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Seafood and
your health

PREGNANCY

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Seafood and your health

Evidence shows that eating a balanced diet that is high in specific types of seafood has benefits for both you and your baby.

This booklet will help guide your food choices and includes a 14 day meal plans to help you to maintain your health during pregnancy and help the neurological development of your baby.

How can seafood help during pregnancy?

Including seafood in a healthy diet can improve and maintain your health. A healthy diet with high levels of oily fish intake during pregnancy has been associated with longer gestation, increased birth weight and lower hypertension.

It also assists a baby's brain to develop during pregnancy. If you are pregnant or planning pregnancy, a diet including seafood is a healthy food choice.

Selecting seafood is also a smart choice for lowering cholesterol, and the omega-3 fatty acids in oily fish can actually help to prevent coronary heart disease. In addition to omega-3, seafood contains many other nutrients beneficial to health, including: selenium; iodine; zinc; calcium and vitamin D.

It's also low in saturated fat, high in protein, and a good source of energy.

Iron	Iron is important for maintaining energy levels and a strong immune system. Mussels, oysters and tinned sardines are good sources of iron.
Iodine	Iodine is important for growth and seafood is the best natural source of iodine. Oysters, mussels and scallops are good sources of iodine.
Folate	Folate aids the prevention of neural tube defects in growing babies. Oysters and mussels are sources of folate.
Vitamin B12	Vitamin B12 helps the brain to work normally. Sardines, mussels and tuna are good sources of Vitamin B12.
Vitamin D	Vitamin D is good for the immune system and strong bones and muscles. Australian salmon, Atlantic salmon and tuna are good sources of Vitamin D.
Vitamins A & E	Vitamins A & E are powerful antioxidants which help the immune system and eye health. Mussels are the richest seafood source of vitamin A. Atlantic salmon and sardines are good sources of vitamin E.
Calcium	Calcium is important for maintaining healthy teeth and bones. Australian salmon and sardines are rich sources of calcium.

How much seafood do I need to stay healthy?

Evidence suggests that women should aim to consume 500mg of omega-3s per day.

Some types of seafood contain higher levels of Omega-3s than others. So the number of serves of seafood you need to eat each week to maintain good health depends on the type of seafood you eat. Generally, one serve of seafood is around 150g.



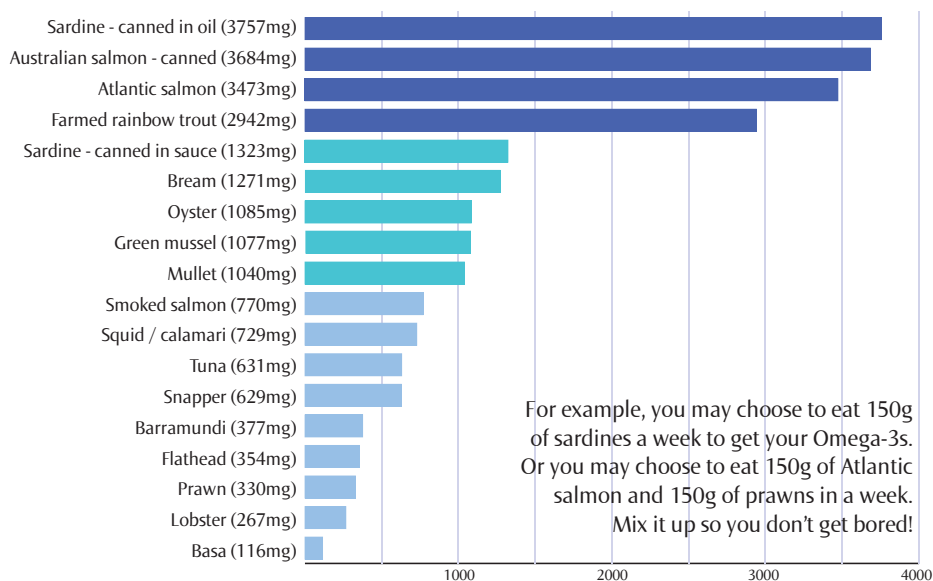


Omega-3s

Omega-3 fatty acids (Omega-3s) are essential to our health. Our bodies cannot produce these fatty acids and so we need to eat foods that contain them. The best source of omega-3s is seafood. In fact, the regular intake of Omega-3s as part of a healthy diet provides health benefit for conditions such as diabetes, heart disease, arthritis and some cancers.













