Seafood and your health

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CANCER
Evidence shows that eating a balanced diet high in seafood will reduce your risk of some chronic conditions, or help you manage your symptoms.

This booklet will help guide your food choices and includes a 14-day meal plan specifically designed for people at high risk of developing cancers that have been linked to diet.
Including seafood in a balanced diet can improve and maintain your health. Research suggests that adequate levels of physical activity and a balanced, healthy diet have a significant preventative effect on the development of some cancers. In particular, consumption of oily fish has been linked with a reduced risk of prostate, breast, colon, oesophageal and lung cancers. When prepared in a healthy manner, fish is a valuable part of a healthy diet.

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-3s, 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.

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>Iron</td>
<td>Iron is important for maintaining energy levels and a strong immune system. Mussels, oysters and tinned sardines are good sources of iron.</td>
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<tr>
<td>Iodine</td>
<td>Iodine is important for growth and seafood is the best natural source of iodine. Oysters, mussels and scallops are good sources of iodine.</td>
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<tr>
<td>Folate</td>
<td>Folate aids the prevention of neural tube defects in growing babies. Oysters and mussels are sources of folate.</td>
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<tr>
<td>Vitamin B12</td>
<td>Vitamin B12 helps the brain to work normally. Sardines, mussels and tuna are good sources of Vitamin B12.</td>
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<tr>
<td>Vitamin D</td>
<td>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.</td>
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<tr>
<td>Vitamins A and E</td>
<td>Vitamins A and 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.</td>
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<tr>
<td>Calcium</td>
<td>Calcium is important for maintaining healthy teeth and bones. Australian salmon and sardines are rich sources of calcium.</td>
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**How much seafood do I need to stay healthy?**

Evidence suggests that we should aim to consume 600mg of omega-3s per day for men, and 500mg for women.

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.
Adults should aim to include 3500 - 4000mg of omega-3s 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:

**How much omega-3?**

For example, you may choose to eat 150g of sardines a week to get your omega-3s. Or you may choose to eat 150g of Atlantic salmon and 150g of prawns in a week. Mix it up so you don't get bored!
Which fish to choose?

Examples of seafood that are excellent, very good, or good sources of omega-3s.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
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<tbody>
<tr>
<td>Excellent sources of omega-3s</td>
<td>Very good sources of omega-3s</td>
<td>Good sources of omega-3s</td>
</tr>
<tr>
<td>Atlantic salmon</td>
<td>Bream</td>
<td>Barramundi</td>
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<tr>
<td>Trout</td>
<td>Mussels</td>
<td>Snapper</td>
</tr>
<tr>
<td>Sardines</td>
<td>Oysters</td>
<td>Smoked salmon</td>
</tr>
<tr>
<td>Canned salmon</td>
<td>Mullet</td>
<td>Canned tuna</td>
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This 14-day meal planner has been developed with a dietitian for people at high risk of developing diet-related cancers.

Menu suggestion: week one
(Choose one item for each meal)

**Breakfast**
Cereal and reduced fat milk
Poached eggs on toast
Egg white omelette with smoked salmon

**Lunch**
Tuna bean salad
Canned salmon salad
Tuna Caesar wraps
Smoked salmon wraps
Tuna and green bean sushi rolls

**Dinner**
Grilled trout with honeyed vegetables
Baked mullet with tasty rice noodles
Garlic prawn skewers and potato salad
Salmon risotto

**Dessert**
Fruit (2 pieces)
Low fat yoghurt (200ml tub)
Small bowl of low fat ice-cream
A handful of nuts
Menu suggestion: week two
(Choose one item for each meal)

**Breakfast**
Cereal and reduced fat milk
Sardines on toast
Boiled eggs and tomato slices on toast

**Lunch**
Tuna and salad roll
Potato salad
Coleslaw and bean salad
Caesar salad (no dressing)
Smoked salmon sushi rolls

**Dinner**
Salmon pasta with fresh garden salad
Grilled mullet with BBQ vegies
Steamed bream with honeyed vegetables
Garlic prawn skewers

**Dessert**
Fruit (2 pieces)
Small bowl of low fat custard
Low fat yoghurt (200ml tub)
A handful of nuts
**Salmon pasta with fresh garden salad**
(Serves 2)

**Ingredients:**
- 2 salmon fillets (150g each), cut into cubes
- Extra virgin olive oil
- 1 small onion, diced
- 400g tin of diced tomatoes
- ½ to 1 cup of chicken stock
- 2 cups of pasta (any sort)
- 1 packet of soup (French onion/pea and ham)

**Method:**
1. Add oil to fry pan and cook onion until soft. Add salmon and cook.
2. Add packet of soup and the tin of tomatoes. Stir. Add stock till sauce reaches desired consistency and simmer for about 10 minutes or until fish is cooked.
3. While the sauce is simmering, cook pasta.
4. Serve with a fresh green garden salad.

