

George Smith continues his series on complementary and alternative medicines

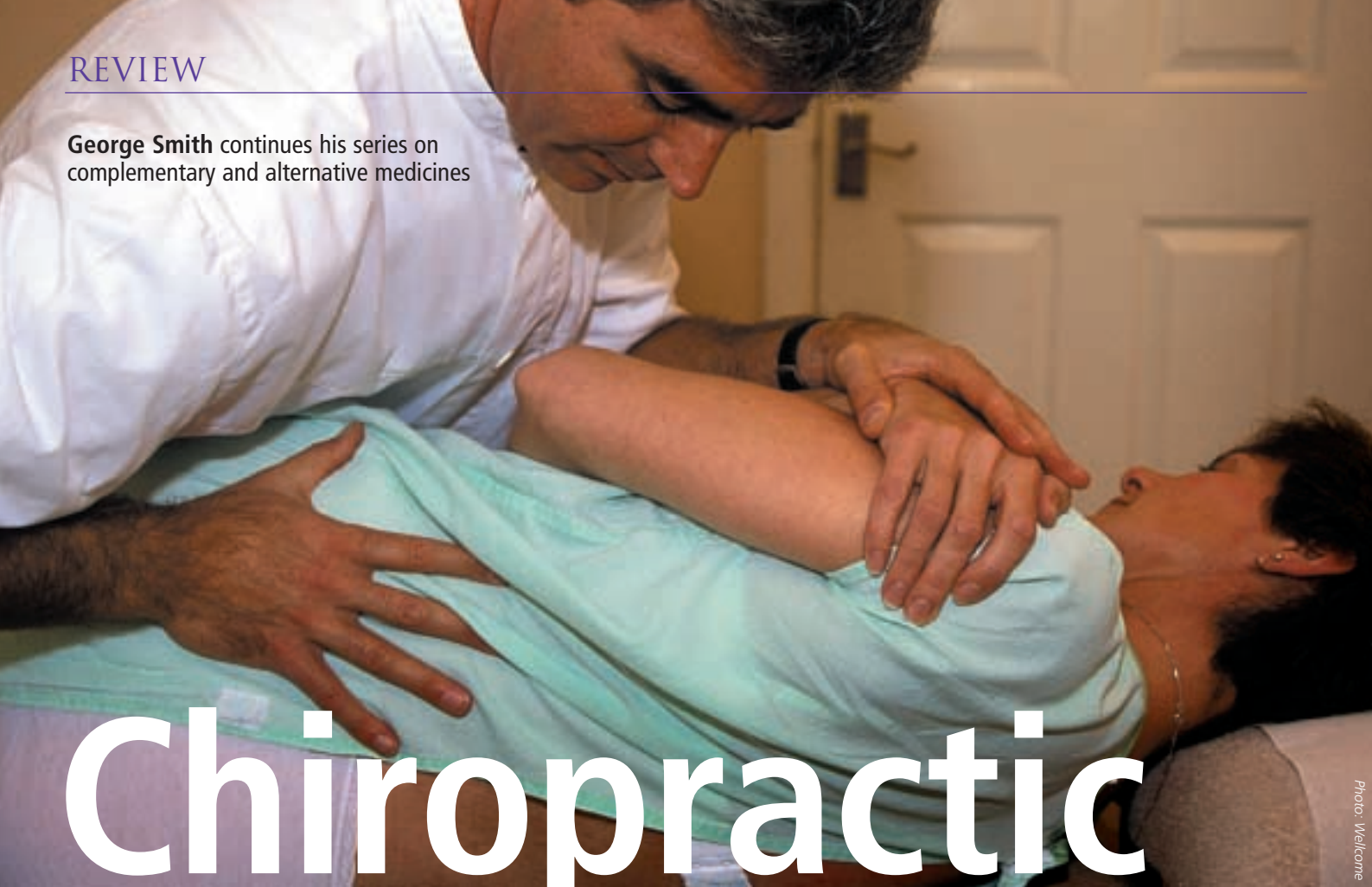


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# Chiropractic

## KEY POINTS

Chiropractic is an alternative system of healthcare and healing based on manipulation of the spine. Its founder, Canadian grocer DD Palmer, believed that maladjusted or displaced vertebra pressed on nerves, interfering with the flow of 'Innate Intelligence' and resulting in defective function and poor health which could be alleviated by chiropractic adjustment. Consistency and reliability of specific chiropractic diagnostic methods, and a credible and verifiable scientific basis have not been shown, and in controlled trials results are inconsistent for back pain, and not demonstrable for other disease. Its basis in a non-Christian belief system and safety factors raise additional concerns.

Chiropractic is one of the most widely used systems of alternative health care available today. It is particularly popular in Canada and the USA, its country of origin, where there are over 50,000 practitioners. It is also available in many other countries around the globe. It was rather slower to take off in the UK, lagging behind osteopathy, but is now increasingly popular with some 4,500 practitioners on the current Register of Chiropractors.

