

Author: Dr. Rangson Tonjunpong Illustrations: Nattika Boonsatitya

Created by ReAct and Chiang Mai Green City Initiative
Supported by Drug System Monitoring and Development Centre
(DMDC) and Thai Health Promotion Foundation

Acknowledgment and Note

This booklet is part of the 'Dancing with the Bacteria' series of publications aimed at raising public awareness about antibiotic resistance, prevention of infectious diseases, nutrition, food safety and medicine.

The contents of the booklet are an outcome of discussions on these themes at several workshops held in Chiang Mai, Thailand in February and July 2015. The workshops were organised by ReAct along with the Drug System Monitoring and Development Centre (DMDC), Sustainable Alternative Development Association (SADA) and Chiang Mai Green City Initiative.

The 'Dancing with the Bacteria' concept focuses on three sets of activities, all of which are closely related to the microbial world. These include promotion of organic food and farming practices, understanding the link between food/nutrition and health and the rational use of medicine.

Many thanks are due to the academics, health professionals, organic farmers, communicators, environment and food safety activists who have contributed to the content of these publications. Special thanks are due to ReAct for providing financial support towards the production of these booklets.

Demystifying Medicine

People around the world have a love-hate relation with doctors.

On one hand many blindly believe in the power of doctors to cure and rush to see them for every small ailment. On the other hand when the remedies don't work or their illness turns out to be complicated they become unhappy and critical of the medical profession itself.

Doctors too have a difficult time dealing with patients and their high expectations. One way many medical professionals respond is by keeping patients informed of every step they take and explaining the ailment and different treatment options. Some doctors take the pains to even give a detailed explanation of the way the medicine works and warn patients about the possible side effects.

However, in many places, doctors are too busy to discuss anything with their patients and just dismiss them with a prescription to take a certain number of medicines over a period of time — and telling them to 'come back if it does not work'. These doctors also don't like patients who read up medical literature on their own and ask many questions as they see this as dangerous 'half-knowledge' and a waste of time of both doctor

and patient.

All this has resulted in exaggerated perceptions of who doctors really are and what they do. For some they are like demigods, who can magically cure their illness. Yet for others they are people to be feared.

Confounding all these exaggerated images of course is also the simple fact that many patients, however educated they otherwise are, have very little idea of how doctors actually do their job or how medicine works.

Many people think that the field of medicine is so specialised or complicated that there is no real point in trying to learn much about it themselves. As long as they have a good doctor or hospital to go to everything will be all right.

This attitude of ignorance and blind faith adopted by patients in turn leads to a situation that puts a lot of pressure on doctors to solve all the patient's medical problems quickly. It becomes difficult for them to explain to patients that there are no easy solutions available in reality. There are genuine limitations of medical knowledge also, with a large number of even common ailments still beyond current scientific understanding. As a result often doctors have no choice but to experiment with various medicines and procedures till they get it right.

The huge gap in knowledge between doctors and patients of course can also lead to abuse of such power. In some countries, not a day goes by without news reports of medical malpractices, in particular the prescription of unnecessary diagnostic tests or expensive medicines to patients in order to make them pay more.

If patients were more knowledgeable about the basics of health, medicine and disease and less driven by anxiety and fear they could help correct this imbalance of power between them and medical professionals. An alert and informed patient can help doctors do their jobs better too and contribute to the overall health of entire societies by spreading the right messages all around.

This manual is a small effort in trying to explain some of the broad concepts that everyone needs to know about in order to understand how medicine really works. Again, this is not an exhaustive analysis of the subject, which is still highly contentious and full of debates between different schools of thought.

It is hoped that readers will use this manual as an entry point to learn more about these debates, muster the courage to ask questions and get better informed in order to look after their health and that of their families better.

Health is Wealth

As they sat down to have dinner Aroon had a strange question for his mother.

"Why is our family so poor?"

Taken aback a bit Ann recovered her composure quickly, "Why do you think we are poor? We live in our own house, we have enough to eat, and you wear good clothes and go to a good school. That is certainly not being poor?"

