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## 6 Health

### Overview

- Good health can be promoted using the methods of awareness, valuing, understanding, endorsement and action.
- Action at the individual level is possible. Far more effective is changing the environmental conditions so that healthy habits become the default option.<sup>1</sup>

To illustrate methods for promoting good health, I use two examples: running to work and a low-salt diet. In between, I will comment on health as a good thing and mention the role of nudges.

### Running to work

In the early 1970s, my wife and I lived in Sydney. We didn't have a car, so we chose rented accommodation in locations convenient to where we worked and not too far from shops.

I was doing my PhD in theoretical physics at Sydney University. On many days I would stay home and work, and usually get much more done. I wanted to go running for the exercise, but found it difficult to maintain my commitment. I'd often say to myself, “I'll do it later today”; later in the day, I'd

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<sup>1</sup> I thank Hannah Brinsden, Trent Brown, Lyn Carson, Don Eldridge, Sean Murray-Smith and Yasmin Rittau for valuable feedback on drafts of this chapter.

say, “I can skip it today and run tomorrow.” It was classic procrastination.

On days when I went to the university, it was a lengthy process. I’d walk a few minutes to the railway station, then wait five or ten minutes for the train — which was often late — ride the train 12 to 15 minutes to Redfern station and then walk 20 minutes to my office. The whole process took maybe 45 minutes, quite a bit of time to travel just five or ten kilometres. I could have cycled this distance in a fraction of the time, but I didn’t dare because the traffic was so dense and chaotic and the pollution so great. Indeed, I could have run the distance in 45 minutes.

That’s when I got the idea of running to work. I could save time by combining commuting and exercise and reduce the motivation required for running. So I resolved that when we moved out of Sydney, we would try to find a place to live that enabled me to run to work.

That’s exactly what happened. I obtained a job in Canberra and we bought a house three or four kilometres from the Australian National University, where I worked. I could run to work and get my exercise without much willpower required.

Whereas previously I kept postponing running, with various rationalisations going through my mind, now things were different. When it was time to leave, I’d put on running clothes and off I’d go. I didn’t think a thing about it. People who drive to work don’t usually require any special motivation to get into the car — when they are ready to go to work, that’s just what they do. It was the same for me to run to work.

Running invigorates me. For the rest of the day I feel better physically and mentally. Though running requires effort, paradoxically it gives me energy. Best of all is the calming

effect: after a tense day at the office, the run home usually puts my worries into perspective.

People sometimes ask about it. “Do you run in the rain?” or, more commonly, “Is there a place to shower?” I keep several changes of clothes in my office and wash off as much or as little as needed. Running in the rain is fine — it’s better than running in a lot of sweat on a hot day.

I feel safer running than cycling. Usually I run on the grass next to streets and cross them only when there’s no traffic. When we moved to Wollongong, we found a house in an even more favourable position, with no busy roads to cross the whole route to the university.

My vehicle — my body — breaks down occasionally, with a sprained ankle or inflamed Achilles tendon. Nearly anyone who exercises a lot experiences injuries. However, I never time myself when running and have never competed in races or joined fun runs. I’m primarily a commuter runner. This lowers the risk of injury.

I’ve met lots of people who say they couldn’t run because of knee or other problems. A good alternative is brisk walking, which has many of the same benefits as running but less pounding.

I’ve been running to work for 35 years. It’s a routine and nothing special for me. But in the wider society, it’s highly unusual. I’ve never met anyone else who commutes by running, though occasionally someone tells me about someone they know who does. A fellow in New York contacted me to say he’d been running to work for seven years.

If getting regular exercise is a good thing,<sup>2</sup> what have I done to make this a habit? Five methods are relevant: awareness,

<sup>2</sup> There is a vast body of research on health. On exercise and health, see for example Eliza F. Chakravarty et al., “Reduced disability and

valuing, understanding, endorsement and action — the same five methods relevant for promoting and protecting a range of good things, as discussed in chapter 1.

First, I became aware of exercise as worthwhile. That was back in the 1970s during the initial jogging boom.

Second, I valued running, recognising it as beneficial physically and mentally. In fact, the main reason I like to run is that it makes me feel better, especially mentally. It reduces stress and keeps me alert.

Third, I knew the arguments about the value of exercise. Being a runner made me especially receptive to information about running.

Fourth, I referred to authorities about the value of running — authorities in this case mainly being researchers, like my brother, a physiologist who has researched exercise-related topics such as the effect of sleep deprivation on performance.

Fifth — and most importantly — I actually did the running. I developed a habit and have stuck with it. So at the individual level, I've used all the standard five methods to promote running to work.