There is a wide variation in claims, application and scope of chiropractic today. The majority of consultations are for musculo-skeletal problems, particularly of the back, neck and shoulder. However, chiropractic as set out by its founder was believed to be an effective treatment for a wide range of diseases including asthma, cardiac problems, digestive disorders, migraine and infantile colic; this is despite no evidence of these conditions having spinal origins.

## Definitions

The term chiropractic derives from two Greek words, *chiro* (*kheiro*) meaning hand and *practicos* meaning practical - the practical use of hands. Concisely, it can be defined as a system of healthcare and healing based on manipulation of the spine.

In 1999 the World Federation of Chiropractors defined chiropractic as 'a health profession concerned with the diagnosis, treatment and prevention of mechanical disorders of the musculo-skeletal system and the effect of these disorders on the function of the nervous system and on general good health. There is an emphasis on manual treatment including spinal manipulation or adjustment'.

The General Chiropractic Council defines chiropractors as 'autonomous primary care practitioners who take an integrated and holistic approach to the health needs of their patients considering physical, psychological and social aspects'.

## Origins

Manipulative techniques can be identified in ancient Egyptian, Hindu, Chinese, Babylonian and Assyrian civilizations. Hippocrates (460-370 BC) advised Greek physicians to 'look well to the spine for the cause of disease'. Bone setters have practised throughout history, being particularly popular in the nineteenth century. It cannot be assumed, however, that any of these groups were forerunners of the specific philosophy and techniques practised by DD Palmer, the founder of chiropractic.

David Daniel Palmer (1845-1913), a Canadian grocer, originally became interested in magnetic healing and mesmerism (hypnosis). He studied anatomy and physiology and was a student of AT Still, the founder of osteopathy. His interest in manipulative treatment began when he noticed that his janitor, Harvey Lillard, had a swelling on the back of his neck. Believing that this was a displaced vertebra, Palmer manipulated it into place with a noticeable pop. Amazingly, the janitor's deafness of 17 year's duration appeared to have been cured. Although this pivotal event is recorded in all accounts of the founding of chiropractic, no corroborative evidence is offered.

Palmer apparently achieved remarkable successes with asthma and heart disease. He came to believe that 90 percent of disease was associated with spinal

problems, which could be alleviated by chiropractic adjustment. A patient, Rev Samuel Weed, first coined the term chiropractic. The Palmer Infirmary and Institute of Chiropractic was opened in Iowa, USA in 1895. Palmer's son, BJ Palmer, developed and expanded this new therapy.

A small volume called *The Chiropractor* contains original lectures by Palmer on the principles, science, art and philosophy of chiropractic.<sup>1</sup> He passionately believed that the exercise of chiropractic was a moral and religious duty. He also believed that the spirit in man is part of the Innate Universal Intelligence, which is present in and controls our whole body. He identified this as being known to Christians as God, but it can clearly be equated to the Universal Cosmic Energy or Vital Force of many Eastern religions and alternative therapies with New Age associations. He believed that a maladjusted or displaced vertebra – subluxation – pressed on nerves, interfering with the flow of Innate Intelligence, so resulting in defective function and poor health.

## Present practice

### Diagnosis

Following a medical history, chiropractic examination concentrates on posture, inspection and palpation of the spinal column. This includes motion palpation and nerve tracing as specific chiropractic techniques (possibly with an intuitive element) together with tests for musculo-skeletal function to identify vertebral maladjustments (luxations or subluxations). These are said to press on nerves (by impingement, pinching or constriction), blocking the free flow of energy within them. X-rays may be taken to exclude organic disease or injury but do not necessarily indicate specific evidence of subluxations. Although Palmer did not use them, laboratory investigations are sometimes ordered today.

Specific chiropractic diagnostic techniques have been tested for reliability but showed poor accuracy.<sup>2,3</sup> A larger group of diagnostic methods used by chiropractors – visual postural analysis, pain description, lumbar X-rays, leg length discrepancy, neurological and orthopaedic tests, plus motion palpation – have revealed only moderate inter-examiner agreement. It was concluded that these diagnostic tests were not reproducible.<sup>4</sup> Consistency and reliability of specific chiropractic diagnostic methods have not been demonstrated.

### Treatment

Advice regarding posture, exercise and lifestyle is given but the characteristic element of chiropractic treatment is manipulation of the spine and its associated joints, usually by high velocity/low amplitude thrusting techniques, together with massage and manipulation on specially designed tables. Vertebral adjustment by these techniques is designed to restore normal positioning and proper function. There may be an audible crack, said to be the sound of gas bubbles bursting under pressure

rather than bones cracking.<sup>5</sup> This claim appears to be speculative.

Treatment by manipulation and massage has by no means been neglected by orthodox doctors and physiotherapists; it is not the prerogative of chiropractors and osteopaths. Manipulation has been advocated by physical medical specialists (especially Doctors Cyriax and Maitland) and orthopaedic surgeons, but for clearly defined and scientifically verifiable conditions. Terminology varies but doctors and physiotherapists usually define manipulation as high velocity/low amplitude techniques and describe other manipulations as manual therapy.<sup>6</sup>

### Regulation

Unlike most alternative therapies, chiropractic is well regulated. The British Chiropractic Association was formed in 1925. The Chiropractic Act of 1994 set up the General Chiropractic Council (GCC) to maintain a register of all qualified chiropractors and regulate teaching and qualifications. A four year internationally accredited degree course is available at the Anglo-European College of Chiropractic in Bournemouth or the McTimoney College of Chiropractic in Oxford, leading to a BSc Chiropractic or Diploma in Chiropractic.

