butter.
- ☐ I know why butter and dough must be the same firmness.
- ☐ I can chill between folds and work in the cool.
- ☐ I store filled bread safely.

NEXT CHAPTER

Cooking Skills: Bread 2, chapter 7 is Rye, Spelt and Other Grains: working with flours that have less gluten.

Cooking Skills: Bread 2

Chapter 7 · Rye, Spelt and Other Grains

SKILL GOAL

Bake with flours that have less gluten: mix them with wheat, handle them gently and know their limits.

Shopping list for this chapter

The basics

Wheat is the baker's friend because of its gluten. Other grains bring flavour, colour and nutrition but have little or no gluten, so they behave differently. The usual approach is to **mix them with strong wheat flour** or to use quick breads that don't depend on gluten at all.



Figure 7. More gluten means a taller loaf. Low-gluten flours bring flavour, so they are mixed with wheat or handled gently.

The grains

GRAIN	WHAT TO EXPECT	HOW TO HANDLE IT
Rye	Dark, earthy, a little sour; little gluten; sticky dough	Use 20 to 40% with strong white flour; wet hands; bake until well done and cool fully before slicing

GRAIN	WHAT TO EXPECT	HOW TO HANDLE IT
Spelt	Nutty and mild; weaker gluten, breaks down easily	Knead briefly; prove less; wet dough absorbs water slowly so rest it
Oats	Soft, sweet, moist crumb; no gluten	Soak first, cool, and mix with wheat flour
Cornmeal	Sweet, gritty, golden; no gluten	Use for quick breads with baking powder, or add a little to wheat dough
Wholemeal wheat	Nutty, denser; bran cuts the gluten	Add more water; allow a longer rest; mix with white flour

Working with low-gluten flours

- **Mix with strong wheat flour** while you are learning.
- **Add more water, but be careful:** rye and wholemeal absorb more water; spelt absorbs it more slowly, so rest the dough.
- **Knead gently:** spelt tears easily; rye doesn't develop much gluten at all.
- **Prove less:** low-gluten doughs collapse sooner than wheat.
- **Cool before cutting:** rye crumb is gummy until fully cooled, which can take several hours.

GLUTEN AND ALLERGENS

Rye, spelt and oats are not gluten-free. Rye and spelt contain gluten, and oats are often contaminated with it, so none of these breads suit people with coeliac disease. Cornmeal (maize) is naturally gluten-free, but the cornbread here also uses wheat flour.

Sticky dough: rye dough is sticky and doesn't pass the windowpane test, so don't keep adding flour. Wet your hands and use a scraper instead.

Try it

LEVEL 1 · START HERE

Rye and caraway loaf (30% rye)

2 hours 45 minutes (30 minutes of work) | 1 loaf (12 slices) | adding rye to a wheat dough

A beginner rye bread: 30% rye mixed with strong white flour, so you get the rye flavour and a sound structure. Caraway is the classic partner.

INGREDIENTS (12 PORTIONS)

350 g	strong white bread flour
150 g	wholemeal rye flour
1 sachet (7 g)	sachet fast-action dried yeast
10 g	fine salt
2 tsp	caraway seeds
1 tbsp	honey or black treacle
350 ml	lukewarm water

1. Mix both flours, the yeast, salt and caraway. Add the honey and water and mix to a sticky dough. It will be wetter and stickier than a wheat dough.
2. Knead for about 8 minutes with wet hands (don't add more flour), until it is smooth enough to hold together.
3. Prove for about **1 hour**. Shape into a round or oval, place on a lined tray, cover and prove for 40 to 45 minutes.
4. Bake at 220°C (200°C fan) for 15 minutes, then reduce to 200°C (180°C fan) for another **20 to 25 minutes**. It should sound hollow underneath. Cool completely (at least 1 hour) before slicing: rye needs time to set.

STICKY RYE DOUGH AND GLUTEN

Sticky dough: rye dough is sticky and doesn't pass the windowpane test, so don't keep adding flour. Wet your hands and use a scraper instead.

Rye, spelt and oats are not gluten-free. Rye and spelt contain gluten, and oats are often

> contaminated with it, so none of these breads suit people with coeliac disease. Cornmeal (maize) is naturally gluten-free, but the cornbread here also uses wheat flour.

LEVEL 2 · GENTLE

A spelt loaf

2 hours (25 minutes of work) | 1 loaf (12 slices) | kneading and proving a delicate dough

Spelt is an ancient wheat with a nutty, slightly sweet flavour. Its gluten is weaker and breaks down easily, so knead briefly and don't over-prove.

