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## China: Multilateral sources combined to resolve dietary diseases

**Abstract:** In China, with the economy boosting up, ratizens' life has been greatly improved. But on the other hand, chronic diseases are becoming more and more popular between adults and this phenomenon has become a big barrier to the society's development. This paper proposes some practical suggestions on the problem, including building healthy lifestyle, going on scientific diets, doing moderate exercise etc. It also includes what government should do in the process.

Keywords: chronic diseases; healthy lifestyle; scientific diets; moderate exercise

Mr. Zhao is an overweight man living in Shijiazhuang, Hebei Province, China. Shijiazhuang is a city with 10.16 million people. The average wage is 3070 yuan per month. Citizens usually purchase food and vegetables at supermarkets or markets. The food are produced and transported from ambient towns or small cities. There are 5 people in Mr. Zhao's family: his mother, his wife, his daughter, his son and him. His daughter is now reading in town senior high school. On diet, the family usually have porridge, soya-bean milk etc. for breakfast, rice or noodles for lunch and porridge for dinner. Stable food include steamed bun, steamed twisted roll etc. As for their access to health care, there is a village hospital and farmers simply go there for health help.

Mr. Zhao is now 47 years old and has hypertension, weighing 100 kilograms. Actually, he is not always such a fatter person. When he was a lad, taking service in a navy, he was only 70 kilograms heavy. Since 2000, he has been fleshing out step by step when he opened a charcuterie, selling cooked food and raw meat. Owing to take care of his business, he always slept late during those days. Not surprisingly, he ate large quantities of salty prepared food like drumsticks and pork livers with alcohol for dinner so that he could easily stay vigorous and stave off boredom, without having a clear recognition of his daily diet structure. Day by day, his weight increased but it did not cause his attention. He still went on with his unhealthy lifestyle, involuntarily and subconsciously. Additionally, drinking beer is also an important factor. After quitting the army, finally being free of the strict rules, he was able to drink whenever he would like to and drink as much as he can. He also smoked, consuming about 3 packs of cigarettes a week on average. But now he is going to give this bad habit up, in consideration of the detriments smoking brings to lungs instead of to the obesity. As he said, "somehow I said goodbye to the tight one and became a fat one", he is now very confused and cherished the memory of the guy he was 14 years ago.

Despite the fact that he is overweight, he says he has no plan to go on a diet. He is now a security man in a university. When he was free, he also moves in a used car market, reselling the cars. In winter, he also delivers mutton to some restaurants. He says that he does not like doing sports and he has neither time nor athletic ground. On diets, he says that he cannot eat little because he has a lot of things to do every day and needs enough energy. In short, his weight will not be reduced in a short time. In fact, there are many people similar to Mr. Zhao in this city. They have similar reasons for being fat, for having chronic disease, and most of them do not want to do anything to make a change.

## The present situation in China is not optimistic.

With the society developing by leaps and bounds, material life has been greatly enriched, whether in the production field or in the consumption world and the physical constitution of the public raises alarm. Chronic diseases, including obesity, heart disease, diabetes, hypertension, hyperlipidemia etc. have come to the top murderers of the public and the morbidity is rising rapidly.

According to the "*China cardiovascular disease report 2011*", there are two with cardiovascular disease out of ten people. Now in China there are about 200 million people with hypertension, approximately 92 million people with diabetes, 100 million people or so with heart disease, nearly 200 million people who are overweight and more than 60 million people with obesity. And the incidence of chronic diseases is still rising.

Over the past 30 years, the amount of Chinese diabetics has been increasing at a surprising speed, especially in the  $21^{st}$  century. In 1980, the morbidity was under 1% and in 1994 the number is 2.5%. While in 2000, it reached 5.5% and the number is 9.7% in 2007. Now, there is one Chinese every three diabetics in the world. Additionally, more and more young people and country man are joining in.

Some people hold the idea that these chronic diseases are incurable but non-lethal. According to the first research of residents' health literacy, there are just 4.66% of residents who have literacy of prevention of chronic diseases. This rate is the lowest of the five questioned conceptual accomplishment. As a result, they do not put much attention to their health conditions. In fact, chronic diseases are not the real horrible things but complications. The case fatality-rate is increasing at a "worrying speed".

Additionally, because most patients with chronic diseases are overweight or obese people, there are more nuisances waiting for them. In fact, cultural factors influence people's evaluation criterion on beauty and health in various ways. Overweight and obesity are regarded as ugly in the appreciation on beauty, are deemed to guilty in religion and are defined as morbidity in medical fields. Overweight and obese people are discriminated, derogated and limited. They may lose a chance to work in a great company just because of their shape, funnily but atrociously.