*For a variation, leave out the stock and serve the sauce over rice.*

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**Baked mullet with tasty rice noodles**
(Serves 2)

**Ingredients:**
- 2 mullet fillets (150g each), skin on
- 3 lemons, juiced
- 4 green onions, thinly sliced
- 2 small carrots
- 1 zucchini
- Handful of snow peas
- 200g rice stick noodles
- ½ cup rice milk
- 2 tbsp chopped dill
- 1 clove garlic, crushed
- Cooking oil spray (canola or olive oil)

**Method:**
1. Preheat oven to 180°C/160° fan-forced. Spray mullet 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 heat proof 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 mullet to serve.
BBQ garlic prawn skewers  
(Serves 2)

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

**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.

Tuna and bean salad  
(Serves 2)

**Ingredients:**
- 1 small tin tuna
- 1 small tin 4 bean mix
- 5 cherry tomatoes, quartered
- 1 red capsicum, diced
- 1 red onion, diced
- Low fat mayonnaise

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

Smoked salmon wraps  
(Serves 2 – 4)

**Ingredients:**
- 100g smoked salmon
- 2 hard boiled eggs
- 2 slices wholemeal lavash bread
- 2 tbsp low fat mayonnaise
- 1 tbsp capers, chopped
- 1 tsp fresh chives, chopped
- 25g baby English spinach

**Method:**
1. Peel and mash the eggs. Add the mayonnaise, capers and chives and mix to combine.
2. Lay the lavash on a flat surface. Spread the egg mixture over the centre of the lavash and top with the spinach and smoked salmon.
3. Roll up to enclose the filling. Cut into thick slices to serve.
Salmon risotto
(Serves 1)

Ingredients:
1 salmon fillet (150g), chopped in bite sized pieces
1 clove garlic, chopped
½ cup Arborio rice
200ml chicken, fish, or vegetable stock (hot)

Juice of ½ lemon
2 tsp chopped chives
½ cup frozen peas
1 tbsp grated parmesan cheese (optional)
1 tbsp olive oil
¼ onion, finely diced

Method:
1. In a non-stick pan over a medium heat, gently cook onion and garlic together in olive oil until soft.
2. Add rice and peas, then hot stock gradually until absorbed. Keep stirring gently until rice is creamy but still has a bite to it – about 10 minutes (If you use hot stock, it keeps the rice cooking continually).
3. Add salmon and cook for a further 3 minutes. Stir in chives and lemon juice.
4. Serve in a deep bowl topped with parmesan cheese.
**Steamed bream with honeyed vegetables**  
(Serves 2)

**Ingredients:**
- 2 bream fillets (150g each)
- Oiled cling wrap
- Salt and pepper
- Sprigs of dill
- 1 cup broccoli, chopped
- 1 cup of carrots, chopped
- 1 cup of pumpkin, chopped

**Dressing:**
- 1 tbsp of honey
- 1 tbsp of vinegar
- ½ tsp of olive oil
- ½ tsp of reduced salt soy sauce
- ¼ tsp of ginger, finely chopped
- ¼ tsp garlic, finely chopped

**Method:**
1. Place fish pieces in the centre of oiled cling wrap. Sprinkle with salt and pepper and place dill sprig on top. Roll up, pierce all over with the point of a sharp knife, and set aside.
2. Slice vegetables to the same size for even cooking. Steam vegetables for 6-8 minutes or microwave on HIGH for 3-4 minutes until crisp but tender.
3. Place dressing ingredients in a saucepan and simmer over a low heat until honey dissolves, or microwave on HIGH for 1 minute.
4. Use a saucepan which fits a metal or bamboo steamer comfortably. Fill saucepan half full with water, bring to the boil, then turn down to a steady bubble or fast simmer. Place fillets in steamer and cover. Steam for 5 minutes.
5. To serve, drain vegetables and toss through dressing. Unwrap fillets from cling wrap onto plates and serve with vegetables.
For more information on seafood and health please visit www.cessh.curtin.edu.au

For more information on cancer visit:

Cancer Council Australia
www.cancer.org.au

Cancer Council WA
www.cancer.wa.asn.au