INGREDIENTS (12 PORTIONS)

500 g	white spelt flour (or half wholemeal spelt and half white spelt)
1 sachet (7 g)	sachet fast-action dried yeast
10 g	fine salt
320 ml	lukewarm water
1 tbsp	olive oil

1. Mix the flour, yeast, salt, water and oil to a soft dough. Knead for only **5 to 6 minutes**, until just smooth: longer breaks the gluten.
2. Prove for about **45 minutes to 1 hour**, until about doubled (spelt rises quickly and collapses if left).
3. Shape into a loaf and place in an oiled 900 g tin. Prove for 30 minutes, until just above the rim.
4. Bake at 200°C (180°C fan) for **35 to 40 minutes**, until golden and hollow underneath. Cool on a rack.

> **GLUTEN AND FLOUR**
>
> **Rye, spelt and oats are not gluten-free.** Rye and spelt contain gluten, and oats are often contaminated with it, so none of these breads suit people with coeliac disease. Cornmeal (maize) is naturally gluten-free, but the cornbread here also uses wheat flour.
>
> **Raw flour:** flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

LEVEL 2 · SOAKED GRAIN

Oat and honey loaf

2 hours 45 minutes (30 minutes of work, plus cooling) · 1 loaf (12 slices)

adding a soaked grain to the dough

Soaked oats make the crumb moist and slightly sweet and keep it fresh for longer. Cool the oats first so they don't kill the yeast.

INGREDIENTS (12 PORTIONS)

400 g	strong white bread flour
100 g	strong wholemeal bread flour
60 g	porridge oats, plus extra for the top
150 ml	boiling water, for soaking the oats
1 sachet (7 g)	sachet fast-action dried yeast
10 g	fine salt
2 tbsp	honey
200 ml	lukewarm water
1 tbsp	milk for brushing

1. Pour the boiling water over the oats and leave for about 30 minutes until cool and thick.
2. Mix both flours, the yeast and salt. Add the soaked oats, honey and lukewarm water and mix to a soft dough. Knead for 8 to 10 minutes.
3. Prove for about **1 hour 15 minutes**. Shape into a loaf, place in an oiled 900 g tin, brush with milk and sprinkle with oats. Prove for 45 minutes.
4. Bake at 200°C (180°C fan) for **40 minutes**, covering with foil if the top browns fast. Cool on a rack.

> **OATS AND GLUTEN**
>
> **Soaked oats:** cool the oats to lukewarm before mixing them in, because hot oats would kill the yeast. Keep soaked oats covered and use the same day.

> **Rye, spelt and oats are not gluten-free.** Rye and spelt contain gluten, and oats are often contaminated with it, so none of these breads suit people with coeliac disease. Cornmeal (maize) is naturally gluten-free, but the cornbread here also uses wheat flour.

LEVEL 2 · QUICK BREAD

Cornbread

40 minutes | 1 tin (9 pieces) | a quick bread with a grain that has no gluten

Cornbread has no yeast and no kneading: mix, pour and bake. Cornmeal has no gluten, so the structure comes from the wheat flour, eggs and baking powder.

INGREDIENTS (9 PORTIONS)

150 g	fine cornmeal (or polenta flour)
150 g	plain flour
1 tbsp	baking powder
½ tsp	salt
2 tbsp	sugar
2	Lion-marked eggs
300 ml	milk
50 g	butter, melted, plus extra for the tin

1. Heat the oven to 200°C (180°C fan). Butter a 20 cm square tin (or a cast-iron pan) and put it in the oven for 5 minutes to heat.
2. Mix the cornmeal, flour, baking powder, salt and sugar. Whisk the eggs, milk and melted butter, pour into the dry mix and stir until just combined (a few lumps are fine).
3. Pour into the hot tin and bake for **20 to 25 minutes**, until golden and a skewer comes out clean. Cool for 10 minutes and cut into squares.

HOT TIN, EGGS AND GLUTEN

Hot ovens, trays and steam: use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Cornbread and eggs: use eggs with the British Lion mark and bake until a skewer comes out clean. Eat within 2 days, covered, and reheat until steaming hot.

Rye, spelt and oats are not gluten-free. Rye and spelt contain gluten, and oats are often

> contaminated with it, so none of these breads suit people with coeliac disease. Cornmeal (maize) is naturally gluten-free, but the cornbread here also uses wheat flour.

Experiments

EXPERIMENT

Rye percentage

0, 30 or 60%.

1. Make three small loaves from 200 g flour each, with 0%, 30% and 60% rye flour (the rest strong white), adjusting water to a similar dough feel.

Look for: More rye means a darker, denser, stickier and more flavourful loaf. At 60% the crumb is close and the dough very hard to handle.

