



*Tips & Techniques*

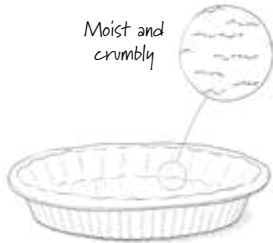
*Mixing*

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# Tightening your glutens; the key to perfect pastry.

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Flour is a pretty intriguing and versatile ingredient.



*Tight, unattached glutens encased in butter*

It is quite incredible when you think about it, how foods with such dramatically different textures like crumbly shortbread, compared with a fluffy croissant, a quiche crust or a bread roll, all build their structure using flour. While what ingredients you mix with flour plays a part, the order in which you add them and the way you combine them is far more important. It's this that determines how much the glutens, the proteins that give dough its elasticity, are developed.

The structure of any dough is essentially determined by how liquids (water or milk) and flour react to one another. The length of time the dough is kneaded as well as the amount of time the gluten in the flour is in contact with liquid is what determines the elasticity of the glutens and hence the dough. Bread dough needs wet flour, heavy kneading and a decent proving time, to maximise its elasticity. But for a crisp, flaky pastry, the opposite is true and gluten development needs to be kept to a minimum. It means essentially inverting the mixing process by adding the fat (room temperature butter works best) to the flour before any liquid to form a moisture barrier around the glutens.



*Elastic, entwined glutens*

But the other secret to truly great pastry is temperature. Keeping the pastry mix cool is critical to prevent the glutens from developing before baking, and also helps prevent cracking.

## TIP

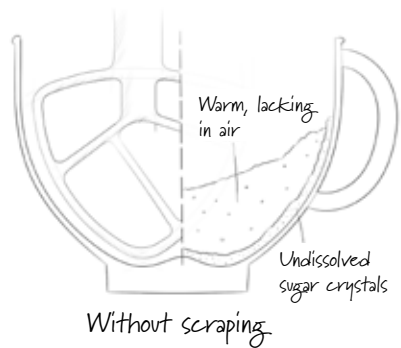
There are three simple but important steps to minimising heat transfer while making pastry. First, pre-cool all the key equipment, like the mixing bowl, the dough hook, the rolling pin and the pastry board in the fridge for half an hour or more before you start. Second, once you've finished mixing and are ready to mould the dough, do so using only your fingertips so you minimise heat transfer from your palms. Finally, when resting the finished pastry dough, keep it in the freezer for about half an hour before baking. A rested, pre-cooled pastry will evaporate significantly less while baking which reduces the chance of shrinking and cracking.

Controlling temperature helps keep your glutens tight and tighter glutens make a world of difference to taste and texture.

## Cream your butter fast for fluffier results!

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Butter creamed with sugar properly is well aerated and you can't feel any sugar crystals when you rub the butter between your fingers.



**The key to good aeration is to not over mix.**

Mixing acts to heat and soften the butter and, because warm butter can't trap air very well, if you mix it too much you start to beat the air back out of the butter. Be that as it may, the key to breaking the sugar crystals down is giving them a good beating.

**So how do you dissolve crystals and still trap the air?**

The key is to stop the butter from sticking to the walls of the mixer and not to over mix. If butter's stuck to the walls, the stuff in the middle gets over mixed while you end up under mixing the sides. This means less air in the middle and more crystals on the outside.

Stop and scrape regularly and as soon as it turns a paler yellow colour, stop and rub the butter between your fingers to check for crystals. If you can't feel any, stop right away.

### TIP

The best way to do it well and repeatedly is to use the scraper beater that comes with this mixer, not the metal one. The scraper beater scrapes the butter from the sides while it mixes to beat it all at the same time. **WARNING** – this is about 3 times faster than using the metal beater so keep an eye on it the first time you do it. Make a note of how long it takes then next time, set the mixer's timer and it will turn off when it's done so you don't over mix.

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