These five methods for fostering my running are nothing special — they apply to many dedicated athletes. What is a bit

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mortality among aging runners: a 21-year longitudinal study,” *Archives of Internal Medicine*, 168 (15), 11/25 August 2008, 1638–1646; Joanna Kruk, “Physical activity in the prevention of the most frequent chronic diseases: an analysis of the recent evidence,” *Asian Pacific Journal of Cancer Prevention*, 8 (3), 2007, 325–338; Ralph S. Paffenbarger, Jr. and Eric Olsen, *LifeFit: An Effective Exercise Program for Optimal Health and a Longer Life* (Champaign, IL: Human Kinetics, 1996); Roy J. Shephard, *Aging, Physical Activity, and Health* (Champaign, IL: Human Kinetics, 1997). On exercise and mental functioning, see John J. Ratey with Eric Hagerman, *Spark: The Revolutionary New Science of Exercise and the Brain* (New York: Little, Brown, 2008).

different in my case is that I set up “environmental conditions,” namely the relationship of things around me, to foster my running. We don't have a car, so there's no temptation to drive. We don't have Internet at home (yet), so to read my emails and use the web, I need to get to my office at the university. The distance is just right for running because we bought our house with this in mind. I've arranged clothes, towels and the like so it all operates smoothly.

These environmental conditions could come unstuck, of course. This happens whenever I'm injured. Another possibility is that some other form of transport could become more convenient. I've talked to environmental science students who said they bought a car fully intending to keep riding their bicycles, but as soon as they had the car, they hardly used their bicycles. What's convenient is a powerful influence. So it makes an enormous difference that we don't have a car.

I do have a bicycle, but the route to the university is extremely hilly. Running is almost easier, because it's like using an extremely low gear. I could take the bus, but the buses are infrequent and usually late (though occasionally early), so door-to-door travel time by running is about the same. On the other hand, if a free bus went by our house every few minutes, that would be a large temptation. There is a free bus to the university, but nowhere near us.

Creating the environmental conditions to foster commuting by running is a delicate operation. So far, I've built most of the tactics for fostering running into my routine. However, what I've done has little relevance to others. In fact, in all my years of running to work, no one has ever been sufficiently inspired by my example to try to do the same thing. Why not? I think there's a status hierarchy in ways of getting to work, and running is near the bottom.

My observation, over many years, is that the modes of commuting with the highest status are those that cost the most, use the most fossil fuels and require the least physical exertion. A private jet or helicopter is reserved for those at the very top. Driving a car is next, noting that bigger and more expensive cars are more prestigious. Then come going by train or bus, followed by walking and cycling. My conclusion is that for getting from point A to point B, there's more status in not using your muscles. Working up a sweat is something to be avoided.

There are some challenges to this hierarchy, especially by cyclists and walkers, but in a car-dominated society like Australia, cycling is seldom seen as high status, except within cycling subcultures.

In order for cycling, walking or even running to work to be widely taken up, the wider social environment needs to be encouraging.<sup>3</sup> In the Netherlands, cyclists are given much more support through a comprehensive set of cycle paths, some through the countryside and others in urban areas. Rather than cyclists riding on a designated portion of the road also used by motor vehicles, they have paths separated from the road by a grassy strip. There are still lots of cars in the Netherlands, as well as many buses and trains, but cycling is catered for in a way alien in Australia.

In the Netherlands, the cues are very different. Because there are so many cyclists, it is hard to avoid being aware of the cycling option. More cyclists, including many who could afford cars, mean that cycling is perceived as having greater value. People understand the value of cycling and there is authoritative

<sup>3</sup> For an assessment of the limited amount of research in this area, see James F. Sallis, Adrian Bauman and Michael Pratt, "Environmental and policy interventions to promote physical activity," *American Journal of Preventive Medicine*, 15(4), 1998, 379–397.

endorsement through the provision of supportive infrastructure. Finally, lots of people cycle — they do it. At a social level, all the tactics of promoting good things are used in relation to cycling.

Let me summarise. In relation to combining commuting and exercise, there are at least three levels for examining tactics.

- The level of personal motivation: doing it on the basis of willpower.
- The level of personally constructing one's environment, as I've done in relation to running.
- The level of socially constructing the collective environment, as in the Netherlands in relation to cycling.

Identifying three distinct levels is a simplification, because there are all sorts of possibilities in between. For example, a couple of friends or family members might assist each other with willpower or constructing their environment, either one of them shaping the other's environment — as parents do with children — or both shaping their joint environment. The Netherlands example is just one way for social arrangements to influence people's inclination to cycle, and interacts with the way individuals go about adapting to their environment. Nevertheless, talking of three levels — personal motivation, personal environment and social environment — is a useful simplification.

### Health as a good thing

Being healthy is more than not being ill. It means body and mind functioning at top capacity. It means being able to cope well

with stressors such as exertion, allergens and worries. It includes feeling full of energy.<sup>4</sup>

The value of good health is most obvious when you don't have it. If you always have pain in your fingers, then absence of pain is wonderful — especially if you love doing work with your hands. If your lungs aren't working well and you have to gasp for every breath, the ability to breathe freely is seen as a delight. And so on through a gamut of problems, from abscesses to vomiting. Many people would trade in their wealth or opportunities for a clean bill of health. Even with the best medical care, neither good health nor long life can be guaranteed.

