

Note: If you're curious to test out the recipes mentioned in Anushka Mukherjee's Truth Be Told piece, '[Four Scientific Principles That Make Any Food Tastier](#)', this document has all the details you need.

Three recipes that use science to make food tastier

1. Chicken Schnitzel sandwich

*Using **brining** to soften chicken instead of marinating*

Step I - Brining the chicken

[serves 2-3]

Ingredients:

2 Medium sized chicken breasts

2 - 3 cups of water

1.5 tbsp salt

1 tbsp sugar

Aromats/spices, as per choice' can include but not limited to bay leaf, cloves, peppercorns, cinnamon, crushed garlic

Process:

Boil one cup of water. Let it cool slightly, and dissolve the salt and sugar into it. Add another cup of room temperature water to cool it down—we don't want to start the cooking process by placing the chicken in hot water, but we do need the water to be warm so the salt and sugar can completely dissolve. Submerge the chicken breasts in the water, and add the aromats. Brine on the countertop if you live in a chilly place, but definitely in a fridge for most places in India. Remove the chicken breasts after an hour or two (a 30-minute brine is also effective in a rush) and pat them dry.



Step 2 - Crisping the schnitzel

Ingredients

100 g fine panko breadcrumbs...or, just blitz some plain rusk coarsely in a grinder.

20 g parmesan cheese (or any hard, umami cheese), to mix with the breadcrumbs

130 g maida, seasoned with salt and chilli powder/cayenne pepper

3 eggs, beaten with a little salt

Process:

Place a lightly oiled cling wrap or plastic bag on top of the chicken breasts, and pound them with medium force with a kitchen mallet until it's about 1 cm thick. I just used the

mortar from my mortar and pestle, and it works fine, too. This is so that the surface area of the chicken can increase, easing the crisping. Season them lightly with salt (yes, more salt!). Now, set up your station with a production line of three bowls. Start with the flour bowl, then the egg bowl, and then the breadcrumbs + parmesan bowl. Dredge chicken in that order: first coat with flour (shaking off excess), then dip into the egg, and then roll it in the breadcrumbs. Set aside on a tray. Repeat with your next piece. Don't let them stay dredged for too long, so remember to have kept the oil ready.

Once the oil in your pan is hot, fry the schnitzel on medium-high heat for at least 3-4 minutes per side, if thinned out by a mallet. They may take slightly longer if not hammered down.



I skimmed out on the breadcrumbs, I realised. Your schnitzel can be way more crispy!

Optional additions:

For a punchy chicken schnitzel sandwich, pair the chicken with the following flavours/textures, just as an easy formula: something acidic, something sweet,

something fatty (creamy). I made a quick hot honey by heating honey on a low sim with aromats and chilli flakes for the sweet element; a quick mint and garlic yogurt with greek yogurt and freshly grated garlic and tons of squeezed lemon for for the acidic element, and a simple coleslaw for the creamy element!



The sambal is from a jar, and was an excellent acidic as well as “hot” element to the dish



2. Prawn Pulao

Using **food pairing** to create a specific spice mix for a pulao. Replace prawns with mushrooms or brinjal for a vegetarian version.

[serves 4]

Ingredients

Prawn marinade

- 500 g large prawns, cleaned & deveined. I keep the heads on – they impart fantastic flavour to the curries and rice preparations. They may soften and disintegrate in this recipe, so if you're okay with some heads/shells in your pulao (as a trade-off), I would highly recommend
- ½ tsp salt + pinch of turmeric
- 1 tsp finely grated ginger + ½ tsp garlic paste/grated garlic
- Half a lemon, for squeezing. (Acids help tenderize seafood, but different acids have different effects. Citric acid from lemons tenderise slowly but firmly, while the acetic acids in vinegar tenderize quickly, with sharpness.)

Whole spices

- ½ tsp cumin seeds (jeera)
- ½ inch cinnamon stick
- 2-3 cloves
- 5-6 pepper corns
- 2 Bay leaves

Spice mix

- 1 tsp fennel seeds
- 1 star anise piece
- 3 green cardamoms (you can use only seeds)
- 1 tsp coriander seeds.