## Medical checklist

### Does it have a rational scientific basis?

A credible and verifiable scientific basis has not been established. Palmer's original cures lack confirmation and explanation. As hearing depends on the VIII *cranial* nerve, vertebral adjustment of a spinal nerve is most unlikely to restore hearing. Neither X-rays nor post mortem examinations have shown reliable evidence of subluxations or their pressure effects on nerves.<sup>7</sup> No verifiable scientific evidence has been produced confirming subluxations to be the cause of general medical disease. Innate Intelligence is a spiritual or metaphysical concept, not verifiable scientifically.

### Does it work?

Hundreds of studies and more than 50 systematic reviews of published papers have been used to investigate chiropractic. Most investigations have focused on back pain and neck problems with far from convincing results. Professor Ernst, of the Department of Research into Complementary Medicine at Peninsular University, commented: 'None of these systematic reviews demonstrate beyond reasonable doubt that chiropractic interventions are effective in treating these conditions or that they are superior to other treatments – for example, physiotherapy or drugs'.<sup>8</sup>

Whilst some past trials suggested that chiropractic treatment might be efficacious for low back pain, two recent investigations have not confirmed this.<sup>9,10</sup> Most studies for other conditions including migraine were not of high quality. Manipulation

## POPULARITY AND REGULATION DO NOT, OF THEMSELVES, GUARANTEE EFFICACY AND SAFETY

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and massage may benefit muscle spasm, tension and pain, but this is not exclusive to chiropractic. There is no convincing evidence of significant benefit in general disease, including cardiovascular, gastro-intestinal and respiratory diseases, migraine or cancer.

### Is it safe?

Systematic reviews reveal considerable evidence of both minor and serious complications, including stroke, spinal injury, thrombosis and joint dislocations, although these are relatively uncommon in relation to the total number of consultations. Recent studies suggest that half the patients suffered some side effects, albeit not serious. A further study reported 177 severe complications after cervical spine treatments and 295 complications of all spinal treatments with 32 fatalities.<sup>11</sup> *Chiropractic: The Victims' Perspective* reported 20 serious complications.<sup>12</sup>

In his book *Back Pain*, Professor Ernst states: 'Contrary to what is often said, spinal manipulation is by no means free of risk. In particular, upper spinal manipulation has been associated with serious complications'.<sup>13</sup> He suggests that complications are under reported. Chiropractic should be avoided in the elderly, osteoporotic or those with malignant or spinal inflammatory disease and those on anticoagulants. Overuse of X-rays is a further potential danger.

### Christian checklist

#### Can it be recommended with integrity?

Claims that chiropractic is safe and effective have not been substantiated. Popularity and regulation do not, of themselves, guarantee efficacy and safety. Exclusive use of an unproven alternative therapy may lead to delay in diagnosis and subsequent effective orthodox treatment, sometimes with serious results.

#### What are its roots?

Palmer's concept of Innate Intelligence clearly underpins his philosophy of chiropractic. It is akin to the New Age pantheistic view of God, quite unlike the Christian belief in a personal Father God. Whilst this concept has been discarded by some modern chiropractors, it was endorsed by John Thie, a prominent Pasadena chiropractor: 'The chiropractic believes that the Innate Intelligence that runs the body is connected to the Universal Intelligence that runs the world, so each person is plugged into the Universal Intelligence throughout the nervous system. It is the job of the chiropractor to help this communicating system to ensure that the body will function'.<sup>14</sup>

#### Is it harmful?

Observations in *Complementary Medicine – an*



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*Objective Appraisal* are salutary, particularly for Christians: 'The Innate Intelligence of chiropractic, the qi of acupuncture and the vital spiritual force of homeopathy have persuasive theoretical effects'. It continues, '...a full participant in chiropractic, acupuncture or homeopathy is having more than their spine adjusted with hands, their meridians opened with acupuncture needles and their spiritualised life force finally connected to its dematerialised counterpart'. Or as Oths said, '...in essence, the chiropractor first manipulates a patient's belief structure before manipulating his or her physical structure'.<sup>15</sup>

In assessing the validity of any alternative therapy, a Christian carer needs to exercise spiritual discernment. Contact or involvement with dubious alternative therapies or New Age practises may lead to spiritual ill health, manifested as anxiety, depression, fear, lack of Christian assurance or interference with prayer life and Bible reading.

### Conclusion

The popular view that chiropractic is a proven and safe manipulative treatment, particularly for back and neck problems, is not confirmed by detailed investigation. There is confusing and unconvincing scientific evidence for its effectiveness and serious concerns about its safety. The philosophy of chiropractic is clearly based on a non-Christian belief system, which raises important additional spiritual concerns for Christians. I believe there are convincing reasons for this therapy to be avoided.

*Ye should do that which is honest. (2 Corinthians 13:7 KJV)*

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