"What I meant was, why aren't we rich?" said Aroon, looking a bit sad.

"Anyway why do you want to be rich?" asked Ann.

"So that I can buy, eat whatever I want, go wherever I want and not have to work for a living," said Aroon.

Ann laughed, "There is no such thing as 'doing whatever I want'. Nobody can do things that defy the laws of Nature for example without damaging themselves."

"What does that mean? Why can't I behave in whatever way I want if I have the money to pay for it?" asked Aroon, a bit irritated with his mother.

"Well, even the richest person is limited by the fact that they have a human body and have to be careful about what they eat, drink, breathe and how they live. The health of your body

is the greatest wealth you possess," said Ann leaving Aroon a bit speechless but not fully convinced of his mother's argument.

That night Aroon's mother slept off quickly, but her mind remained restless. It was all very well to say that 'health is wealth' but what exactly is the meaning of health? And how can one remain healthy throughout one's life in a world full of so many dangers?

Ann was in deep sleep when all of a sudden she felt a warm gust of wind blow through the open window. She did not wake up or even open her eyes and yet realized there was someone else in the room beside her.

"Don't wake up. I am only here to visit you in your dream because some of the questions disturbing you tonight are the same ones that haunted me over a century ago" said a gentle voice, so comforting in its tone that all of Ann's rising anxiety at the intrusion vanished quickly.

"Who are you?" asked Ann in her dream.

"My name is Florence Nightingale and I have come all the way from England," said the voice. Suddenly, Ann could see her, the illustrious 'Lady with the Lamp', dressed like a nurse in her flowing white gown.

"You are the famous nurse...Oh My God!" stuttered Ann, a bit awed by this unexpected honour of being visited by someone so famous.

"Yes nurse, public health campaigner, statistician, champion of the rights of women and many more things all rolled together," said the lady with a radiant smile.

"I am here tonight though to try and answer some of the questions you seem to have about what health really means. But first you will have to come with me on a little journey" said Florence. Before Ann could say yes or no she had already been transported to faraway England, back in time to the mid-nineteenth century.

It was a change of place and time so drastic that Ann felt she had walked into a black and white movie from the early days of cinema. The city of London was dark and grey all around with everything around from people to their horse carts moving in slow motion.

One of the first things that disturbed Ann, as she crossed a bridge across the Thames River with Florence was the terrible smell all around. Florence caught Ann covering her nose with a hanky and said with a sigh, "The stink is coming from the river of course, which is where much of London's waste is dumped. There is hardly any sanitation system in the city".



It was early winter and the London air was filled with toxic smog, formed from the smoke emitted by hundreds of homes burning coal to warm themselves. The streets were lined with uncollected garbage and once again Florence apologised for the messy condition of the city, saying, "We have no garbage collection mechanism either!"

"Eeeeeeeek!" Ann leapt into the air all of a sudden with an ear-shattering scream.

"What happened?" asked Florence anxiously.

"A big rat nibbled me on my heel!!" said Ann, shivering with fear and disgust.

"That is normal here, with all this garbage on the streets, there are bound to be rats too" said Florence, looking relieved that it was nothing scarier than a mere rat.

"I thought London was a fancy, modern city but this is worse than anything I have seen in poorer parts of the world," said Ann looking a bit annoyed.

Florence smiled, "Oh! This is London from around 150 years ago. A lot of cleaning up happened after this through various public health campaigns".

"From what I remember reading you were one of the leading lights of these public health campaigns," said Ann.

Florence blushed a bit and quickly said, "Come here is the hospital that I am trying to help sort out. There are simply too many patients dying here, not from the ailments they get admitted for, but from the infections they pick up in the hospital".

Ann shrank in horror at the sight before her. The dimly lit hospital wards were overflowing with patients, resembling the scene from a refugee camp somewhere. The floors were unbelievably filthy with medical and other waste strewed all around. The air palpably smelt of death and disease, there being a cholera outbreak in the city.