Standing at a higher level, at a national level, with national health level dropping down with more and more people are being clouded by chronic diseases, the problem will turn into a strategic issue. Not only will it aggravate the burden of the government, but also the consumption of medical resources will turn into a kind of "waste". Therefore, it is not only vital but also essential to go on with further discussion.

Needless to say, if we all human beings do not bring this phenomenon under control, it will become an extremely serious and worldwide public health problem and aggravate the government in financial pressure further more.

## Non pathological causes of these diseases are of various kinds.

Why is it that chronic diseases were so "popular" not hundreds of years ago but in 21st century? Take China as an example, in ancient China, like Tang and Song Dynasty, people considered grains as their staple food and had wide choices of non-staple foodstuffs. With less sugar and more fresh vegetables, also with the beneficial beverage, various kinds of teas, our forefathers hardly got today's dietary disease. Specialists announce that Chinese traditional dietary structure is a best example to take precautions against these "diseases of the wealthy". In 1970s, carrots and cabbages were main vegetables on Chinese people's dining table. They even replaced food. In the late 1980s, wheat flour and rice gradually replaced coarse food grain and food from all over the world began to appear in China. As a result, in the 21<sup>st</sup> century, Chinese eat better and more and have more and more health problems at the same time.

On diets, patients take too much energy, much more than they need. They prefer fried food and often eat in fast food restaurant. As a result, most of them have less than 250 grams of vegetables a day and do not have a habit of eating fruits. Additionally, these people's animal food intake and edible oil intake maintains at a high level, which would make it easier for them to get fat and their behavior will increase the incidence of these chronic diseases. What's more, interestingly, most of them like salty food and the habit itself will do harm to our body in various ways. Furthermore, salty food tastes delicious and can work up an appetite and result in people's eating more and getting fatter. Fifthly, about one in five people of this special group has a habit of not eating breakfast and the same proportion of people eat most in the evening among three meals. Last but not the least, some of them are accustomed to eating snacks.

On daily exercise, as I mentioned before, the overweight and obese don't even have a clear understanding of their problem and this is the main reason why they do not have daily exercise. As for those who know the importance of exercising and have a desire to do so, there are still many barriers. Firstly, some people can't make up their minds. Secondly, some people have some kind of disease and cannot do exercise. Thirdly, some people do not have athletic ground. Fourthly, some young people are overworking so they are always too tired to do sports. Additionally, no company to go together with, no time etc. are also some difficult barriers to pass through.

As for their weight loss measures, men and women are quite different. Let us cite a research made in Shanghai on overweight and obese people aged 20~45 as an example. Among the three measures, go on a diet, do exercise and weight-reducing product, 50.88% (this is the ratio of all informant, similarly hereinafter unless otherwise specified) of men choose physical exercise while 46.93 of women choose to control their diet. These are respectively two ways that men and women mostly prefer. Not surprisingly, only 0.88% of men ever used weight-reducing products while this rate for women is 10.61%. Gratifyingly, 44% of men and 51% of women adopt two of the three ways. Among these people, 93.5% of men and 87.7% of women prefer "exercising & food reducing". This model

(exercising & food reducing+) is also popular among those who take three measures. When asked about their view on whether it is easy to go on weight loss plans, men and women are greatly diverse. 66.43% of men think it is not easy while 97.50% of women believe this is difficult.

As for the patients' access to education on correlative knowledge, the existing situation is quite worrying. Despite the fact that most patients with these chronic diseases know something about their conditions, their health knowledge is poor. And there may be blindness in the treatment of disease. So some patients are misled by advertisement and eliminate discontinuation of regular treatment. Take obese patients as an example, many of them didn't seek advice from doctors before buying weight loss medicines. Moreover, this kind of education now in China is permitted by series of lectures. But this kind of fashion is sermonic and cannot leave listeners a deep impression.

Besides, there are some other small factors:

- 1) The habit of eating snacks before turning in. Food taken in will not be consumed and released as energy but turn into fat and stay in body.
- The habit of drinking and smoking. This may increase the incidence of getting cardiovascular diseases.
- 3) The habit of drinking beverages, including coffee and carbonated drinks.
- 4) Marriage situation. It seems that married men are more likely to join the overweight crowd than unmarried men.
- 5) Hours of sleeping and sleeping quality. These two factors may affect some of the chronic diseases in a way.
- 6) Age. It seems that the wrinkly are more likely to suffer from chronic diseases.