How could good health ever be a bad thing? It's possible to think of a few circumstances. Sometimes people take their health for granted. A bout of illness makes them realise how wonderful it is to be well. Then there are the children who, because they are ill for long periods, develop advanced capacities for reading, imagination or other capacities that wouldn't have been likely otherwise. Ill health is sometimes a valuable warning to change your ways. Becoming ill can be a way to escape a damaging job or impossible demands in a relationship. Then there are the people who are doing bad things, such as killers and torturers. If they become unwell, others benefit. So actually there are quite a few potential advantages to bad health.

Despite these exceptions, good health is usually worth promoting. But within the health professions, promoting health beyond its average level is a fairly low priority. Nearly all the effort goes into addressing bad health. You go to a doctor when you break your arm or develop heart palpitations but seldom visit doctors when you're feeling well. The so-called health

4 In the 1940s, the World Health Organisation defined health this way: "health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."

system is actually an illth system, with the main emphasis on repairing problems and comparatively little attention to helping people develop optimum health. There are some government-funded and private bodies whose official task is health promotion, but their efforts are usually short on funds and recognition.

What can be done to promote good health? A host of measures can be listed, from flossing your teeth to getting suitable exposure to the sun for vitamin D production. Here I will focus on three main areas: diet, exercise and mental state.<sup>5</sup>

The first method to promote health is awareness. Most adults are quite aware. However, some young people take their health for granted, having not learned its significance.

Next is valuing good health. Nearly everyone does. They even value the things that foster good health, but don't do them nearly as often as they might.

The third method is to understand what promotes good health. Many people know the basics. They know asparagus and apples are good for you — as part of a balanced diet — and that potato crisps and soft drinks are not so good. They know that getting regular exercise is healthy. They know that being calm and focussed — the opposite of high stress — is desirable. But understanding isn't enough. Lots of people understand the importance of healthy practices but do other things anyway, for example not eating many vegetables and not doing much exercise.

5 Research shows that several modifiable factors contribute to well-being and longevity: not smoking, physical activity, moderate weight and healthy diet. See for example Rob M. van Dam et al., "Combined impact of lifestyle factors on mortality: prospective cohort study in US women," *BMJ*, 337, 2008, 1440–1447; Laurel B. Yates et al., "Exceptional longevity in men," *Archives of Internal Medicine*, 168 (3), 11 February 2008, 284–290.

The next method is authoritative endorsement. These days, nearly all medical authorities support healthy behaviours. For example, official recommendations are to have five or more servings of fruit and vegetables per day. However, this doesn't seem to have made a lot of difference to what people eat.

The final method for individuals to promote good health is to actually do the things that promote it, such as eat plenty of vegetables, exercise nearly every day and meditate, relax or take other measures to foster a calm mental state. By doing these things regularly, they become habits.

Sally has healthy habits. She carefully plans what she eats, for example being sure to have cruciferous vegetables such as cauliflower and broccoli (with anti-cancer properties) and limiting her intake of highly processed foods and the wrong types of fat. She swims for 30 minutes six days per week. She's chosen a job that offers regular challenges without high stress, and she meditates ten minutes every morning and evening. She gets plenty of sleep and avoids risky activities like smoking, heavy drinking and fast driving. She spends a lot of time with a group of close friends whose company she appreciates. Every spare minute she devotes to amateur theatre.

Need I say more? Sally is a mythical creature who is doing everything right to be healthy, and happy as well. She has the required habits. What helps keep the habits going? She is aware of what's required to be healthy, regularly checking research on diet and exercise. She values being healthy, being proud and protective of her habits. She understands exactly what she's doing. For example, she knows the research on the anti-cancer properties of foods. She backs up her choices by referring to health authorities who are credible scientifically.

I've referred to Sally as a "mythical creature." Actually, a few people are just like Sally, but not many. Sally is mythical in

that she makes good decisions in the face of pervasive pressures to deviate from a healthy lifestyle. These pressures are obvious enough, but let me point them out anyway.

Everyone is aware of unhealthy options. Cigarettes are available for sale in supermarkets. Sugar-rich drinks and pastries are widely available. A comfortable chair is available in front of the television. The video game is nearby — far more obvious than the gym. And so on.

Many unhealthy choices have high status. Until recently, smoking was a sign of maturity and sophistication, and still is in some circles. When going to a restaurant, or serving a meal with guests, in most groups a steak has more status than nuts or lentils. When offering tasty treats to guests, a pastry heavy with butter and sugar is usually seen as more suitable than celery and carrot sticks.

Next consider understanding of choices in relation to health. I've said that most people know which choices are healthier, but they also know some other things that provide a superficial rationale for taking unhealthy choices.

For example, eating a few sweets isn't that bad, as long as they are part of a balanced diet. Having a few drinks is seldom dangerous. Missing exercise for a week now and again is not hazardous. Many people rationalise their choices by seeing them as temporary: "I'll just have a few beers" or "I'll start exercising later" or "After this project I'll take a break and relax a bit." There are lots of other rationalisations, for example "My father smoked like a chimney and lived to be 92" or "You've got to die from something" or "I want to enjoy life."