Medical personnel rushed about the place with the relatives of patients beseeching them for attention. None of them wore masks or gloves and the equipment they used was primitive, more fit for a torture chamber than a real hospital.

"Now you will understand what I mean when I say the hospital itself is more dangerous than the disease people come in with. This place needs a real cleaning up," said Florence picking up a mop and swiping the floor. Ann joined her soon and the two of them took up the challenge of turning the mountain of filth before them into a clean floor.

"When you went to sleep you were wondering what is the meaning of health. Let me say this is what it is all about — safe



and clean surroundings, basic personal hygiene, good nutrition and sufficient physical activity" said Florence, using the hard end of her mop to push open a closed window letting some fresh air and sunlight into the ward.

"What is the role of doctors and medicines?" asked Ann.

"Of course those are important too at some stage but as they say prevention is always better than cure and much of that is really in the hands of individuals or communities themselves" said Florence.

Pointing to the patients milling around them Florence explained that many of them were prone to illness because they did not have sufficient food, lived in crowded, poorly ventilated houses and on "Now you will understand what I mean when I say the hospital itself is more dangerous than the disease people come in with. This place needs a real cleaning up," said Florence picking up a mop and swiping the floor. Ann joined her soon and the two of them took up the challenge of turning the mountain of filth before them into a clean floor.

streets that were full of garbage. The factories they worked in damaged their bodies further either through overwork in hostile conditions or because of the dangerous chemicals that were often used in the production of goods.

"The Industrial Revolution has made England a world power but as you can see it has also ruined the health of its people," said Florence. Even a middle-class person in nineteenth century England she said, could expect to live only till the age of 45 years, so the life expectancy of the poor could be imagined.

Listening to Florence speaking with rapt attention Ann did not notice that all of a sudden everything around them had changed. They had moved forward in time by around eight decades and the difference to the past was startling.

To begin with, the hospital ward looked quite clean, there were much fewer patients in the wards, the walls looked freshly painted and there was plenty of light streaming through ventilators and windows. Even more significantly the medical personnel, particularly those involved in any kind of surgery, washed their instruments and also their hands with disinfectants before and after the operation.

"These are the nurses I have trained myself and they know how to both prevent disease and also take care of patients who are ill," said Florence proudly. According to her nurses, though not as highly trained as doctors, were equally important as they provided the 'care' part of 'healthcare'. In other words, while a good diagnosis and prescription of treatment was important



it was the nurses who devoted a great amount of personal attention to the patients and made sure that the treatment was implemented properly.

Ann could see that, outside the hospital also the situation was vastly better than before. The streets were free of trash, the drains were covered, the air was clear and most importantly people looked far better nourished. Even in the poorer parts of London there was safe drinking water available in every home, all of them had toilet facilities and basic healthcare was accessible to most citizens.

Florence told Ann that thanks to the vigorous campaigns by social reformers factories had better safety procedures, shorter working hours, child labour had come down considerably and women workers had won the right to go on maternity leave.

"It is impossible to maintain good health as an individual if where you live and work is itself a breeding ground for illness" said Florence as they crossed the road. All of a sudden, out of nowhere a horse carriage came hurtling forcing both of them to jump out of its way.

"He is driving like a madman!" shouted a clearly upset Florence.

"There are too many people in the world who are dying need-lessly in road accidents, making everyone's efforts to maintain good quality healthcare meaningless!" said Ann, also looking very annoyed.

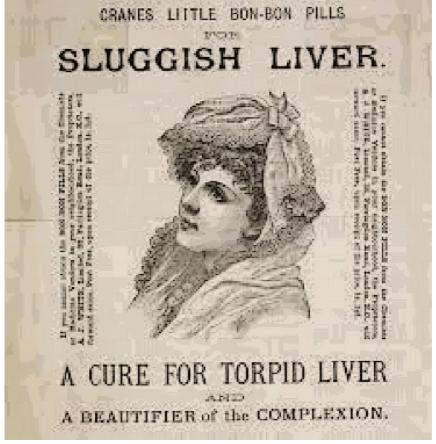
"That is an important insight Ann, that while we all should take care of our health as individuals we should also ensure that the environment we live in is safe. Modern cities put the lives of all citizens in danger due to pollution, traffic accidents and crowded living conditions" said Florence.