To better reflect the problem, I chose Mr. Zhao as the detail focus of my report. Millions of people have similar health conditions and health problems, separated in hundreds of cities, towns around China.

### Possible and pratical solutions should be immediately put into action by patients.

As we can see from the above-mentioned example, patients themselves play an important role in the problem. In order to lead a healthy lifestyle, they are supposed to "control their mouth and bust a move".

"Controlling mouth" means to have a scientific diets, it is absolutely the best way.

1. Rigid control over energy intake is vital. Patients must take Lo. CHO, Lo. Fat and Lo. Chol so that keep it at negative energy balance. Specifically,

- 1) It is suggested to take one gram of protein per kilogram of body weight a day. High protein foods include the skin of soy-bean milk, soya beans, peanuts, chicken, lean meat of pork, beef, duck and lamb, oats, eggs, etc.
- 2) Be sure to take about 150 but no more than 200 grams of carbohydrate a day. Foods of high carbohydrate include various kinds of grains like rice, wheat corn, barley, oat and sorghum, many sweet fruits like sugarcane, banana, watermelon, grape and cantaloupe, nuts and some vegetables like carrot and sweet potato.
- 3) Other energy supply should be offered by fat.
- 2. Taking hypohaline food is helpful and can greatly strengthen the effect. It can force people to eat less by blunting the edge of appetite. It will also limit the Sodium and water retention and in result of alleviating the burden on the body. Generally speaking, regular people should take no more than 6 grams a day of salt while people with chronic diseases should take no more than 5 grams a day.
- 3. On oil use, overweight and obese people are suggested to use olive oil, which is the most suitable one for human nutrition needs that has ever been discovered. Olive oil is of good stability and has strong resistance to oxidation. On the one hand, it can be used as acetarious oil. On the other hand, it is also suitable to be cooked in high temperatures. At least, we should use plant oil as a substitution of grease.
- 4. On the choice of ingredients and condiments, we should also pay attention. Some minutiae may include:
  - 1) Using white meat instead of dark meat. White meat includes chicken breast, rabbit meat, pork, veal, lamb, etc. While dark meat includes beef, mutton, venison, etc.
  - 2) Using graham flour instead of refined wheat flour. Graham flour is the natural source of water soluble fiber and can effectively lower cholesterol and control blood glucose. Additionally, it is rich in vitamins, including B group vitamins, vitamin E, etc., so that it can effectively prevent and cure diseases caused by the lack of these vitamins.
  - 3) Eating grilled food instead of frying food to reduce oil intake.
  - 4) Using honey instead of artificial sweetener and sugar to reduce glucide intake.
- 5. Prevent gluttony: it is really harmful. Even people who care for diets in everyday life, especially those who have dietary diseases, cannot avoid taking a large amount of nutritious food at a time during festivals. This is an important taboo. It can even trigger heart disease.

"Busting a move" means taking exercises, which can help patients to improve their health conditions forwardly. As for its importance, I do not want to give unnecessary details. Let us see what the patients should do and should pay attention to in the process.

Firstly, all patients need to understand the following principles:

- 1. On time selecting, the best time quantum is 5:00~6:00 p.m., 30~50 minutes each time, 3~5 times a week.
- 2. Do this in a persistence way and exercise according to one's abilities. It is not the more time you spend on this and the more vigorously you exercises, the better. Improper exercises will cause physical discomforts, far from producing effects. Long time of persistence is the most important thing.
- 3. Proceed in an orderly and gradual way and do not be anxious to accomplish the assignment.
- 4. Be sure to do the warm-up and recovered activity. Before exercising, a complete inspection and a perfect project are both necessary.

After getting a general command of these principles, we are now coming to learn some measures:

- 1. Aerobic exercise is strongly recommended. 300kals are consumed in about 30 to 60 minutes and this can lead to an obvious result. Simple aerobic exercise includes walking, jogging, climbing stairs, rope skipping, swimming, cycling etc.
- 2. Among the forward-mentioned ways, walking is the most widely used and loved one. Jogging costs little but benefits much. Firstly, it is simple and convenient. Secondly, the amount of exercise is small so it will not do harm to body because of hyperkinesia. The concrete measures include:
  - 1) Chin up and chest out while walking
  - 2) Swing arms high and make stride lengthened
  - 3) Be completely relaxed.
- 3. Exercising in a gymnasium is also a good choice. As for quinquagenarians, be sure to begin at the lowest level and go further step by step, in case of suffering from sport injury.

Significantly, different diseases have different pathogenesis, so patients should choose to take targeted suggestions in practice.