What about the role of authorities? They regularly advise healthy practices, but others often have more influence: peers such as family, friends and co-workers. If everyone else in your house has pizza and soft drink for dinner, it's easier to join in

rather than make yourself a salad. When your co-workers drive to work, you feel you'll look foolish riding a bicycle. Where are the authorities when you need them? If your boss set the pace by ordering gourmet health foods for staff functions, arranging a cycle club for commuting, mandating rest breaks, and promoting fun and laughter, you'd be much more likely to join in.

Health promotion often relies on the power of education to change people's behaviour. The idea is that if people just knew what makes them healthy and understood why, then they'd be more likely to do those things. It sounds plausible and is effective for a small proportion of people, but is overwhelmed by counter-pressures. To really make a difference, the environment — things around a person — needs to change, so healthy behaviours become the easiest option and you have to go out of your way to do really unhealthy things.

What this means in terms of tactics is that the way society is organised needs to ensure that awareness, valuing, understanding, endorsement and action are oriented to healthy outcomes. An example is anti-smoking measures. Australia has some of the most stringent anti-smoking measures in the world and, as a result, a fairly low rate of smoking for a wealthy country. I remember when the university administration first introduced a policy banning smoking inside buildings. There were some holdouts, especially staff who insisted on continuing to smoke in their own offices. But enough staff supported the policy so that peer pressure was huge: smoking in a building was seen as anti-social. Within a few years, it almost never occurred. Smokers congregated outside the entrances to buildings, so later on a policy was passed that there was to be no smoking within 10 metres of a building entrance. This was seldom policed and often disobeyed, but gradually it had some effect too, because it was easier to ask smokers to move away from entrances. Most

recently, smoking has been banned in a large open area between buildings.

This is just one small example from a wider process of mobilising against smoking, one of the most successful health-promotion campaigns of the past half century. It is founded on mobilising people — mostly non-smokers — to take action against smoking, and gradually reducing the opportunities and incentives to smoke.<sup>6</sup>

**Awareness** More and more places — cinemas, buses, office buildings, people's homes — are explicitly smoke-free. Non-smoking signs and an absence of smokers operate to make smokers aware of concern about smoking.

**Valuing** More and more people see a smoke-free life as sensible.

**Understanding** People know why they should avoid tobacco smoke.

**Endorsement** Medical authorities are unanimous in advising against smoking.

**Action** Many more people are gaining experience as non-smokers. For example, when smokers try to stop, they can gain assistance from doctors and friends.

Reducing the incentives to smoke can be seen as an example of promoting a good thing, though in many ways it's better conceived as stopping a bad thing. The key point here is that change has been driven largely through changing the environment rather than by separate individuals making decisions to

<sup>6</sup> The best source on anti-smoking campaigning is Simon Chapman, *Public Health Advocacy and Tobacco Control: Making Smoking History* (Oxford: Blackwell, 2007).

stop smoking. Indeed, changing the environment has made it far easier for individuals to quit. Cigarette advertisements are nowhere to be seen, prices are higher, lots of places are smoke-free and many people don't want smokers around. It's a big shift from when non-smokers felt assaulted whenever they ventured into public spaces.

Now wait a minute. I started out to discuss tactics for good health, but I've somehow switched into a related but different topic: how to oppose dangers to health. But aren't these the same? Not quite.

The usual approach to health is to oppose the bad things. The medical approach is to attack disease: antibiotics against infections; surgery, chemotherapy and radiotherapy against cancer. This approach is so dominant that health is often seen as a matter of dealing with disease. However, the treatment or even the absence of illness doesn't automatically mean good health.

There is an analogy to war and peace. Peace is sometimes thought to be absence of war, which is sometimes called "negative peace." But there is something worth aiming for that is better than absence of war: a society with high levels of justice and freedom in which all people are supported to achieve a high quality of life. This is called "positive peace." Pushing for positive peace is complementary to opposing war.

The same sort of thing applies to health. Treating disease is worthwhile, but so is promoting high positive levels of health — through means such as exercise, diet and mental harmony.

If absence of disease is called "negative health" by analogy to negative peace, then vibrant good health can be called "positive health." In this picture, where does opposing smoking fit in? It's useful to arrange possibilities on a spectrum.

- Treating disease (for example, treating cancer)
- Detecting disease (for example, screening for cancer)
- Preventing disease (for example, campaigning against smoking)
- Promoting positive health (for example, designing environments to have clean, unpolluted air).<sup>7</sup>

In this chapter I focus on the last two.

### Nudges

Richard Thaler and Cass Sunstein have come up with the valuable idea of a "nudge" — a way of influencing people's behaviour through the way choices are made available to them.<sup>8</sup> Their argument is based on two key points. First, people are greatly influenced by subtle aspects of their environment; in particular, their choices are influenced by the way choices are presented. A lot more people will stick with whatever they're doing or given — the default option — than will take the effort to change. So if your telephone number is in the directory until you make a special request to remove it, most people's numbers will be listed, but if your number is only in the directory if you specially request it, few people will bother.

