How to be Healthy: Traditional Chinese Health Preservation Teachings and Modern Research

Abstract

The human body does not come with an instruction and maintenance manual. If we want to achieve as long and healthy a life as possible, we need guidance on basic lifestyle factors such as diet, rest, sleep, exercise and so on. This article discusses two sources of such guidance: traditional Chinese health preservation teachings and modern lifestyle research.

"In caring for life, the wise must adapt themselves to the fluctuations of cold and heat in the four seasons, live peacefully and practise temperance in joy and anger, balance between yin and yang, strength and gentleness. Hence no outward evil can impair their health and they will enjoy long lives". The Yellow Emperor's Inner Classic, 100BCE to 200CE.

Introduction

he Buddha taught that sickness, old age and death are inevitable, and no human being can expect to enjoy lifelong good health or be able to fully control the coming and going of disease. Many factors affect how a human life is played out and the presence or absence of illness is determined by constitutional factors, wealth or poverty, geography and chance, as well as lifestyle.

"A person is strong and long-lived or weak and short-lived. This depends on whether one is richly or poorly endowed in constitution by nature ... When richly endowed in constitution, he is strong in physique and long-lived. When poorly endowed in constitution he is weak in physique and short-lived".

"A person takes the mother as foundation and the father as shield". The Yellow Emperor's Inner Classic².

We know from both the teachings of Chinese medicine and modern research that the principal factor that determines how long we will live is our constitutional inheritance, and Chinese medicine further teaches that our constitution will determine how innately robust or weak we are. Other than wisely learning to work with our own constitutional strengths and weaknesses, there is little that we can do to change the core foundation we were born with. Nor we can we ever absolutely overcome injurious influences that happened when

we were in the uterus and in the early years of life. It may even be impossible to recover completely from severe illnesses or abuses, such as prolonged smoking, that occur in the adult years.

"It is man himself, not Heaven, who governs his life, and he who abuses himself dies young, while he who takes good care of himself enjoys a long life". Gao Lian, Ming dynasty³.

Yet despite the importance of constitutional factors, it is clear that we can make a very considerable difference to our health, and reduce the risk of disease and premature death by adjusting our lifestyle. Chinese medicine teaches that jing-essence, the ultimate consumption of which means that life is no longer viable, has two sources. The first, known as the essence of the Kidney (or pre-heaven essence), is derived from our parents and corresponds to our constitutional inheritance. This cannot be added to after birth. The second, known as the essence of water and grain (or post-heaven essence), is formed from the activities of breathing and eating, or more widely from the transformation of all forms of nourishment we receive in our daily life. Post-heaven essence can supplement pre-natal essence, and paying attention to proper nourishment and at the same time guarding against dissipation of essence through poor lifestyle, means that we can maximise health and longevity up to the limits set by our unchangeable constitution. By contrast, poor nourishment and a dissipated lifestyle will eventually consume the essence and shorten the lifespan even of those endowed with plentiful constitutional essence.

How to live in such a way as to maximise nourishment and our ability to transform it, as well as to minimise dissipation of essence, qi and blood, yin and yang, is considered in the Chinese tradition under the heading of health preservation. This can be viewed as one of the great branches of the Chinese

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Health preservation simply comprises the teachings handed down over at least two thousand years on how to lead a harmonious and healthy life. Some of the greatest doctors in the history of Chinese medicine contributed their wisdom to this body of knowledge, for example Sun Simiao, the incomparable Daoist doctor of the 7th century CE who said: "To live long, people should take care not to worry too much, not to get too angry, not to get too sad, not to get too frightened, not to do too much, talk too much or laugh too much. One should not have too many desires nor face numerous upsetting conditions. All these are harmful to health". Sun Simiao⁴.

The knowledge embodied in many health preservation teachings, based on long observation of human life, is dramatically confirmed by the growing body of lifestyle research of the last few decades. Several long-running studies, involving tens of thousands of subjects, as well as many other shorter studies, have yielded data for detailed analysis of how diet, exercise, alcohol consumption, smoking, sleep and emotional patterns impact on health and longevity.

This article will discuss the teachings of health preservation alongside the findings of modern research, and illustrate how the fruits of careful observation over many centuries, combined with the wisdom of the Chinese tradition, have managed to be so accurate. It should be stressed that this is just the briefest introduction to Chinese health preservation teachings and I have focused particularly on those aspects that are confirmed by modern research.