How much omega-3?

Adults should aim to include 3500 - 4000mg of omega-3 in their diet each week. This table shows you how much Omega-3 is in a 150g serve of a variety of fish and seafood:



Which fish to choose?

Examples of seafood that are high, medium or low in Omega-3s.

A	B	C
High omega-3	Medium omega-3	Low omega-3
 Atlantic salmon	 Bream	 Baramundi
 Trout	 Mussels	 Snapper
 Sardines	 Oysters	 Smoked salmon
 Canned salmon	 Mullet	 Canned tuna

What about mercury?

The good news is that most common fish species available in Australia are perfectly safe to consume while pregnant or planning pregnancy. However, these are some recommendations during pregnancy and for children under six years (Note: a child's serving size is 75g, rather than the 150g recommended for adults).

2 – 3 serves/week of any fish/seafood EXCEPT orange roughly, catfish, shark or billfish	or	1 serve/week of orange roughly (sea perch) OR catfish THEN no other fish that week	or	1 serve/fortnight of shark (flake) OR billfish (swordfish/broadbill/marlin) THEN no other fish that fortnight
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Mercury recommendations from Food Standards Australia New Zealand

14-day menu planner

Menu Suggestion: Week One

(Choose one item for each meal)

Breakfast

Cereal & reduced fat milk
Poached eggs on toast
Egg white omelette with smoked salmon

Lunch

Tuna bean salad
Canned salmon salad
Tuna Caesar wraps
Tuna and green bean sushi rolls

Dinner

Baked bream with tasty rice noodles
Linguine with grilled trout & broccolini
Garlic prawn skewers

Dessert

Fruit (2 pieces)
Low fat yoghurt (200ml tub)
Small bowl of low fat ice-cream
A handful of nuts

14-day menu planner

Menu Suggestion: Week Two

(Choose one item for each meal)

Breakfast

Cereal & reduced fat milk

Sardines on toast

Boiled eggs & tomato slices on toast

Lunch

Tuna & salad roll

Potato salad

Coleslaw and bean salad

Caesar salad (no dressing)

Dinner

Salmon with mushroom & asparagus pasta

Baked bream with spinach pasta
& green salad

Barbecued trout with avocado
& tomato salad

Dessert

Fruit (2 pieces)

Small bowl of low fat custard

Low fat yoghurt (200ml tub)

A handful of nuts

Recipes

Tuna and bean salad

(Serves 2)

Ingredients:

1 small tin tuna	¼ red capsicum, diced
1 small tin 4 bean mix	¼ red onion, diced
5 cherry tomatoes, quartered	low fat mayonnaise

Method:

Drain tuna and beans. Combine in a bowl and mix through diced vegetables. Add low-fat mayonnaise to taste.

Barbecued trout with avocado & tomato salad

(Serves 2)

Ingredients:

2 trout fillets (120g each)
Olive oil
Salt and black pepper

Dressing

2 tbsp red wine vinegar
2 cloves garlic crushed
½ tsp extra virgin olive oil
Sea salt and black pepper to taste

Avocado and tomato salad

2 avocados, skin removed and chopped into chunks
1 lemon juiced
3 tomatoes deseeded and sliced
¼ cup of basil leaves roughly chopped
1 bunch of rocket leaves, rinsed

Method:

1. Combine dressing ingredients in a small jar with a lid and shake well.
2. Salad: Place tomato and basil in a small bowl; add dressing and mix to combine. Pour lemon juice over the avocado and then toss the avocado through the tomato mixture. Garnish with rocket leaves and season with salt and pepper if desired.
3. Heat the barbecue until it is very hot. Brush the salmon fillets with a little olive oil and season the skin liberally with salt. Place fish skin-side down on the barbecue and cook for about 5 minutes; turn over when crisp and cook another 5 minutes or until cooked through.
4. Serve with salad.



Recipes

BBQ garlic prawn skewers (Serves 2)

Ingredients:

12 prawns	4 small mushrooms, sliced
1 garlic clove, minced	8 cherry tomatoes
1 tbsp olive oil	¼ red capsicum
¼ zucchini, sliced	

Method:

Pre-heat the BBQ. Soak prawns in garlic and olive oil while you chop vegetables. Thread prawns and vegetables onto skewers, and BBQ until prawns turn pink.