<sup>7</sup> These options can be related to levels of prevention as studied in epidemiology. Primordial prevention, which involves addressing social and environmental conditions underlying the causes of disease, overlaps with promoting positive health. Primary prevention, which involves addressing specific causes of disease, is what I've called preventing disease. Secondary prevention is what I've called detecting disease. See R. Bonita, R. Beaglehole and T. Kjellström, *Basic Epidemiology*, 2d ed. (Geneva: World Health Organization, 2006), 103–110.

<sup>8</sup> Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (London: Penguin, 2009).



Thaler and Sunstein argue that those who design the “choice architecture,” namely the way choices are made available, can benefit people by using people’s tendencies toward inertia (not changing the status quo) and by presenting options in a simple and informative way. They call this approach “libertarian paternalism.” It is paternalistic in that the choice architects are setting things up for the general good; it is libertarian because no one is forced to choose particular options, as there are always opt-out possibilities. They give numerous examples involving retirement and investment plans, energy conservation, schooling and health.

A nudge, in the way Thaler and Sunstein think about it, is usually designed and implemented by government, namely by policy designers and implementers, or occasionally by their equivalents in industry. So the Netherlands government, by building lots of cycle paths, gives a nudge to cycling. Lots of people still drive cars, but cycling is far more common than it otherwise would be. In this sense, town planning — or lack of planning in some cases — is a nudge-production process. People are encouraged but not required to adopt certain behaviours.

Building a new freeway is a nudge towards driving. Indeed, it is more than a nudge, because many freeways ban cyclists, pedestrians and various other transport options. Non-drivers can get to their destination by other routes, but at much greater inconvenience. For many choices, Thaler and Sunstein prefer nudges that don’t force people or impose excessive costs.

The idea of a nudge can easily be expanded to cover your own efforts to construct the environment that shapes your behaviour. When I arranged my life — no car, living a convenient distance from work, etc. — to make running the default option, I was essentially creating a nudge for myself.

Thaler and Sunstein leave out one way of designing nudges. This can be illustrated by an example they use early in their book. They note that the order in which food is displayed in a cafeteria affects people’s choices of what to buy and eat, so by suitably arranging the food, people can be nudged to have a healthier diet. They give five options for the manager of a student cafeteria.

1. Arrange the food to make the students best off, all things considered.
2. Choose the food order at random.
3. Try to arrange the food to get the kids to pick the same foods they would choose on their own.
4. Maximize the sales of the items from the suppliers that are willing to offer the largest bribes.
5. Maximize profits, period.<sup>9</sup>

Option 1 is Thaler and Sunstein’s preferred nudge. But there’s another option: let the students design the nudge. If this is too difficult to arrange, choose a random selection of interested students, inform them about nutrition and the influence of food arrangements, and follow their advice within the constraints of legality, ethics and financial viability.<sup>10</sup> This could be called “participatory paternalism,” because the people affected are helping design their environment.

Thaler and Sunstein repeatedly emphasise that their proposals do not sit on one side or the other of US politics: they are neither liberal nor conservative, neither Democratic nor Republi-

<sup>9</sup> Direct quote from *ibid.*, 2.

<sup>10</sup> There is a large amount of research on the use of randomly selected decision-makers. See for example Lyn Carson and Brian Martin, *Random Selection in Politics* (Westport, CT: Praeger, 1999).

can. Their description of nudges as “libertarian paternalism” captures both elements of US politics, libertarianism being a market approach, allowing consumer choice, and paternalism being a government or large-organisation approach. What this configuration misses is participatory politics, in which people cooperate in shaping the conditions of their lives, including the nudges.

## Salt

Many people enjoy the taste of salt — as long as there isn’t too much of it. Many eaters add a bit of salt to their food, for example finding the taste of a baked potato without any seasoning to be bland or unattractive. So bring on the salt, not to mention butter and cheese. But if you add butter or cheese, you may not need the salt, because many manufacturers add salt to these products.

Salt refers to sodium chloride. It is much the same substance whether it is table salt, sea salt or rock salt.

For many years I used to think that humans have an innate craving for salt, because it’s necessary for survival. Sodium is part of the metabolism of every cell in the body, based on an interplay between the elements sodium and potassium. Some animals seek out salty foods and travel great distances to salt licks.

Then I read Trevor Beard’s book *Salt Matters* and discovered I was wrong. He writes:

There is a popular theory that a liking for salt helped our ancestors to survive in salt-poor environments. However, explorers and anthropologists have reported the exact

opposite — they find that salt-free societies *dislike* salt, often very strongly.<sup>11</sup>

In industrialised societies today, people often have ten times as much salt as necessary. All that is required for survival is a fraction of a gram per day, yet people typically have at least several grams.

This heavy use of salt isn’t driven by biology but rather by cultural and economic factors. Salt is added to foods as a flavour, a preservative and, in bread, as a dough improver. People get used to the taste of salty food and come to expect it.

Decades ago, salt played a valuable role as a preservative, but today, with freezing, refrigeration and vacuum sealing of food containers, there isn’t the same need for salt — but it is still heavily used. It is cheap and adds flavour.