Traditional Chinese health preservation can be summarised under a number of headings: cultivation of the mind, regulating diet and consumption of alcohol and tea, exercise, work and rest, sleep, smoking, sexual habits and care of the ageing body and mind. In each case I will compare the traditional teachings with the findings of modern research.

Cultivation of the mind

"Laughing makes you ten years younger, distress causes your hair to become grey" Chinese saying.

"Anger speeds up ageing, laughter makes you younger" Chinese saying.

"Those who cultivate their moral character by doing charitable deeds never fall seriously ill or suffer calamities" Sun Simiao⁵.

"Life comes to man but once and the past will never come again, why not control the seven emotions and cultivate the temperament to protect yourself against diseases?" Sun Simiao⁶.

"People have illness because they do not have love in their life and are not cherished". Sun Simiao

There is ample evidence that avoiding intense negative emotions, calming the mind, laughing, being in intimate relationships with others and cultivating generosity, all contribute to good health and longevity.

Meditation, which could be called the clinical science of calming the mind, is associated with a host of benefits. Even a short (8-week) programme of mindfulness meditation can produce lasting changes in the left frontal region, an area related to positivity and optimism, and the function of the immune system7. In breast and prostate cancer patients meditation was found to enhance overall quality of life and decrease stress8. Patients with irritable bowel syndrome who meditated twice a day for fifteen minutes each time experienced a significant improvement in symptoms compared to a control group who were put on a waiting list (and subsequently learned to meditate)9. Among those patients who continued to meditate for a whole year, not only was improvement maintained but symptoms improved even further¹⁰. Transcendental meditation appears to decrease atherosclerosis and may lower the risk of heart attack and stroke in hypertensive adults¹¹. Transcendental meditation has also been shown to relax and open the blood vessels and thus contribute to low levels of blood pressure in regular meditators¹². Most recently, a long-term study of people who had practised transcendental meditation for several years found that they had a 23% reduction in risk of death from all causes compared to those who practised other relaxation techniques or who received standard medical care. Specifically there was a 30% decrease in the rate of cardiovascular mortality and a 49% decrease in the rate of mortality due to cancer¹³.

Happiness and laughter are clearly beneficial to humans. A recent study has found that laughing promotes vasodilation. Blood flow was significantly increased in nineteen subjects after they watched comedy film clips, but was reduced in fourteen subjects after they watched clips from a violent film¹⁴. In a similar study, women who watched a humorous film showed decreased stress and increased immune function compared to women who watched a tourism video¹⁵. And people with type 2 diabetes are better able to process sugar and have a smaller rise in post-meal blood glucose if they watch a comedy show compared to listening to a monotonous and humourless lecture¹⁶.

Feeling happy has virtually immediate effects on the immune system. Within 20 minutes of happy thoughts beingexperienced, the amount of antibody immuno globulin (sIgA) found in the saliva doubles, remaining raised for at least three hours. By contrast, memory of traumatic or painful experiences causes the sIgA levels to drop. There is a similar response to unpleasant and pleasant smells¹⁷.

"A treasured friendship can replace regret and hatred and heal the old wounds of the mind. Such a friendship can provide sincere help, consolation and encouragement. These can be magic weapons for elimination of grief and anxiety. When your life is free from anxiety and grief, you will find food tasty, sleep restful and recreation enjoyable". Xu Xiangcai¹⁸.

Despite Sun Simiao's extraordinary statement about people not having enough love in their lives (apparently made when he was very old), Chinese health preservation texts do not often emphasise the need for close personal relationships for the maintenance of wellbeing and health. This may be because social isolation has always been rare in a traditional culture so deeply rooted in the extended family. The Confucian ideal of 'family harmony and filial children' offers a model of mutual respect, affection and the closeness that comes from placing the family group above all others. Modern life is different, however, with a much greater degree of potentially harmful social isolation. According to modern research, intimacy and close relationships have a proven relationship to health in general and heart health in particular. Having a close relationship with someone, such as a friend, lover or relative, can significantly reduce the risk of having a repeat heart attack¹⁹. The investigators in this study also found that people who lacked a close relationship were more likely to drink heavily, use illegal drugs and to have had at least one previous heart attack before admission. They were also twice as likely as others to have been separated from their parents in childhood. According to Dr. Dean Ornish, a medical pioneer in the field of heart disease, "Those who feel lonely, depressed or isolated are three to five times more likely to suffer premature death or disease. I don't know of anything else across medicine that has such a broad and powerful impact"20.

