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# Research on the Existence of Chinese Load-bearing bow of Spine – Report on 2 Cases of Standing full spine radiographs of Typical Traditional Chinese Spine and several very interesting photos worth studying

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Funding: No specific funding was received for this work. Potential competing interests: No potential competing interests to declare.

### Abstract

Over the past six years, the author has been exposed to 100,000 spines while working at the medical examination center. While studying the prevalence among young people of lumbar spondylosis worldwide and in China, the authors recently proposed two new concepts of Chinese traditional shoulder-carrying culture and traditional Chinese spine <sup>[1]</sup>. Previously, modern medicine had only the term "normal lumbar spine" without any distinction between oriental and western ones. The normal lumbar spine, considered the world standard, is essentially a centuries-old study based on the Western spine, and thus is called the western spine by the author. The western spine is also a new concept proposed by the author to distinguish the traditional Chinese spine, which has not yet been recognized by the global academic community. Therefore, these terms have never appeared in any literature or textbook before. In this study, the author described how these Chinese people with traditional Chinese spines were identified, their physical examination, x-ray imaging findings, and two-year follow-up outcomes. The author concludes that for thousands of years, the traditional Chinese spine has been famous for carrying heavy objects while having few lumbar spondyloses; this kind of "Chinese load-bearing bow of spine" has gradually disappeared with the Chinese shoulder-carrying culture. In spinal mobility tests at physical examinations, this traditional spine showed poor mobility and good stability. In terms of the vertebra of the normal lumbar spine, there is no difference in the number of vertebrae, but there are differences in four curvatures. Imaging shows inward transversus abdominis, with the spine closely connected to the anterior abdominal cavity. This X-ray film bridges the gap in the global research on the spine, representing the difference between the traditional Chinese spine and the modern normal lumbar spine, and also the difference in appearance, size, and movement of the traditional Chinese shoulder-carrying people from the West ones. Of course, two cases are not enough. Hope that more traditional Chinese spines can be found, studied, and reported. It is essential to conduct research on how to restore and cultivate the "Chinese load-bearing bow of spine". The research will facilitate addressing the global prevalence of lumbar spondylosis, provide a different approach to the prevention and treatment of lumbar spondylosis, and affect spinal health for future generations.

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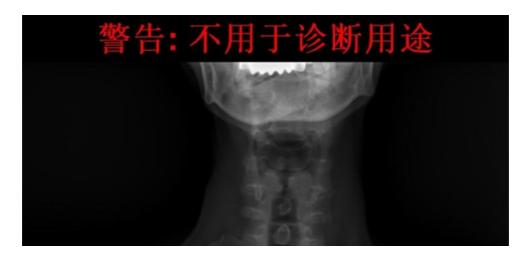
**Keywords:** traditional Chinese spine; traditional Chinese shoulder-carrying culture; western spine; global prevalence of lumbar spondylosis; Standing full spine radiographs; human health; lumbar column curvature; ergonomics; Chinese load-bearing bow of spine; Reversed bending spine.

## Introduction

It is well known that modern medicine explores the Western spine and neglects the study of the traditional Chinese spine. Due to the different living, production, and activity habits, there are apparent differences in the spine of Oriental and Western people, yet the lumbar spine has not been studied in a comparable way. The Chinese ancestors had to help their parents at an early age. Due to poor living conditions, they had to work and learn survival skills. The bodies of the Chinese people were cultivated from an early age to live outdoors in a free-range style and were domesticated like production tools such as cattle or horses. As a result, the Chinese people are a hard-working, strong-willed nation that can carry heavy loads on their shoulders and endure hardship. Many old people can still carry a hundred pounds of weight before they die and labor in the field as usual. Because of their good health, the Chinese shoulder-bearers have rarely suffered from lumbar spine diseases since they were young. The traditional Chinese spine has not been studied separately by modern medicine, hence the first case reported in the world.

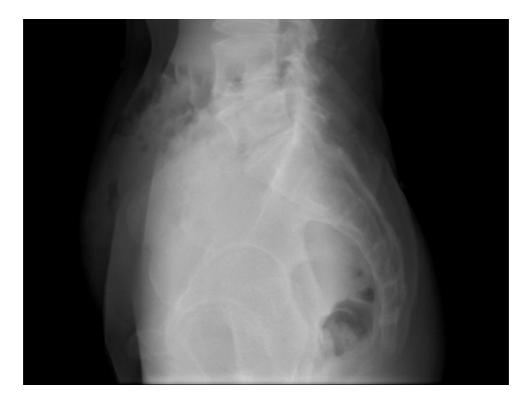
## Case Report

This study focuses on 2 reported cases and several very interesting photos.