Excess salt intake is a key to a contemporary health problem: hypertension, otherwise known as high blood pressure. Eating a lot of salt can, in many individuals, contribute to hypertension that in turn is a risk factor in heart disease, stroke and kidney problems. In a country like Australia, half of all adults develop high blood pressure. Excess salt is also linked to other health problems including Meniere’s syndrome, osteoporosis and stomach cancer.

How much salt is too much? In Britain, the maximum recommended daily intake is six grams. Less than this might still be excessive in susceptible individuals.

Eating processed foods greatly increases average salt intake and also increases the intake of sodium relative to potassium.<sup>12</sup>

11 Trevor C. Beard, *Salt Matters: The Killer Condiment* (Sydney: Hachette Australia, 2007), 4 (emphasis in the original).

12 I mainly refer to salt, taking it as a surrogate for sodium, but there are sources of sodium other than sodium chloride, for example monosodium

In a potato, without added seasoning, there is more potassium than sodium. In a serving of potato crisps, there is a *lot* more sodium than potassium. The more food is processed, usually the higher the sodium-potassium ratio. Bread may have 100 times as much salt as the wheat from which it is made.

Cutting back on salt is one way to reduce the risk of hypertension. One initial step is not to add any additional salt when eating: get rid of the salt shaker. That's useful, but it eliminates only a small proportion of the salt ingested by most people in industrialised countries. The major challenge is cutting back on processed foods with lots of added salt, everything from potato crisps to cakes. Instead of having a pastry, have a bowl of fruit — fruit has hardly any salt.

Reducing consumption of high-salt foods is easier said than done. Eating at restaurants is risky. A single fast-food meal with hamburger and chips can contain several grams of salt. A business lunch is likely to be loaded with salt unless you choose very carefully. At a cocktail party, the savouries are likely to be salty. Sitting in front of the television eating corn chips — more salt.

Cutting back on salt intake can improve one's diet generally. Fresh fruits and vegetables, ideal foods for a low-salt diet, are highly recommended by nutritionists. Fresh, unprocessed meat is also compatible with a low-salt diet.

It might seem that cutting back on salt is going to lead to very bland meals, but not necessarily. On reduced salt, your taste buds gradually adapt so that foods with just a little bit of salt in

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glutamate. It is possible that sodium without chloride has less effect on blood pressure: Theodore A. Kotchen and Jane Morley Kotchen, "Dietary sodium and blood pressure: interactions with other nutrients," *American Journal of Clinical Nutrition*, 65 (supplement), 1997, 708S–711S.

them taste salty. Celery, for example, is not seen as particularly tasty on its own and is commonly eaten with a dip or sauce, but on a really low-salt diet celery will taste salty on its own.

So what are the tactics for maintaining a low-salt diet? All the standard methods apply.

**Awareness** You need to be aware of salt as a health issue.

**Valuing** You need to value a diet low in salt. Alternatively, you need to value a healthy blood pressure.

**Understanding** It helps to know how a low-salt diet will prevent or ameliorate hypertension and other health problems.

**Endorsement** Most medical authorities agree on the importance of maintaining a modest salt intake.

**Action** You need to initiate and continue a low-salt diet.

For those who know about and value a low-salt diet, the hard part is maintaining it. People know what they need to do, and they want to succeed, but salty-food temptations are ever-present. Processed foods loaded with salt fill supermarket shelves and are a special risk when dining with friends. So the next step is to adapt the methods to shape one's environment.

**Awareness** You could put a sign in the kitchen — such as "beware the salt fiend" — and ask your family and friends to remind you about salt when eating together.

**Valuing** You can train yourself to appreciate low-salt dishes, and have your friends reinforce this attitude. One way is to prepare extremely appetising low-salt menus and express your appreciation. When encountering an extremely salty food, like soy sauce, respond with "yuk." Ask others

to help you find low-salt options. If there's a support group for hypertension, join it — or set up your own group.

**Understanding** You could read articles about high blood pressure and explain them to friends, using the long-standing principle that the best way to learn something is to teach it. Read the book *Mindless Eating*<sup>13</sup> and some of the scientific studies reported in it, so that you know how to take control of your diet.

**Endorsement** You can seek out others who are willing to support your approach, such as friends or doctors, and get them to reinforce your decisions.

**Action** You can make low-salt eating easier by shaping your environment. Don't buy salty grocery items; give away the ones you have already. If you are tempted to snack, put healthy choices, such as apples and unsalted peanuts, in the front of your refrigerator and cupboard shelves. Use ideas from *Mindless Eating* to make it easier for you to pursue your diet and enjoy it.

The common theme in these suggestions is to arrange your life so less willpower is required to adhere to a low-salt diet. To achieve this requires a lot of support from friends and family and a fair bit of personal commitment to set up and maintain the conditions to support the diet. Once these conditions are achieved, though, low-salt eating may become normal, desirable and appealing.