"When faced with something exasperating, one should calmly consider which is more important, anger or health. This comparison will enable one to gradually eliminate one's anger." Cao Tong, Qing dynasty²¹.

"Of the seven emotions, anger is the hardest to control". Li Yi-ru, Qing dynasty²².

"It is known that all diseases arise from the upset of qi: Anger pushes the qi up...". Yellow Emperor's Inner Classic²³

As far as negative emotions are concerned, anger appears to be especially harmful, and loss of temper can trigger a stroke within two hours²⁴. Men who are generally hostile and contemptuous of other people or prone to outbursts of anger are at greater risk of developing atrial fibrillation, and have a 20% greater risk of dying from any cause than men with a cooler temperament²⁵. Men with anger-related personality traits and a propensity to express anger

outwardly are also at greater risk of carotid atherosclerosis²⁶. However emotional suppression may also be harmful and there is evidence that men with moderate levels of anger expression are less likely to suffer heart attacks or strokes than men with low levels of anger expression²⁷.

This is explained by Fei Bo-xiong who said "Joy, anger, melancholy, anxiety, grief, fear and terror are common to everyone. Giving vent to joy, anger and melancholy as occasion requires is what is meant by venting emotions properly"²⁸.

"Be cheerful whether rich or poor, He who does not laugh can only be a fool". Bai Juyi²⁹.

In much of the modern world, we are subtly and overtly $indoctrinated \,with \,the \,idea \,that \,acquisition \,offers \,fulfilment$ and happiness. This is what Marx tellingly referred to as the 'fetishism of capitalism'. The word 'fetish', from the Portuguese, originally meant an object invested with greater significance than it actually possesses, for example a stone worshipped as the embodiment of a spirit. Marx was therefore pointing out that capitalism encouraged acquisition and consumption on the false premise that it would deliver satisfaction and happiness. In 1985, in an article in Psychological Science in the Public Interest, Ed Diener presented results of a survey which showed that respondents from the Forbes list of the 400 richest Americans and the Masai of East Africa reported almost equal levels of satisfaction and well-being. The Masai are a traditional Eastern African herding people who have no electricity or running water and live in huts made of dung.

"The reason why the virtuous live long is that they are not greedy for outward gains and are able to keep inward peace". Dong Zhongshu 179 BCE-104BCE 30 .

At the same time, there is evidence that generosity and altruism benefit health. In a study of 423 older couples, 134 individuals died over a 5 year period. Almost two thirds of these were people who had said they do not help others, whereas only one third of the deaths were of people who were rated as helpful and giving to others ³¹.

Regulation of diet

"The less one eats, the broader his mind and the longer his life span; the more one eats the narrower his mind and the shorter his life span". Zhang Hua, Jin dynasty 265-420³².

"Eat to be only half full and of no more than two dishes; drink seldom and then only three tenths of one's capacity". Gong Tingxian, Ming dynasty³³.

"Eat neither too much nor too little ... One should eat more grains and less meat". Li Dongyuan, 13th century ³⁴.

Modern research into longevity lifestyle is dominated by one finding. Less food (caloric restriction) not only extends the lifespan of laboratory animals but also reduces the incidence of virtually all diseases of aging such as cancer, heart disease, diabetes, osteoporosis, auto-immune disorders, neurological decline and diseases such as Alzheimer's and Parkinson's. Caloric restriction has been shown to dramatically extend both the life and health of all animal species tested to date³⁵. New American research confirms that caloric restriction also benefits humans. In comparisons of 18 volunteers who have been practising caloric restriction (between 1112 and 1958 calories daily) for an average of six years and a group of 18 people eating a normal diet (between 1976 and 3537 calories a day), the caloric restriction group were found to have significantly lower levels of triglycerides, cholesterol and C-reactive protein (a marker for inflammation of the arteries), significantly lower blood pressure and no atherosclerotic plaque in their arteries³⁶.

"Vegetables are indispensable at every meal". Sun Simiao, 7^{th} century CE^{37} .