The first case, born in 1957, was a male farmer with an education background of secondary school and grew up under the influence of Chinese shoulder-carrying culture. He weights 55 kilos and grew up with postures of standing, squatting, bending over, and facing the earth and the sky in his daily work and life. He was usually engaged in activities such as trekking through the mountains, plowing, planting, chopping wood, and hoeing. Sometimes he works as a migrant worker at the construction site and carries bricks or other heavy objects. Modern life had little influence on him. Passing by a village one day, the author saw a 60-year-old farmer laboring in the fields and carrying 75 kilograms on his shoulders. He said when he was young, he could carry 150 kilograms of heavy objects and walk a hundred miles with heavy objects on his shoulders. He had been engaged in shoulder-carrying labor for decades yet had no low back pain. The author explained the purpose of the visit and took a standing full spine radiograph with his consent. This film was taken on September 15, 2020. He gave the world the chance of seeing a traditional healthy full-spine film of the Chinese nation. After two years of follow-up, he has no lumbago and is still able to carry 75 kilograms on his shoulder.

#### Attachment: Photo and X-ray Film

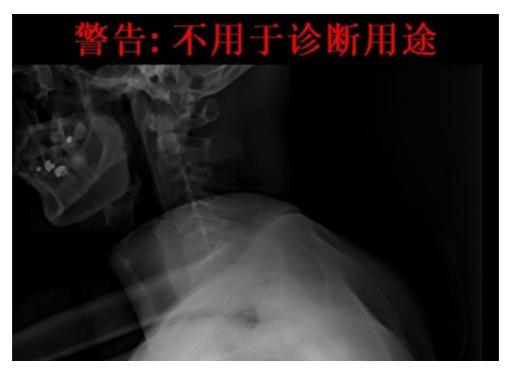
The film shows that his cervical, thoracic, lumbar, and sacral curvatures are different from the current normal lumbar spine and that the inward transversus abdominis can be seen.

Physical examination results show that he features limited lumbar mobility, excellent stability, and a natural inward lower abdomen. This is a typical traditional Chinese shoulder-carrying farmer who participate in primitive farming labor all his life.

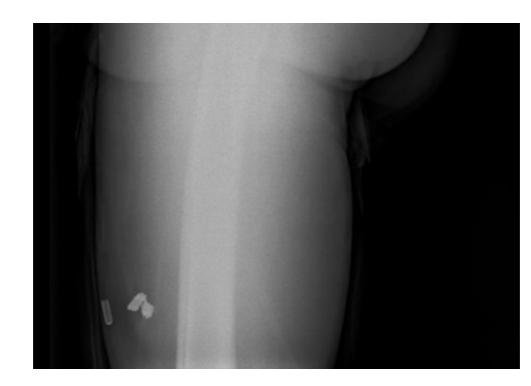
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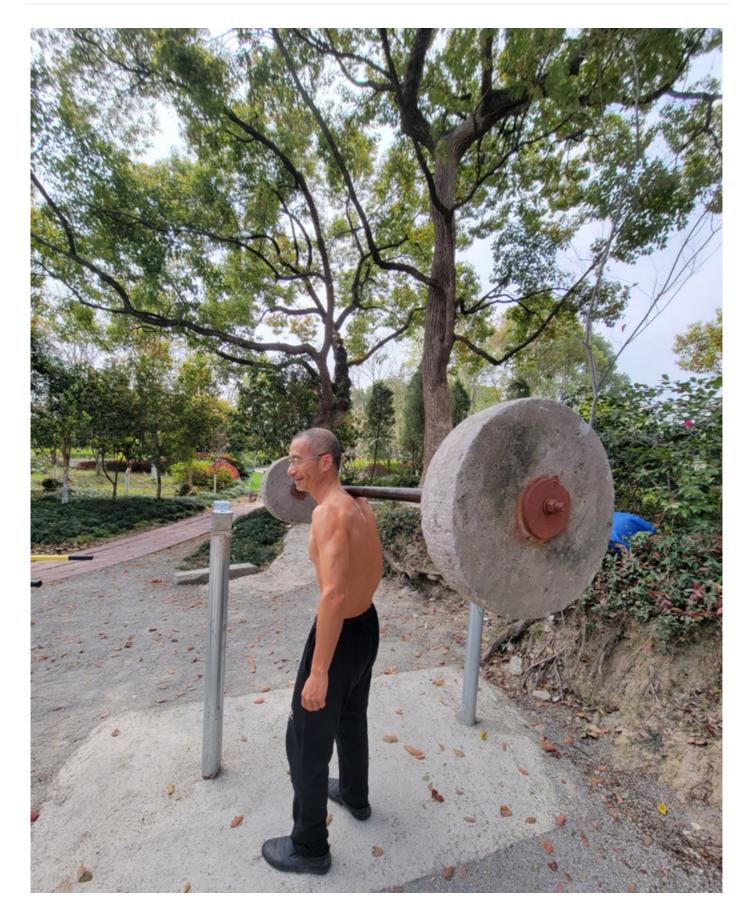