Only a few individuals have the capacity for this sort of personal planning. After all, advertisers, marketers and well-meaning family and friends are constantly touting salt-heavy

<sup>13</sup> Brian Wansink, *Mindless Eating: Why We Eat More than We Think* (New York: Bantam, 2006).

choices. Although some people try to help and some shops offer reduced-salt products, many temptations remain.

Can something be done at a wider level? One possibility is gradually reducing the amount of salt in food manufacture. Imagine this scenario: all companies agree to reduce salt in their products by 5% within a year, with similar reductions each year until an optimal level becomes standard. Companies could still market high-salt options if desired, but they would become the exception rather than the rule — and have a significantly higher price. A gradual transition would not require sudden drastic investments in new food manufacturing technology. This is certainly achievable: some companies have been able to make much larger reductions.

If such a transition were implemented, hardly anyone would notice. Few people would notice the change in any given year, and people's palates would adjust to the lower salt levels. (In fact palates can adjust far more rapidly, within a matter of weeks.) Public health could be improved and people would actually enjoy their food more, by being better able to appreciate the natural tastes of unsalted products.

What's stopping this change? Mainly lack of sufficient incentive to make any change. Sodium chloride is cheap and the technology for producing it is standard. No one is going to change unless there is some incentive. Those concerned about hypertension are not politically organised. In a market economy, their influence operates to diversify consumer choice, namely to offer low-salt products for the minority who seek them. It doesn't matter that nearly everyone would benefit from lower salt levels across the board.

Back in 1980, when I lived in Canberra, I was a member of a small group called Community Action on Science and Environment (CASE). Our members included a few activists,

PhD students and a couple of untenured researchers (one of whom was me). We picked a few issues of interest to us — I remember salt, sugar and head lice — and prepared leaflets or short reports aimed at making members of the public more aware of the issues.

Being involved with CASE is the main reason for my interest in salt. My blood pressure is quite low and hasn't increased over the years, so I may be one of the few who are not very susceptible to hypertension.

In pursuing the salt issue, we obtained a leaflet from the Finnish government titled "Rationale of 'new salt'," recommending replacement of typical sodium-chloride table salt with a mixture composed of 65% sodium chloride, 25% potassium chloride and 10% magnesium compounds. This would reduce sodium intake, improve sodium-potassium balance and increase magnesium intake. Inspired by this example, we wrote to a number of manufacturers about this possibility and received a few replies essentially fobbing us off. Our main output on this topic was a two-page leaflet titled "The myth of salt" covering the facts we had discovered.

To have had a chance of influencing government policy or industry practice, our group needed inside connections or powerful backers, such as concerned politicians as personal friends or an industry group with a vested interest in new salt. Alternatively, dozens of active new-salt activist groups around the country might have been able to put the issue on the public agenda. That didn't happen then and, so far as I know, hasn't happened anywhere since.

Our group only survived for a few years and then members went their individual ways. To have an impact on an entrenched problem, staying power is vital. Coincidentally, at exactly the same time and in the same city, Canberra, a much more long-

lasting initiative began: the Salt Skip Program. The program encourages people to eat low-salt foods and assists by providing information about how to go about this.<sup>14</sup>

One of those involved for the long haul was Trevor Beard, whose comprehensive book *Salt Matters* was published in 2007. Going through my file of old documents on salt, I discovered a newspaper article from 1983 reporting Beard saying "Although the link between salt and high blood pressure has been known for about 80 years, there are still some doctors who are sceptical and who demand proof." He was planning a study of lowered salt intake on hypertension.<sup>15</sup>

There has been some campaigning. In 1996, a group of British medical specialists set up Consensus Action on Salt and Health (CASH), which holds annual salt awareness weeks and puts pressure on food manufacturers to reduce salt levels in their products. CASH is now a charity with its work carried out by a team of nutritionists, still supported by the medical professionals who set up the organisation.

CASH has obtained sympathetic media coverage that operates to encourage or shame companies into taking action. As a result of CASH's initiatives, quite a few companies have agreed to voluntary salt reduction targets — and met them, some companies dramatically reducing salt levels in their products. CASH has achieved results through promoting awareness and understanding of the issues and through the credibility of its experts. CASH has gone international through World Action on Salt and Health (WASH).

<sup>14</sup> Beard, *Salt Matters*, 17–109.

<sup>15</sup> Karen Milliner, "1,000 volunteers wanted to forgo salt for study," *Canberra Times*, 28 June 1983, p. 9.

I haven't been able to find any recent information about Finland's "new salt." But, according to Beard, Finland's government continues to be in the forefront of action against high-salt diets:

The government withholds the subsidy on drugs for high blood pressure unless the doctor certifies that the patient has followed an ideal diet and lifestyle for six months, including skipping salt. If drugs are still needed despite that background, the doctor must also certify that the patient agrees to continue an ideal diet and lifestyle indefinitely (to permit better control at a lower dose).<sup>16</sup>

In most countries, however, the usual medical response to high blood pressure is to prescribe a drug. Some doctors encourage reduced salt intake and some people with hypertension learn about the low-salt approach. This creates a demand for low-salt foods and in turn promotes the commercial availability of lower-salt products.

