

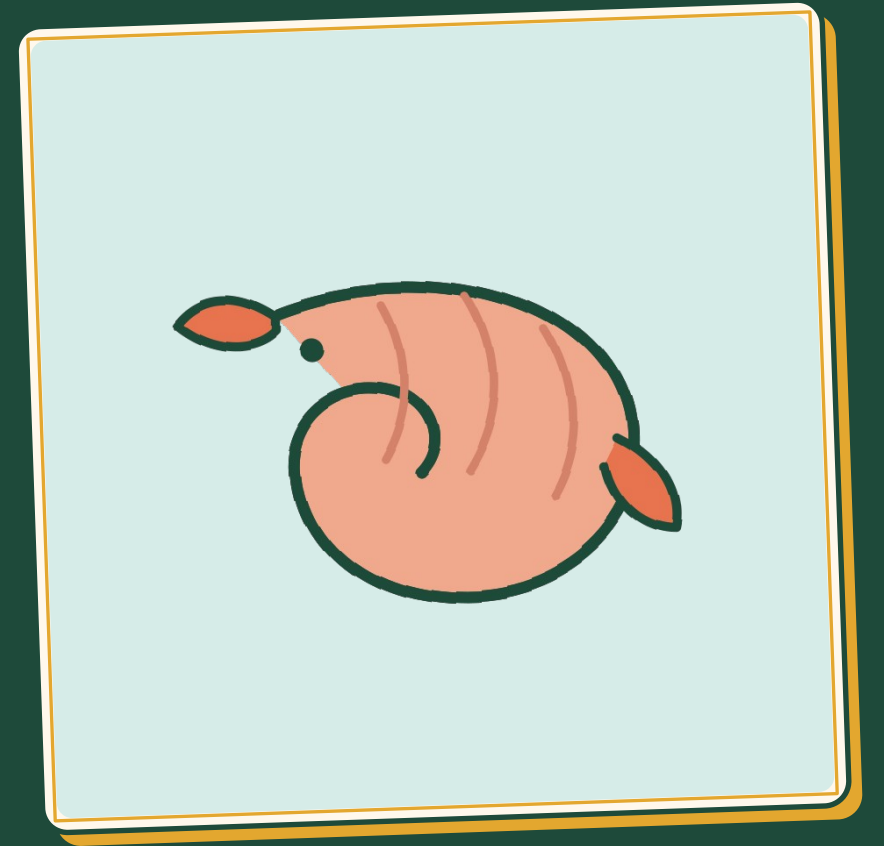
RECIPE BREAKDOWN · RECIPE 17

Mango Shrimp Ceviche

Caribbean freshness — bright, acidic, clean protein, no heat required.

Six ingredients. The only thing that cooks anything here is a lime.

Scratch Nutrition Lab × Evans High School



THE WHOLE TRICK

Acid cooks. It just takes longer.

WITH HEAT

Heat unwinds the protein.

A pan at 400°F forces the protein strands apart and they set. Pink, firm, opaque — done in minutes.

WITH ACID

Lime juice does the same thing.

The acid unwinds the same strands chemically. Same colour change, same firm texture, same food safety. It takes thirty minutes instead of four.

Ceviche reflects the food science of Indigenous and African coastal communities across Latin America and the Caribbean. They worked this out long before anybody had a word for denaturation.

ONE SERVING

What this bowl is carrying

240

CALORIES

30g

PROTEIN

16g

CARBS

6g

FAT

4g

FIBER

Thirty grams of protein for two hundred and forty calories. Go back to the number you calculated yesterday — one bowl of this is most of a meal's worth.

Take CTRL · Recipe 17

HOW THIS WORKS

One Ingredient at a Time

1

Picture it

The ingredient, on its own.

2

Read the jobs

Three or four things it actually does.

3

Then build it

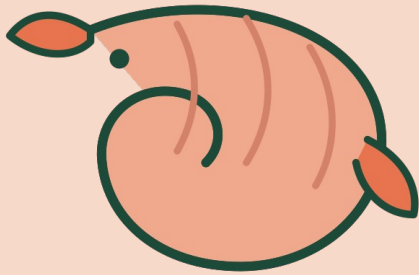
Six ingredients, one bowl.

Nothing in this bowl is random. Every piece is doing something.

INGREDIENT 01 OF 06

Shrimp

1 lb jumbo, peeled, deveined, halved



1

Lean complete protein

About 30 grams a serving, with all nine essential amino acids and very little fat.

2

Iodine

Shellfish is one of the better sources. Your thyroid runs on it.

3

Cooks without heat

The acid does the work. That's the technique you're here to learn.