The second case, born in 1970, was a male doctor, weights 65 kilos, the author of this study, the researcher of shoulder-

carrying culture, and grew up under the influence of the shoulder-carrying culture. The author was able to shoulder carry 75 kg when he was young. Influenced by modern life and western sports, the author did not engage in shoulder-carrying labor after the age of 20. During a spinal check-up in 2017, palpation revealed that the author's spine, unlike that of a modern young man, was similar to that of a shoulder-bearer. After researching, the author found that his spine was influenced by both Chinese traditional and modern life and that it belonged to an atypical traditional Chinese spine with load-bearing capacity that had not been completely westernized. Later, the author gradually resumed shoulder exercises. In 2022, the author started to set up a 70 kg stone stretcher in a park, carried out shoulder exercises every day, and discussed with the shoulder-bearer. To date, the author has no discomfort and can still carry 70 kg on the shoulder after one year's follow-up.

A very interesting photo for research



The year 1980 marked an important turning point at the end of Chinese traditional shoulder-carrying education and training, marked by the disappearance of the "shoulder pole", the symbol of Chinese civilization. Slowly, Chinese people became divided into three kinds of people: those who continue to work on their shoulders, those who have shouldered heavy objects, and those who do not shoulder heavy items. History let them live together for a period of time, forming a cultural landscape.

The picture is from a few years of my WeChat circle of friends call "Xiao Xiong", he is a famous photographer in Linhai City, Zhejiang Province, who has been taking tens of thousands of pictures for nearly 50 years and recorded this history.

This photo has taken in a thousand years old city, a thousand years old well, a woman who has been educated by a thousand years of should-shoulder culture meets a modern beautiful and fashionable girl on Millennium Road. The old woman in the picture is estimated to have two or three children at such her age, she still can carry 25 kilograms of water on her shoulder every day. But this modern beautiful girl and her whole new generation do not shoulder any heavy items.

## Discussion

In the farming era, the Chinese nation needed to keep carrying a certain amount of weight on their shoulders for their whole life, hence their lifetime "Chinese load-bearing bow of spine". Many people rarely have back pain in their lives. The cases in this study are typical examples. The shoulder-carrying culture is the crystallization of 5,000 years of wisdom of the Chinese nation. After the Chinese shoulder-carrying culture is abandoned, modern Chinese no longer possess the "Chinese load-bearing bow of spine". In the future, young people are not only unfit for heavy work, but also find it difficult and tiring to bend over for light work, resulting in the prevalence of many diseases such as lumbar spondylosis. The reason is that both modern Chinese life and body are severely westernized. Westernization is the major destroyer of the "Chinese load-bearing bow of spine", so the Chinese people used to be the shoulder-bearers who could carry a hundred pounds. With the improvement in living conditions, modern Chinese people are living a westernized life without carrying heavy loads, thus losing the "Chinese load-bearing bow of spine" and suffering from diseases such as lumbar spondylosis. The Western spine is reversed bending spine and does not have much load-bearing capacity. Western sports are basically of the spine bow movement's opposite direction of sports, specifically designed for the Western body type. It is well known that the direction of the spine in Western sports is opposite to the Chinese nation's laboring direction. In the past, those excellent sports students from the countryside were not competent for farming work, being work, being work and shamed by rural parents for their loss of shoulder-carrying capacity.