Despite improvements in some countries and by some companies, the food environment is still heavily salt-laden, certainly compared to low-salt societies. This illustrates a common pattern. There are lots of things that can be done to promote good health. Some are encouraged by authorities, but the onus is largely on individuals to use their willpower to follow the advice. A few individuals can shape their personal environments to make healthy habits easier to sustain. But all too often little is done at the collective level. The default option is not as healthy as it could be.

<sup>16</sup> Beard, *Salt Matters*, 216.

## Conclusion

Running for exercise and having a low-salt diet illustrate a general approach. You can promote your own good health by adopting healthy habits. Obviously enough, it helps to be aware of what these habits are, and to value them. Understanding the reason for the habits is also helpful. When authorities support the habits, that's another advantage. The key is to actually adopt the healthy habits.

Some people have tremendous willpower and can maintain healthy habits in the face of continual temptation, for example the temptation to skip exercise today or to indulge in some junk food. Relying on willpower is the most difficult road. It is far easier to construct your personal environment so healthy choices are the easier option. So you join a health club and arrange with friends to visit it regularly, or you make sure unhealthy food choices are not available at home. The more you can arrange things so you make good choices without having to agonise over them, the easier it is to maintain healthy habits. What this means is applying the tools of awareness, valuing, understanding and endorsement to constructing your personal environment.

Constructing your environment is a powerful option, but it has limits in a society in which unhealthy options abound and indeed are promoted by sophisticated marketers. It is all very well to keep only healthy foods at home, but what about the temptations of restaurants or your best friend's home cooking? The wider solution requires social change.

In a health-friendly social environment, the default options — the easiest options — would be healthy. The easiest transport options would be walking or cycling, and using motorised vehicles would be more inconvenient (except for people unable to walk or cycle). You would have to go out of your way to find high-salt products. And so forth.

Many campaigners have pushed for changes to promote public health, everything from sanitation to smoke-free workplaces. These campaigners are the keys to healthy living, because the changes they promote make a big difference to vast numbers of people. No single individual can bring about the changes needed, but every individual can contribute. Indeed, being involved in a campaign is a good way to become aware of all the facets of good health.

### Appendix: health disputes

As I was working on this chapter, there was a news story questioning the need to reduce salt intake. The *Sydney Morning Herald's* treatment, titled "Low salt diet not all it's cracked up to be," begins

Public health advice to minimise salt consumption to lower blood pressure is based on spurious science and does not recognise the complex role of sodium in the body, say scientists whose study attacks the basis of dietary guidelines.<sup>17</sup>

This sounds significant. So I looked up the study but all I found was this modest conclusion:

Sodium intake in the US adult population appears to be well above current guidelines and does not appear to have decreased with time.<sup>18</sup>

17 Julie Robotham, "Low salt diet not all it's cracked up to be," *Sydney Morning Herald*, 22 October 2010, p. 3.

18 Adam M. Bernstein and Walter C. Willett, "Trends in 24-h urinary sodium excretion in the United States, 1957–2003: a systematic review," *American Journal of Clinical Nutrition*, 92, 2010, 1172–1180.

The basis for the news story claims seems to have been comments in the study about factors contributing to hypertension. If the rates of hypertension are rising but salt consumption is roughly the same, then other factors are probably responsible, such as obesity. However, there's no contradiction. If high salt intake is one factor that contributes to high blood pressure, then it's worth addressing even if other factors are involved and need to be addressed too.

Assessing the relationship between salt intake and hypertension is complicated by the role of groups with vested interests in salt in foods. Salt industry advocates and scientists with ties to industry like to cast doubt on salt-hypertension research findings. Pharmaceutical companies prefer that hypertension be addressed by drugs, and many doctors are influenced by drug marketing.

At least as important is people's acquired taste for salt interacting with a dietary environment laden with salty products. People who like the taste of salt are more likely to be receptive to reports like the one in the *Sydney Morning Herald*: it provides an excuse for not going to the trouble of pursuing a low-salt diet.

The dispute over salt and hypertension is just one example of disputes over health matters, which range from cholesterol and trans-fats to cancer treatments.<sup>19</sup> What is the implication for those pursuing healthy lifestyles?

It is impossible to be absolutely sure about any health measure. Furthermore, vigorous debate can be valuable to help stimulate research into points of disagreement and encourage

19 An excellent source on the ways the US food industry promotes its interests over those of its customers is Marion Nestle, *Food Politics: How the Food Industry Influences Nutrition and Health* (Berkeley, CA: University of California Press, 2002).

consideration of alternatives. It is futile to expect debates to cease and everyone to agree about salt, exercise or anything else.

Yet this does not imply a do-nothing stance. Because people have options, there is no neutral position. Going along with a standard high-salt diet is just as much a choice as minimising salt intake. Neither one is neutral. Scientists may not agree, but agreement is not a prerequisite for taking action.

When vested interests are involved, it is sensible to subject their claims to extra scrutiny. After examining the arguments, or deciding who to trust, then it's time for action. Whatever you do is a form of action — including doing what you've always done.