EXPERIMENT

Water amount

Stiff or wet rye.

1. Make two small rye doughs, one at 65% water and one at 80%.

Look for: The wetter dough gives a moister crumb and more open structure but is harder to shape; the stiffer dough is easy to handle but denser.

EXPERIMENT

Soaking

Soaked or dry oats.

1. Make two small oat doughs, one with soaked oats and one with dry oats added with extra water.

Look for: Soaked oats make a softer, moister crumb. Dry oats are chewy and draw water from the dough, leaving it dry.

EXPERIMENT

Cooling and cutting

Warm or cooled rye.

1. Cut one slice of the rye loaf after 30 minutes and another after 4 hours.

Look for: The warm slice is gummy and compresses. The cooled slice has a firm, clean crumb. Rye rewards patience.

Tasting notes

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Rye and caraway loaf				
Spelt loaf				
Oat and honey loaf				
Cornbread				
Rye percentage				
Water amount				
Soaking				
Cooling and cutting				

Troubleshooting

PROBLEM	LIKELY CAUSE	WHAT TO DO
Rye loaf dense and gummy	Too much rye, cut too soon, or under-baked	Use 30% rye; bake until hollow; cool for at least an hour
Sticky rye dough	Normal	Wet hands and a scraper; don't add flour
Spelt loaf collapsed	Over-kneaded or over-proved	Knead briefly; prove less

PROBLEM	LIKELY CAUSE	WHAT TO DO
Oat loaf dry	Dry oats absorbed the water	Soak the oats first
Cornbread crumbly	Too much cornmeal, or over-baked	Check the ratio; bake until just done
Pale crust	Oven too cool	Start hot, then lower the heat

GLUTEN, EGGS AND HEAT

Rye, spelt and oats are not gluten-free. Rye and spelt contain gluten, and oats are often contaminated with it, so none of these breads suit people with coeliac disease. Cornmeal (maize) is naturally gluten-free, but the cornbread here also uses wheat flour.

Cornbread and eggs: use eggs with the British Lion mark and bake until a skewer comes out clean. Eat within 2 days, covered, and reheat until steaming hot.

Hot ovens, trays and steam: use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

CHECKPOINT: CAN YOU DO THIS NOW?

- ☐ I know which grains have gluten and which do not.
- ☐ I can add rye, spelt or oats to a dough sensibly.
- ☐ I handle a sticky rye dough with wet hands.
- ☐ I can make a quick bread with cornmeal.
- ☐ I let rye cool fully before slicing.

NEXT CHAPTER

Cooking Skills: Bread 2, chapter 8 is A Baker's Weekend: planning a weekend of sourdough, rolls and pizza, fixing faults and building a bread basket.

Cooking Skills: Bread 2

Chapter 8 · A Baker's Weekend

SKILL GOAL

Plan and run a weekend of baking, find out why breads go wrong and build a bread basket of your own.

Shopping list for this chapter

The basics

You now have pre-ferments, sourdough, enriched doughs, pizza, laminated breads and other grains. The last chapter is about **using them together:** planning a weekend, finding out why things go wrong and designing your own bread basket.



Figure 8. A weekend plan for a sourdough loaf and pizza. The fridge turns waiting time into flavour, so there is little work on Sunday.

Planning a baking weekend

- **Mix slow doughs first:** pizza dough, sourdough and pre-ferments.

- **Use the fridge as a pause button:** it moves work to the evening and the baking to the morning.
- **Bake in order of heat:** hottest first (pizza, sourdough in a pot), then moderate (enriched), then cool.
- **Overlap rises:** shape one dough while another proves.
- **Write the plan down** and tick off steps.
- **Leave space for the oven:** pots and trays need 30 to 45 minutes to heat.

Your skills table

SKILL	CHAPTER	BEST FOR	MY TOP TIP
Pre-ferments	Bread 2, chapter 1	More flavour for little work	Ferment a poolish overnight; count it in the recipe
Sourdough starter	Bread 2, chapter 2	Wild-yeast breads	Feed on a schedule; use it at its peak
Sourdough bread	Bread 2, chapter 3	Crusty loaves with tang	Judge by the dough, not the clock
Enriched doughs	Bread 2, chapter 4	Soft breads and buns	Knead longer; add butter late
Pizza	Bread 2, chapter 5	Quick meals and parties	Rest the dough; a hot tray; light toppings
Laminated and folded	Bread 2, chapter 6	Treat breads	Keep it cold; chill between folds
Rye, spelt and other grains	Bread 2, chapter 7	Flavour and variety	Mix with wheat; handle gently

Fill in your own tips below.