"Fish, meat and fruits can all be eaten, but the diet should not be sumptuous in fish and meat and it is better to remain thrifty and simple". Sun Simiao³⁸.

"Food that is too salty shortens the life span". Sun Simiao³⁹.

As far as composition of diet is concerned, a diet high in vegetables and/or fruit has been found to prolong survival in ovarian cancer⁴⁰, reduce the risk of breast and prostate cancers by 50%41,42 and halve the risk of older people dying of all causes over a 4-year period⁴³. A diet rich in saturated fats, by contrast, substantially increases the risk of developing breast cancer⁴⁴, whilst eating whole grain cereals is associated with a onethird reduction in the risk of heart disease and cancer⁴⁵. The Mediterranean diet (vegetables, legumes, fruits, nuts, cereals, olive oil and fish, a low-to-moderate intake of dairy products and alcohol and a low intake of meat and poultry) which corresponds fairly well to the traditional Chinese dietary ideal is associated with greater longevity (a 25% overall lower death rate, with a 33% lower death rate from coronary disease and a 24% reduction in cancer deaths)46.

"Yang qi is swelling at noon and deficient at sunset; therefore enough food should be taken at breakfast and less food for supper, and at night it is necessary to keep the stomach empty". Cao Tingdong, Qing dynasty ⁴⁷.

The idea that the main meal of the day should be breakfast is common to many different cultures. An old English saying goes "Breakfast like a king, lunch like a merchant and sup like a pauper", whilst a Jewish saying more pointedly advises "Eat your breakfast alone, share your lunch with a friend and give your supper to your enemy". Research indicates that eating breakfast, especially one that contains whole grains, helps to stabilise blood sugar levels and regulate appetite and energy throughout the day. As a result, people who eat breakfast are significantly less likely to be obese and suffer from diabetes than those who usually do not48. In a US study of schoolchildren, eating breakfast was associated with higher maths grades and a reduction in depression, anxiety and hyperactivity⁴⁹. From a traditional Chinese medicine viewpoint, the habit of taking the main meal in the evening, which fits our modern lifestyle much better, means that the stomach is full of food at night, resulting in food stagnation and eventually in chronically impaired digestion and injury to the Spleen and Stomach qi.

Alcohol

"Liquor ... brings the function of medicinal herbs into full play in the human body, eliminates all evils, promotes blood circulation, nourishes the Stomach and intestines and dissipates worries. Therefore if one drinks a limited amount of liquor it maintains good health. Excessive drinking impairs the mind, shortens the life span and changes one's intrinsic nature". Hu Se Hui, Yuan dynasty ⁵⁰.

"Liquor is a heavenly drink. Taken in small quantities, it warms up the blood, improves the circulation of qi, invigorates the spirit, resists cold, dissolves anxiety and raises one's interest in life". Li Shizhen, Ming dynasty ⁵¹.

There has been an enormous amount of research into the effects of alcohol consumption over the last few years, some of it contradictory, but the overall verdict appears to be that moderate alcohol consumption is beneficial. Moderate drinkers were found to have a roughly 40% lower risk of dying from cardiovascular disease compared to non-drinkers⁵². Wine consumption is linked to a host of benefits, including a reduced risk of developing Alzheimer's disease and other forms of dementia (red wine)⁵³, better lung function⁵⁴ (especially white wine), and significantly lower mortality from coronary heart disease⁵⁵. Dark beer has been found to prevent blood clotting⁵⁶ and light beer (lager) benefits cholesterol and antioxidant levels⁵⁷.

Tea

"Seven bowls of tea may bring you seven advantages. Firstly it promotes the production of body fluid and quenches the thirst. Secondly it refreshes the mind. Thirdly it helps digestion. Fourthly it induces diaphoresis to relieve common cold. Fifthly it help weight reduction. Sixthly it activates thinking and strengthens the memory. Seventhly it ensures longevity". Lu Tong, Tang dynasty⁵⁸.