As I suggested, for 2 weeks, Mr. Zhao only had porridge for breakfast, noodles for lunch and some vegetables for dinner, a potato or something. And he has formed a habit of jogging in the university at work, also for work. As a result, he now feels lighter all through the body and weighs 2.5 kilograms less. But there are still many difficulties he needs to face in the future, for instance, to stick to this

healthy lifestyle. From this tiny example of Mr. Zhao, we can see that a small change can make a big difference as long as you would like.

# Educating program is vital.

The choke point in China is that it seems that it is incapable to turn medical personnel's recognition to the public's recognition. In a word, how to call on more "Mr. Zhao"? Unhealthy lifestyle will do harm to our body while healthy lifestyle can bring benefits. In fact, these two perspectives have been caught on widely among medical staff. But on the other hand, millions of people are still going on with their habits and customs. As a result, their present life will take a great toll on them some day in the future.

To get through the choke point, setting up a holonomic mechanism of education to change people's sense is important. Education program should follow the rule of making plans depending on patients' conditions. It may differ from man to man. Through the education, patients should have a systematized knowledge of their diseases so that dependence between doctors and patients will be strengthened.

- 1. Most importantly, as I mentioned above, it is the pertinence, including pertinence to the patients and pertinence to their family members. While drawing up the recipes, while making up the exercise therapy program, doctors and nurses must have a basis in reality and make the whole therapeutic regimen fit for patients to maximize the treatment effect.
- Evaluations and analysis are also necessary. Build up trace research system and trace patients' complications.
- 3. The content of the education should be systemic, coherent and repeating.
- 4. Family members play an important role in the therapeutic process. Patients are very likely to shirk whenever in the process. So appropriate supervisions are essential and the one from family members is absolutely the strongest and most effective one. They are supposed to stand with doctors and work together. This point is often ignored in clinical medicine.
- 5. The government should be forward-looking and recognize the importance of educating people to take care of their body. Government has the right and obligation to allotted special fund to support and ensure the smooth running of the program.

# The government should shoulder the responsibility.

As for the government, there are a lot to do to promote a healthy lifestyle for us citizens and it is on the way.

1. Chinese government has made "*China chronic diseases prevention and work plan for 2012-2015*". Health authorities have built up national and provincial platforms for chronic diseases information and knowledge release. Radio and television, press and publication departments, organize major media to establish health column, wide spreading prevention knowledge of chronic diseases, encouraging people to consciously cultivate health behavior and healthy lifestyle.

- 2. In September, 2008, The Ministry of health, the National Patriotic Health Campaign Committee introduced universal health life style action for the first time, guiding out reasonable diet and physical activity, designing guidance scheme which is closely related to residents' daily work and life, which can be put in practice in long term and which is effective. The two departments call on nationwide people to pursue heathy life, stay off wine and cigarettes, stay on reasonable diet and do moderate exercise. Similar activities should be put on a year-basis and should be extended to every province and city.
- 3. The agricultural sector adjusts and improves the structure of food production, guide produce safe, nutritious, convenient and rich agricultural products. Department of Commerce advocate and encourage food sailors to set up particular shops for healthy food, guiding customers to choose healthy food.
- 4. The government is also actively creating a fitness environment and implementing "National Fitness Program", guiding and promoting mass sports activities. Sports Department should strengthen scientific guidance to physical exercise and gradually increase the openness of public sports facilities and utilization. Education Department should ensure that students at school should have at least one hour to exercise. Environmental Department should strengthen environmental quality monitoring and assessment and strengthen the comprehensive treatment of environmental pollution.
- 5. From October, 2009, China Diseases Prevention and Control Center began to popularize healthy lifestyle in schools in Beijing, Shanghai, Jinan, Xi'an and Nanning. The campaign advocate schools to establish the awareness of "health is the most important", highly concentrate on children's health and foster them of keeping nutrition balance. Such kinds of activities should be held to every city to make sure that the young generation can have a healthy lifestyle from a young age.

# Conclusions

Patients, medical personnel and governments have been on the way. Besides, some local organizations can also make a difference. For example, community service centers may hold some health talks at regular intervals. The public should also get moving, consciously forming healthy lifestyle and preventing chronic diseases.

Gratifying, there have been some changes in China: the number of people who do morning exercise has increased rapidly, square dance is sweeping the nation and the audience ratings of health knowledge programmes are going up.

All these phenomenon's have raised our confidence and worked up our nerve to face and challenge this. We firmly believe that, as long as we make up our minds to conquer all the difficulties we may meet in the process, as long as every part of the society take its responsibility, as long as we strengthen national and international cooperation, chronic diseases will be no longer terrifying nor invincible.

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