Base and rice

- 2 medium onions
- 1 tomato
- Ginger and garlic, grated or blitzed (fresh is ideal)
- Chilli powder
- Turmeric powder

- 3-4 green chillies
- 2 cups short grain rice
- **(Optional)** 1 cup coconut milk

Process:

Marinate prawns with the listed ingredients, but for longer than 15 minutes. Technically, the acid will actually start “cooking” the prawns after that.

Also soak your rice at this stage.



In a heavy bottomed pan, start the pulao by frying off the whole spices in heated ghee. Add chopped green chillis (volatile rule: if you want it spicier, chop it smaller) and as they sizzle, the ginger and garlic. I made a rough paste of all three—even 5 minutes of effort adds more flavour than packet pastes! Follow with sliced onions.



When the onions have shrunk and softened to a light, translucent pink, add the tomatoes. At this stage, add a bit of salt and if you prefer, some sugar (a pinch of sugar balances flavour wonderfully. It enhances saltiness, rounds out bitterness and reduces the stinging sharpness of acid). But the salt will pull out water from the vegetables, especially the watery tomato, so don't add the rest of your spices yet. Let it dry out until your onions and tomatoes form a jammy mixture.

Now, add a bit of chilli powder and turmeric.

Grind together the spices chosen by pairing into a fine powder, and add it here.



The cloves and peppercorn were to bloom as whole spices



Saute the mixture on low to medium heat until you see all the spices fold in, and the tomatoes adopt a deeper colour. At this very last stage is when we'll add the prawns (and hence, it is advisable to start marinating the prawns just when beginning to cook), because they over cook easily. Fold in the prawns with your masala and mix well. When

the prawns firm up a bit and lose their grey colour slightly (and the aromas of all the spices have wafted out into the room), add 4 cups of boiled water, followed by rice.



Optionally, I added some coriander leaves and stems with the prawns.

Make sure your flame is on a higher heat now. Let the water come to an angry bubbling, before lowering the heat. Mix everything well together once. At this stage, you can add one cup of coconut milk: this adds a subtle, light flavour to the pulao, and rounds out all the spices well. If you like a bit of a kick, skip this step.

Cover the pulao with a tight lid and heat on low heat for at least 25 minutes. Keep checking. Let the pulao form a light, crispy crust on the bottom of the pan, but any more than that and you may burn it!



Enjoy with a salad or raita.



3. Caramelized onion and cream pasta

Using the **maliard reaction** to create a deep, sweet onion sauce

[serves 2-3]

Ingredients:

- 3 large yellow onions (about 800g), thinly sliced
- 2 tbsp olive oil
- 1 tbsp butter
- ½ tsp salt

- 350g spaghetti
- 4 cloves garlic, finely chopped
- 150 ml cream
- 30g grated Parmesan or any hard cheese
- 1-2 tsp red wine or balsamic vinegar

Process:

This whole dish champions onions. Take your time and slightly your onions *really* thinly—as thinly as you ever have. This makes a lot of difference. Caramelized onions are so jammy that they melt in your mouth, and bigger pieces will add an unnecessary bite to the process. Start boiling water for spaghetti, salt it generously.



In a wide pan, add the olive oil and butter. Add the garlic, then add the onions and season with salt. Cook the onions of medium-low heat, stirring every 5-8 minutes in the beginning.



Now, the onions will transcend in stages.

After the first 15-20 mins, they will be softer and translucent.



At the thirty minute mark, the onions will start to crisp up and brown.



Continue cooking – the onions will get browner and jammier. The malliard reaction will work its wonders better and better once all of the water from the onions (and there is a lot) is sweated out.



Between 45 and 60 minutes, the onions will finally be completely malliard-ed. They will be soft, brown and jammy. Taking it any further will risk burning.



The next steps are simple enough. Don't do too much with the onions. Deglaze your pan with a little red wine or balsamic vinegar, and once it simmers a bit, add the fresh cream. You can add a bit of the pasta water here to adjust consistency.



Season with salt and pepper (adjusting salt as per the amount of salty pasta water added). Add the cheese, and finally fold in the spaghetti.

The pasta will remind you of a rich french onion soup, but creamier and subtler!