Research evidence on the benefits of drinking green and black tea is too copious to reference in this article⁵⁹. However, to summarise:

- Green tea has been shown to halve overall cancer risk, reduce the risk of breast, stomach, skin, colon, rectal, oesophageal, pancreatic and ovarian cancer, destroy lung cancer cells, aid recovery from HPV (human papilloma virus) infected cervical lesions, reduce cholesterol, prevent HIV from latching onto T-cells, help prevent arthritis and reduce the incidence and severity of rheumatoid arthritis, reactivate dying skin cells, block the production of histamine and immunoglobulin E (IgE), help slow muscle degeneration in Duchenne muscular dystrophy, prevent brain damage after stroke, counter Helicobacter pylori, speed up calorie burning and help diabetic retinopathy.
- Black tea can reduce the risk of colon and prostate cancer and the risk of coronary heart disease.
- Both kinds of tea aid immunity, strengthen bones, reduce mortality after acute myocardial infarction, prevent tooth decay, reduce cholesterol, prevent recurrence of breast cancer, help heal precancerous oral lesions, reduce oxidative stress, and increase concentration and the ability to learn (independent of caffeine content).

Cultivation of the body with work, rest and exercise

"The Tao of nurturing life requires that one keep oneself as fluid as possible. One should not stay still for too long, nor should one exhaust oneself by trying to perform impossible tasks. One should learn how to exercise from nature, by observing the fact that flowing water never stagnates and a busy door with active hinges never rusts or rots. Why? Because they exercise themselves perpetually and are almost always moving" Sun Simiao, 7th century.

"Ordinary people are often told about diseases from overstrain without any knowledge of diseases from excessive comfort; the latter, however, are more harmful". Lu Jiuzhi, Qing dynasty ⁶⁰.

A range of different aerobic and strength exercises has been shown to be associated with numerous health benefits. Exercise is more effective than angioplasty in preventing heart attack, reduces the risk of endometrial cancer, reduces mortality from diabetes, helps prevent breast cancer, prevents erectile dysfunction and benign prostatic hypertrophy, slows down the build-up of atherosclerosis, reduces the risk of heart attack and stroke in women, has an anti-inflammatory effect, reduces blood pressure, significantly reduces depression and cognitive decline in older adults, increases life expectancy and reduces the risk of gallstones⁶¹.

"From as early as the origin of the previous Tao and Tang families (2000BCE), yin tended to stagnate internally and accumulate in the depths of the body, the water passages were thus blocked up and water no longer flowed in its right passages; Qi smouldered and stagnated within the body; the muscles and bones shortened and could not extend properly; then dancing was created to move stagnation and obstruction". Lu Shi Chun Qiu, 3rd century BCE.

"When they rejoice, they grow. Growing, how can they be repressed? When they come to this state that they cannot be repressed, then unconsciously the feet begin to dance and the hands to move". Mencius, 372 to 289 BCE⁶².

The unique and flowing exercises typical of the Chinese tradition, nowadays most commonly practised as tai chi and qigong, are said to have their earliest origin in dance. As far as these traditional Chinese health exercises are concerned, a systematic review of 47 studies published in English and Chinese has shown that tai chi benefits balance, strength, cardiovascular and respiratory function, flexibility, the immune system, symptoms of arthritis, muscular strength and psychological well being⁶³. Its effect on improving balance is demonstrated in studies showing that it can reduce falls in the elderly (a common, distressing and medically costly form of accident) and in Parkinson's disease sufferers⁶⁴. In a separate study, those who participated in a tai chi programme showed an increase of nearly 50% in immune cell levels (immunity to shingles virus) after completing the programme, as well as improvements in physical functioning⁶⁵.

Sleep

"The secret of health preservation is first of all sleep. It can regenerate the essence, improve health, invigorate the Spleen and Stomach and strengthen bones and muscles". Li Yu, Qing dynasty⁶⁶.

Seven to eight hours of sleep appears to be the optimum for the majority of people. One study found that among women the risk of heart disease increased both with each hour less sleep and each hour more sleep than eight hours. Only 37% of Americans currently manage to get eight hours of sleep a night⁶⁷. In another study of over 1.1 million men and women aged between 30 and 102, those who slept an average of 7 hours every night had the best survival rate. People who slept more than 8 hours or less than 4 hours per night had a 15% increase in overall mortality compared to those who slept 7 hours every night. Those who regularly slept 10 hours or more had a 30-40% higher mortality than did 7-hour a night people⁶⁸.

Sleep deprivation can also weaken the immune system⁶⁹ and impair the production of leptin which controls appetite⁷⁰, thus contributing to obesity and diabetes.