The author knows the whole process of how the Chinese nation cultivated shoulder-carrying skills. The author himself grew up in a shoulder-carrying culture and was even nurtured from a young age. By the age of 20, the author could easily carry 75 kilograms on his shoulders and still walk with heavy objects at the age of 50. Although the author has maintained his original shoulder-bearing physique, his spine has also been impacted and affected by modern life, sports, and injuries. The author is a good example of the combination of the past shoulder-bearing culture and modern life, so he is able to analyze the impact of westernization on the "Chinese load-bearing bow of spine". Knowing shoulder-bearing, understanding sports, and being a doctor, the author can conduct a study on shoulder-bearing closest to reality. Besides, because of his knowledge of theories, methods, and principles of exercise, the author can scientifically analyze through comparison that the loss of the "Chinese load-bearing bow of spine" is the root cause of lumbar spondylosis among Chinese youth today, and is also the main reason for the global prevalence of lumbar spondylosis.

The traditional Chinese shoulder-carrying culture has been abandoned for over 40 years, resulting in many scientific studies of shoulder-carrying not being kept up to date and enormous damage. Modern young people have no clear idea what shoulder-carrying is all about, so there are misconceptions about it and fear that it may cause lumbar spondylosis. In essence, the Chinese shoulder-carrying culture has gone through over 5,000 years. From ancient times to the modern era

of reform and opening up, there is no record of a national prevalence of lumbar spondylosis. A survey of previous generations revealed that they had remained shoulder-carrying lifestyles and were rarely heard of suffering from lumbar spondylosis. Nevertheless, the shoulder-carrying culture has been discontinued for over four decades. With the passing down of those who mastered the shoulder-carrying spine, there is no "Chinese load-bearing bow of spine" for modern people. People lack knowledge of how to carry out scientific shoulder exercises, and there is no way to study and popularize the basics of correct shoulder exercises, much less to make scientific judgments on whether the ancestors shoulder heavy loads are beneficial to the lumbar spine. The author believes that anything should be in balance, and the same goes for the shoulder-carrying skill. These traditional shoulder-bearers will disappear completely within a decade, so it is pressing to conduct relevant research for preserving the shoulder-carrying culture.

Many people keep asking the author what is the normal standard for a traditional Chinese spine. It's actually very simple! Based on the normal lumbar spine developed in the West, it leans forward a few centimeters, so that the center of gravity can fall on the arch of the foot. And the "Chinese weight-bearing bow" was not destroyed. This is our traditional Chinese spine. As the American astronauts said after the moon landing, "That's one small step for man, one giant leap for mankind". This study believes that it will be a giant leap for the Chinese nation and human beings to lean the normal lumbar spine of the Western spine forward a few centimeters!

Over the past 6 years, the author is able to determine empirically from the body shape and palpation whether there is a traditional spine or a Western spine, mainly depending on if there is a "Chinese load-bearing bow of spine". The number of people with this traditional spine is decreasing, and it is even more difficult to mobilize people with a traditional Chinese spine to have full-spine radiography. These two cases are of traditional Chinese spines with "Chinese load-bearing bow of spines", which are rare to see. The author's first report aims to bring the modern medical community to its senses and to move quickly into the study of the structure and function of the "Chinese load-bearing bow of spine" in this group of people, thus comparing the differences between the traditional Chinese and Western spines and re-examining and assessing the ergonomics and spinal curvature of a normal spine. This study intends to address the growing global prevalence of lumbar spondylosis, provide different solutions for the prevention and treatment of lumbar spondylosis, influence the spinal health of the next generations of mankind, and build a community with a shared future for mankind.

This is the crystallization of human wisdom in the course of evolutionary walking uprightness. In the process of growth, the Chinese nation's shoulders were loaded with heavy objects, so that they may develop a "Chinese load-bearing bow of spine" in adulthood that can carry hundred pounds of load lifetime, that is, to maintain the force characteristics of the spine of reptiles on all fours, but also to walk upright. Standing straight, straightening back, and living a sedentary life or a westernized life such as western sports are the destroyers of the "Chinese load-bearing bow of spine".

All the findings are based on the research on the "Chinese load-bearing bow of spine".

#### References

1. Chen Huabin An Oriental Physician's Views and Thoughts on the Global Prevalence of Lumbar Spondylosis – The

traditional shoulder-carrying culture and traditional spine of a large eastern country are disappearing silently Qeios,

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