4

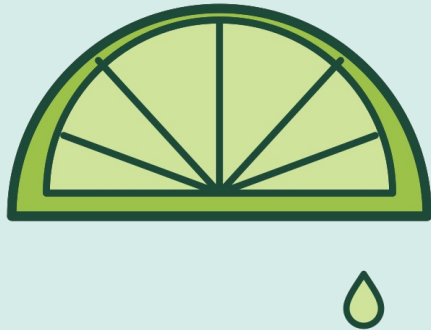
Watch it change

Grey and translucent going in, pink and opaque coming out. That's the protein denaturing.

INGREDIENT 02 OF 06

Lime Juice

½ cup · 4–5 limes · this is the heat source



THIS IS THE STOVE

1

Acid cooks the protein

Denaturation — the same structural change heat causes, done chemically instead.

2

Vitamin C

And it boosts how much iron your body pulls out of the shrimp.

3

It's also the seasoning

Sour balances salt, so the dish needs less of it.

4

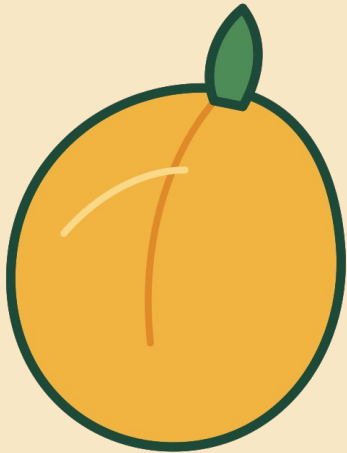
Fresh, not bottled

Bottled lime is weaker and flatter. This recipe leans on the acid — use real limes.

INGREDIENT 03 OF 06

Mango

1, diced



1

Vitamins A and C

The orange flesh is carotenoids on their way to becoming vitamin A.

2

Sweet against sour

The counterweight to all that lime. Without it the dish is just sharp.

3

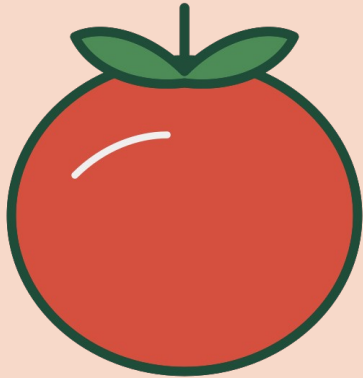
Fiber

Fruit sugar arriving with the whole fruit around it.

INGREDIENT 04 OF 06

Cherry Tomatoes

1 cup, diced



1

Lycopene

The antioxidant behind the red. The avocado's fat helps you absorb it.

2

Vitamin C

Teams up with the lime and the sweet peppers.

3

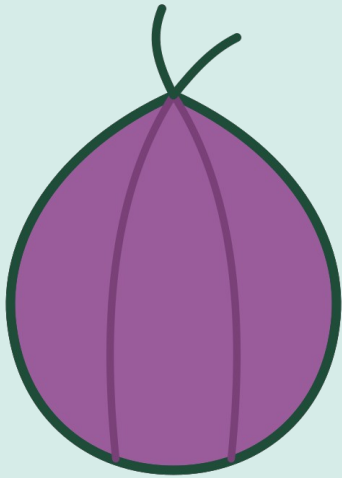
Mostly water

Which is where a lot of the juice in the bowl comes from.

INGREDIENT 05 OF 06

Red Onion

½, sliced thin



1

Quercetin

An antioxidant concentrated in the purple outer layers.

2

Prebiotic fiber

Food for the gut bacteria — same thread as the plant-forward session.

3

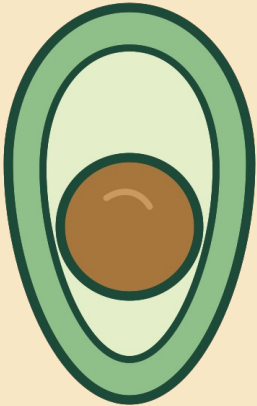
Slice it thin

Thick raw onion takes over. Thin slices season the bowl instead of dominating it.

INGREDIENT 06 OF 06

Avocado

1, diced · goes on last



1

Monounsaturated fat

The good fat, and the thing that makes the whole bowl feel rich.

2

It unlocks the rest

Lycopene and vitamins A and K need fat to be absorbed. The avocado is the vehicle.

3

Potassium

Balances fluids and blood pressure.

4

Last, not first

Fold it in at the end or it turns to paste in the acid.

PUT IT TOGETHER

Ingredients Work as a Team



Lime + shrimp

The acid cooks the protein and boosts how much iron your body pulls out of it. One ingredient, two jobs.



Avocado + tomato

Lycopene and vitamins A and K need fat. The avocado is what carries them in.



Mango + lime

All that acid needs a counterweight. Without the sweet, the bowl is just sharp.

NOW LET'S BUILD IT

**No stove. Just a bowl and
thirty minutes.**

Watch the shrimp go from grey to pink. That colour change is the whole science lesson, and you did it with fruit.

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