Baked bream with tasty rice noodles (Serves 2)

Ingredients:

2 bream fillets (120g each), skin on	handful of snow peas
3 lemons, juiced	200g rice stick noodles
4 green onions, thinly sliced	¼ cup rice milk
2 small carrots	2 tbsp chopped dill
1 zucchini	1 clove garlic, crushed
cooking oil spray (canola or olive oil)	

Method:

1. Preheat oven to 180°C/160° fan-forced. Spray bream fillets with oil.
2. Place skin-side down in a roasting pan. Drizzle with 2 tbsp lemon juice. Cover with foil and bake for 10-12 minutes or until cooked through. Sprinkle with half the onion.
3. Meanwhile, use a vegetable peeler to cut carrot and zucchini into long ribbons.
4. Put noodles in a heatproof bowl and cover with boiling water for 10 minutes to soften. Drain.
5. Spray a large non-stick frying pan with oil. Add vegetable ribbons and snow peas and cook over medium heat, stirring, for 1-2 minutes. Add noodles, remaining lemon juice, rice milk, dill, garlic and remaining onions. Toss to combine; do not boil.
6. Place noodles onto plates and top with bream to serve.



Recipes

Salmon with mushroom & asparagus pasta

(Serves 2)

Ingredients:

200g pasta, fresh e.g. fettuccine or spaghetti	½ cup (125ml) chicken stock
3 tbsp (60g) butter	¼ cup (60ml) low-fat cream
2 tbsp extra virgin olive oil	salt flakes and freshly ground black pepper
2 salmon fillets (120g each)	to taste
1-2 spring onions	1 lime (or lemon)
150g button mushrooms, sliced	2 tbsp fresh tarragon leaves
1 bunch asparagus	

Method:

1. Bring a large pan of salted water to the boil. Add pasta and cook according to directions. (Note for fresh pasta this may only take a few minutes).
2. Meanwhile, place two large frying pans on the cook-top and heat. Melt 1 tbsp of oil and 1 tbsp of butter in one pan. Heat the remaining butter in the other pan.
3. When butter has foamed and melted, add fish fillets, skin-side side down to the pan with both butter and oil. Cook until golden and half-cooked through, then turn over and cook the other side.
4. In the other pan, sauté spring onions and when soft, add mushrooms.
5. Meanwhile chop asparagus into 3-4cm lengths and add to pasta pan.
6. When mushrooms are softened, add chicken stock and cream to this pan and bring to the boil, simmer. Season to taste with salt and pepper. Drain pasta and asparagus and toss through mushroom sauce.
7. Squeeze lime over the fish. Place the pasta in a bowl, top with a piece of fish and sprinkle with tarragon leaves.

*As an alternative to button mushrooms replace with 150g punnet exotic mushrooms (shiitake, white enoki, pink cloud's ear, gold oyster)



Fortnightly shopping list

Grocery

Cereal (rolled oats, bran flakes or Weetbix)

Eggs

Tuna & salmon (cans)

Sardines (can)

Three bean mix (can)

Rice (brown & jasmine)

Rice stick noodles

Udon & soba noodles

Extra virgin olive oil /Canola oil

Mayonnaise, low fat

Chicken stock

Mixed nuts

Dried apricots

Pasta (spaghetti/fettuccine)

Dairy

Milk, reduced fat

Cheese & cottage cheese, reduced fat.

Parmesan cheese

Yoghurt, low fat

Custard, low fat

Crème fraiche

Seafood

Bream

Trout

Salmon

Prawns

Fruit and vegetables

Apples, pears

Oranges, mandarins

Bananas

Lemons/limes

Tomatoes/cherry tomatoes

Carrots

Avocado

Mushrooms

Asparagus spears

Baby spinach

Salad leaves/rocket

Caesar salad mix/Cos lettuce

Fresh herbs-parsley, basil, chives

Garlic & ginger

Red onions/spring onions

Potatoes, leeks

Zucchini, capsicums

Broccoli/broccolini, Cauliflower

Bok choy

Snow peas

Bean sprouts

Freezer

Peas, corn

Green beans

Ice-cream, low fat

Bakery

Bread (multigrain & rye)

Lavash bread, wraps

Bread rolls

Rye crisp bread & crackers



For more information on seafood and health
please visit **www.cessh.curtin.edu.au**

For more information on health during pregnancy, visit:

Food Standards Australia and New Zealand
www.foodstandards.gov.au

National Health and Medical Research Council
www.nhmrc.gov.au