As they walked down Piccadilly Street Ann saw a notice pasted on the wall of one of the buildings. It said:

"Crane's Little Bon-Bon Pills. A cure for Sluggish Liver and a beautifier of the complexion"

"What do you think of this doctor and his claims?" she asked Florence.

"I would not take any pill or medicine that has not been researched properly for both its benefits and side-effects" said



Florence, lamenting the fact that there were dozens of companies selling remedies for everything from diabetes to cancer without any proof of their having a good impact. And all of them were making lots of money because people with various ailments flocked to them out of desperation.

"For ordinary patients it is very difficult to make out the difference between a genuine medicine that can help you and a false one that is useless or can even harm you" said Ann.

"That is true and one of the reasons why people should learn something about how medicine actually works" said Florence.

"We are still at an early stage of understanding many illnesses or how exactly many processes in the human body happen.

There are many common existing diseases, including diabetes, hypertension, arthritis, asthma or even routine viral fevers which can be relieved or managed by modern medical methods, but cannot be cured",

"Frustrated by this patients sometimes search for alternative methods of addressing their health problems. Another reason for the popularity of alternative medicine in many countries is because modern medicine is neither readily available nor always affordable", Florence continued. The high cost of modern medical care also drives people towards other streams of medicine.



"I will tell you a secret about disease that many people do not know, and that is that the human body is capable of looking after itself and can resolve many minor illnesses itself" said Florence.

"That is fascinating to know," said Ann. "We have become so ignorant of basic facts about the human body and disease that we rush to the doctor or hospital for everything and become over anxious with even the smallest of health problems".

"People should go for routine preventive health check-ups to the hospital or to doctors to catch major ailments before it is too late but they should learn enough to manage many of the smaller problems on their own or within the community," said

Florence.

"Many people though are not satisfied unless they have seen the doctor and taken some form of medicine" said Ann.

"Patients should understand that medicine is not just beneficial and it can be harmful also. There is a trade-off involved with taking every medicine, both traditional and modern. Often medicines have side effects, which aggravates the health problems of those who take them. Also, depending on what is the quantity or dose you take the same medicine can be curative or poisonous to the body," said Florence.

"I have some friends who have become addicted to medicine like they would to drugs — especially painkillers and mood elevator drugs," said Ann.

"That is why the sale of medicine should be strictly regulated and made available only through prescriptions," said Florence, adding "that is not easy to implement in many societies where people are not used to following any rules strictly".

"I agree, restricting the sales of medicine in pharmacies will not work unless people voluntarily give up popping pills due to their anxiety. That is why there needs to be a wider campaign to educate citizens about health, disease and medicine," said Ann.

"You have certainly come a long way in your understanding of these issues since we first met up. Maybe it is time for me to go as I seem to have done my job of educating you quite well," said Florence. As Ann watched in a bit of shock Florence slowly fading away from sight, waving a goodbye as she went.

"No! Don't go! I need to talk to you a bit more..." shouted Ann running after the disappearing Lady with the Lamp. There was no response however and Florence vanished as quickly as she had appeared, leaving Ann distraught.

Ann woke up from her dream and found Aroon shaking her saying, "Is everything OK with you mummy? You seem to be in pain!"

Ann looked at her son and stroked his head gently. He was the one who set off her chain of thoughts about health and what it really meant. If children did not ask difficult questions adults — whose minds are often closed— would never learn anything at all, she thought as she closed her eyes and went back for another quick snooze.



Points to Ponder

- The blind faith adopted by patients in doctors puts a lot of pressure on doctors to solve all the patient's medical problems quickly even if this is not possible in reality.
- An alert and informed patient can help doctors do their jobs better too and contribute to the overall health of entire societies by spreading the right messages all around.
- The three factors that are essential to maintain good health of the individual are sufficient and good quality nutrition; safe environment and healthy lifestyles.