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
My best sourdough				
My best enriched bread				
My best pizza				

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
My best laminated bread				
My favourite grain				
My signature bread basket				

Try it

LEVEL 1 · START HERE

A weekend plan: sourdough and pizza

Friday evening to Sunday lunchtime, about 3 hours of work

1 sourdough loaf and 4 pizzas

using the fridge to turn waiting into flavour

A good baking weekend uses the fridge as a pause button. Mix the slow doughs on Friday, shape on Saturday, and bake on Sunday morning.

INGREDIENTS (8 PORTIONS)

1 batch sourdough loaf: 100 g starter, 450 g white flour, 50 g wholemeal flour, 325 ml water, 10 g salt (Cooking Skills: Bread 2, chapter 3)

1 batch pizza dough for 4 pizzas: 500 g flour, 10 g salt, 2 g yeast (a scant ½ tsp), 325 ml water, 1 tbsp oil, with a cold rise (Cooking Skills: Bread 2, chapter 5)

1 batch pizza sauce and mozzarella, or your own toppings

1 tbsp flour or semolina for dusting

1. **Friday evening:** feed your starter. Mix the pizza dough with the reduced yeast, knead for 10 minutes, rest for 30 minutes, then divide into 4, put in oiled containers and chill for 24 to 36 hours.
2. **Saturday morning:** let the starter peak (4 to 8 hours after a feed). Mix the flour and water for the sourdough and rest for 30 minutes, add starter and salt, then fold every 30 minutes for 2 hours.
3. **Saturday afternoon:** bulk rise for 2 to 4 hours until grown by half. Shape, place in a floured bowl or basket and chill overnight.
4. **Sunday morning:** heat the oven with a pot inside to 240°C (220°C fan). Bake the sourdough straight from the fridge, 20 minutes with the lid on and 20 minutes with it off.
5. **Sunday lunchtime:** take the pizza dough out for an hour to come to room temperature, then stretch and bake the pizzas on a preheated tray at the highest heat for 8 to 10 minutes each.
6. Write down what worked and what you would change.

> **HEAT, FLOUR AND FRIDGE DOUGHS**

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

Hot ovens, trays and steam: use dry oven gloves, pull the shelf out rather than reaching in, and put hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Bread on the table: bread with butter, cheese or dips shouldn't sit out all day. Cover leftovers, keep dairy-filled and egg-glazed breads in the fridge if the room is warm, eat within about 2 days, and throw away any bread that grows mould (the whole loaf). Freeze what you won't eat.

LEVEL 2 · DIAGNOSE

A fault-finding clinic for all the doughs

1 hour | no portions (a learning exercise)

finding the cause across sourdough, enriched, laminated and pizza doughs

Use the questions below on any bread that has gone wrong, then change one thing and try again. Cooking Skills: Bread 1, chapter 8 has the basic clinic: this one adds the new doughs.

INGREDIENTS (1 PORTION)

1	a bread that went wrong, or a recipe you have struggled with
1	notebook and pen

1. **Sourdough:** dense with big holes (under-proofed or weak starter), flat and sour (over-proofed), pale (pot not hot enough). Was the starter at its peak? Did the dough grow by about half?
2. **Pre-ferments:** flat or sharp (the poolish was too old), no flavour (too young). How old was it, and at what temperature did it ferment?
3. **Enriched doughs:** slow to rise (a lot of sugar and fat), dense (too little kneading), burnt outside and raw inside (oven too hot, or too big). Did you add the butter after the gluten started?
4. **Pizza:** soggy middle (too many toppings, tray not hot), springy dough (not rested), pale base (cold tray).
5. **Laminated:** butter leaked (proofed too warm or not sealed), no layers (butter too soft, or not chilled between folds).
6. **Rye and spelt:** gummy (cut too soon, too much rye), collapsed (over-kneaded or over-proved).
7. Write down the cause, change one thing, bake again and compare.

> **KEEP A BAKING DIARY**
>
> Write down the flour, water, starter or yeast, times, room temperature and oven. The next time something goes wrong, the diary tells you why.

LEVEL 3 · CREATE

Your own bread basket for 8

Plan for 30 minutes, bake over 1 to 2 days | 8 portions (about 2 pieces each)

designing a basket of three breads

A bread basket for a dinner party: one familiar bread, one with character and one quick extra, with a flavoured butter. Plan the baking over two days so that most of it is done before the guests arrive.