Sex

"It is not all right for humans to sever their sexual desire. Yin and yang (can then) not communicate. This will lead to diseases due to accumulation and stagnation. Those who suffer from diseases due to bitterness hidden in their mind (in turn) due to protracted suppression of their sexual desire will experience short life. (However) indulgence in sex will (also) result in failure to enjoy longevity. Only temperance in sexual activities can keep humans healthy in body and mind". Ge Hong⁷¹.

"The affairs of the bedroom can give life to a man or it can kill him". Liu Qing⁷².

The traditional Chinese teachings on sexual activity assert that it is a fundamental human need, the suppression of which can be harmful for most people, but also that it can be damaging to health if overindulged in. More specifically, it is male ejaculation – and the concomitant loss of essence – which is the focus of concern, and traditional teachings are full of advice on restraint of over-frequent ejaculations, especially for men beyond their 50s.

Strangely (for such a popular subject), the relationship between sexual activity (per se) and health seems to have been little researched in Western medicine. There is, needless to say, overwhelming evidence on the multiple dangers of unsafe and unprotected sex, yet that is a somewhat different matter. As far as sex itself is concerned, there is certainly a general modern assumption that sexual fulfilment is 'a good thing', at least as far as mental and emotional health is concerned. However, what research there is on the implications of ejaculation on male health is somewhat contradictory. It is still not clear, for example, whether a greater or lesser number of lifetime and middleaged ejaculations is better for prostate health. Nor is it clear whether abstinence or indulgence is better for sportsmen before a major competition. One of the only certainties is that abstinence beyond a few days does not improve male fertility. The apparent lack of investigation of possible links between ejaculation and health may result from a reaction to the fearful and oppressive sexual culture of the 19th and early 20th centuries, which were full of ominous warnings of the dangers of masturbation.

Smoking

"Smoking burns the yin of the Lungs, causing people to suffer from sore throat and pharynx. Spitting blood and the loss of voice are common cases which often result from addictive smoking. It consumes the blood and shortens the life span. Those concerned about their health should keep away from it". Wu Yiluo, 1736-1795 CE⁷³.

This quotation shows that the negative effects of smoking on the body were well understood among Chinese doctors, which makes it all the more surprising that it was not until the latter part of the 20th century in the West that it was truly understood how harmful smoking was to health. In the last couple of decades the evidence against smoking has become overwhelming and it is now understood to harm virtually every organ and tissue in the body.

Old age

"The elderly should always think". Guan Zi, Warring States 475-221 BCE⁷⁴.

"Learning should never cease". Xun Ci 75.

"One cannot allow one's mind to fall into disuse and must not let it turn into a piece of withered wood or dead ashes". Cao Huishan, Qing dynasty ⁷⁶.

Chinese medicine has historically viewed the aging process as commensurate with the slow decline of Kidney essence. Therefore nourishing post-heaven essence and avoiding dissipation of essence by overwork, stress and worry, and by the avoidance of excessive sex, is one approach to delaying ageing. Yet as anyone who has visited a Chinese park early in the morning will know, appropriate exercise for the elderly is also considered an integral part of healthy ageing. This is because, as well as deficiency and decline of the Kidney, aging is characterised by an increasing tendency to stagnation, particularly of blood.

This is very much the view of modern Western geriatrics which increasingly views what were previously thought of as diseases of aging itself as in fact diseases of inactivity. Exercise in the elderly can improve cardiovascular function, strength and muscle mass, improve postural stability and psychological function, prevent hip fractures from falls by increasing bone density, coordination, balance, and muscle strength, benefit arthritis, Parkinson's disease, stroke, and other chronic diseases of aging and alleviate depression and sleep disorders⁷⁷.

As far as mental activity is concerned, the same principles apply. Flexibility, fluidity and a lack of rigidity in thought, will keep the mind young. Chinese health preservation texts are full of advice on maintaining reading and studying, playing chess and music, practising calligraphy and painting and enjoying nature. This is confirmed by study evidence that reading, playing games or musical instruments and dancing is associated with significantly less risk of developing dementia⁷⁸.

"One should always enjoy simple pleasures such as sunshine in winter or shade in summer, beautiful scenes on a bright day, walking cheerfully with a stick, watching fish in a pond, listening to birds singing in the woods, drinking a cup of wine or playing a musical instrument". The Yi Qing Xiao Lu⁷⁹.

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