INGREDIENTS (8 PORTIONS)

1 batch	a bread that suits the meal: soft rolls (Cooking Skills: Bread 1, chapter 6)
1 batch	a bread with character: a seeded sourdough, rye loaf or focaccia
1 batch	a quick extra: garlic flatbread or cornbread
100 g	butter, softened, mixed with herbs, garlic or honey
1	a dip or spread, such as hummus or olive oil with balsamic vinegar

1. **Choose three breads** that contrast in shape, flavour and texture (soft, crusty, flat), and that suit the main course.
2. **Plan the timing:** bake the sourdough or rye the day before (they improve overnight), shape the rolls the evening before and bake them on the day, and make the quick bread last.
3. **Make a flavoured butter:** beat the soft butter with herbs, garlic or honey and chill it in a roll or dish.
4. **Serve warm:** warm the bread for 5 to 8 minutes at 160°C (140°C fan) wrapped in foil, put it in a cloth-lined basket and label each bread.
5. **Clear up:** keep leftover bread covered, freeze what you won't eat, and note what guests liked.

ALLERGENS, LABELS AND KEEPING

Label for guests: put a small card by each bread saying what it is and whether it contains milk, egg, seeds, nuts or sesame. All of these breads contain wheat (gluten). If anyone has coeliac disease, tell them clearly, because none of these breads are gluten-free.

Bread on the table: bread with butter, cheese or dips shouldn't sit out all day. Cover leftovers,

> keep dairy-filled and egg-glazed breads in the fridge if the room is warm, eat within about 2 days, and throw away any bread that grows mould (the whole loaf). Freeze what you won't eat.

Experiments

EXPERIMENT

A timed weekend

Plan it, then run it.

1. Write a plan for two breads over a weekend. Note the actual time each step took.

Look for: Compare your plan with what happened. The usual mistakes are forgetting to feed the starter in time and starting the oven too late. Fix the plan and keep it.

EXPERIMENT

Swap one flour

One change.

1. Bake your sourdough or tin loaf twice, once as written and once with 100 g of the flour swapped for rye or spelt (adding or reducing water as needed).

Look for: The swapped loaf is darker or nuttier, and the dough handles differently. Write down which you prefer and why.

EXPERIMENT

Your own recipe

Build a new bread.

1. Combine two things you have learned (for example a poolish with a seeded or cheese filling, or a sourdough with a swirl) into a new recipe. Bake it, change one thing and bake again.

Look for: Write down both versions. This is how every baker builds a signature loaf.

Tasting notes

WHAT I TRIED	METHOD OR AMOUNT	WHAT I SAW	WHAT I THOUGHT	WILL I DO IT AGAIN?
Weekend plan				
Fault-finding clinic				
Bread basket				
Timed weekend				
Swapped flour				
My own recipe				

Troubleshooting

PROBLEM	LIKELY CAUSE	WHAT TO DO
Starter not ready when you need it	Not fed in time	Feed it the evening before; keep a spare in the fridge
Everything needs the oven at once	Poor planning	Bake by temperature order; use the fridge to delay shaping
Can't tell what went wrong	Changed too much at once	Change one thing; keep a baking diary
Bread goes stale too fast	Stored badly	Freeze slices; don't use the fridge for plain bread
Too much bread	Over-baked	Plan portions; freeze or share
A guest with an allergy	Didn't ask	Ask beforehand; label breads; keep a safe alternative

BAKING-WEEKEND SAFETY

Raw flour: flour is a raw ingredient and can carry bacteria such as E. coli, which are killed only by baking or cooking. Don't taste raw dough, don't let children eat or play with it, and wash your hands, bowls and surfaces after handling flour and dough.

Hot ovens, trays and steam: use dry oven gloves, pull the shelf out rather than reaching in, and put

hot trays and tins on a heatproof surface. If you put a tray of boiling water in the oven for steam, pour it carefully with the oven door open a little and your face well back: the steam is far hotter than the water.

Label for guests: put a small card by each bread saying what it is and whether it contains milk, egg, seeds, nuts or sesame. All of these breads contain wheat (gluten). If anyone has coeliac disease, tell them clearly, because none of these breads are gluten-free.

Bread on the table: bread with butter, cheese or dips shouldn't sit out all day. Cover leftovers, keep dairy-filled and egg-glazed breads in the fridge if the room is warm, eat within about 2 days, and throw away any bread that grows mould (the whole loaf). Freeze what you won't eat.

CHECKPOINT: CAN YOU DO THIS NOW?

- ☐ I can plan a baking weekend using the fridge.
- ☐ I can diagnose a failed loaf across the different doughs.
- ☐ I can design and time a bread basket.
- ☐ I label breads for allergies and gluten.
- ☐ I keep and freeze bread safely.

NEXT CHAPTER

Cooking Skills: Bread 2 is complete. Cooking Skills: Pastry 1 is planned, with shortcrust, pies and tarts.