# OCCUPATIONAL HEALTH AND CHIROPRACTIC

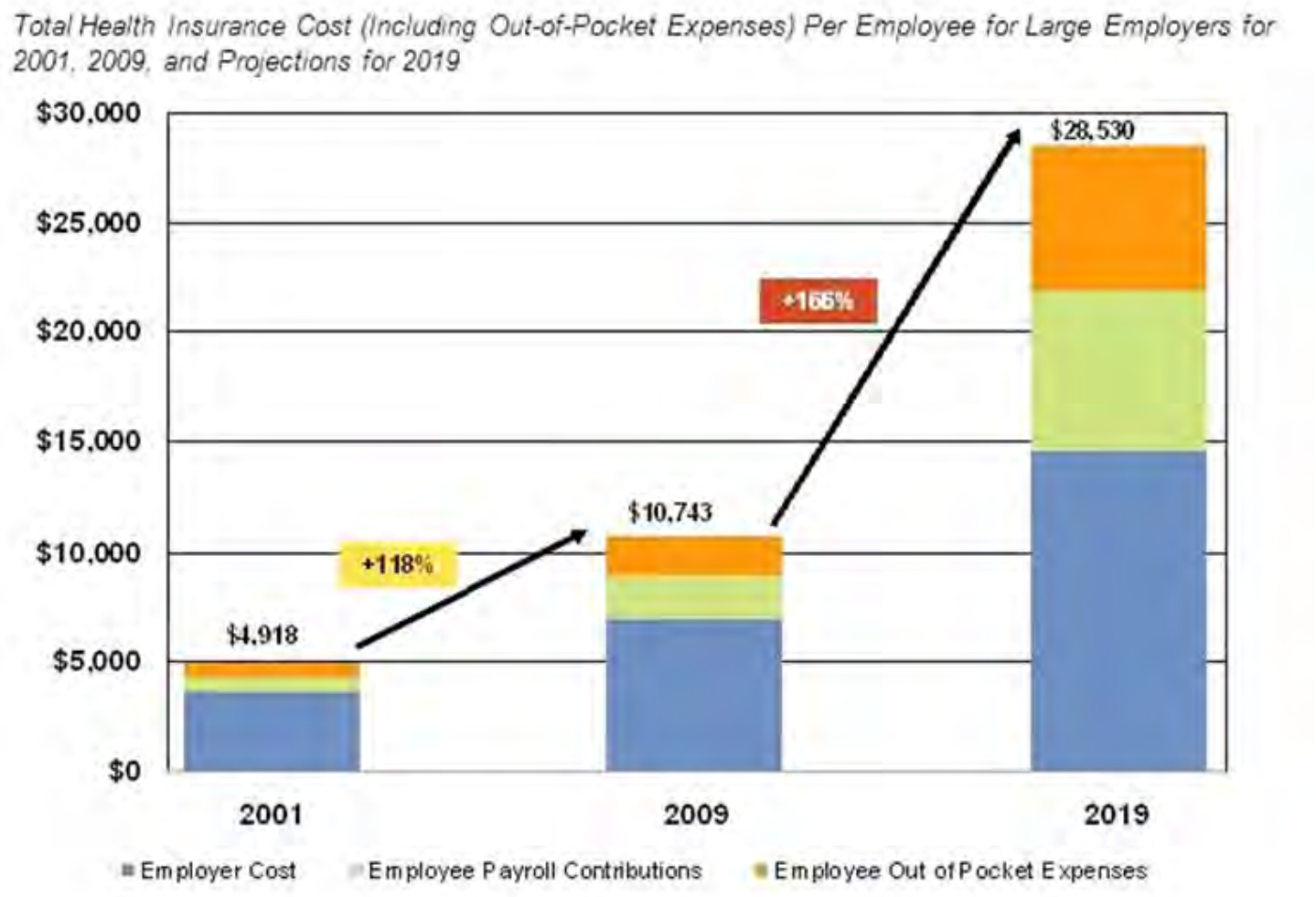
## What every company and organization needs to know

By Keith Wassung

## RISING COST OF HEALTH CARE IN CORPORATE AMERICA

The cost to cover the typical family of four under an employer plan is expected to top $20,000 on health care this year, up more than 7% from last year, according to early projections by independent actuarial and health care consulting firm Milliman Inc. In 2002, the cost was just $9,235, the firm said.

**It's no secret that these mounting costs are eroding profit margins, and in some cases, threatening the survival of U.S. companies.**




# "It is a well-known fact that the U.S. automobile industry spends more per car on health care than on steel."

**Lee Iacocca, retired chairman of Chrysler**

# THE HIDDEN COST OF OCCUPATIONAL HEALTH ISSUES

Health care continues to be expensive for corporate America for a wide variety of reasons including an aging workforce and the rising cost of goods and services used for patient care -- such as workers, equipment and information systems.

Other factors are a rising demand for care, compliance with regulatory requirements and new technologies, such as robotic surgery, are growing rapidly and carry an expensive price tag.

Making matters worse, researchers have identified another, even more significant business cost of unhealthy employees — the cost of lost productivity from absent workers (absenteeism) and present workers (presenteeism) who can't perform because of health-related impairments. This is a modern phenomenon and research shows that it now costs employers two to three times more than direct medical care, such as insurance premiums and pharmacy costs.

Looking at recent statistics for the cost of **lost productivity** due to common diseases, conditions, and risk factors is eye-opening.

In 2010, cardiovascular disease and strokes cost American business more than $503 billion in lost productivity and health care expenditures.

In 2010, Alzheimer's disease and other forms of dementia cost $172 billion in lost productivity and direct health care costs.

In 2008, the estimated cost of lost productivity due to cancer was $18.8 billion. Lost productivity due to premature death from cancer was estimated to be $116.1 billion.

According to a 2009 study, workers with diabetes lost an average of fifteen percent of work time due to health problems.

In 2003, the most recent year for which statistics are available, arthritis was responsible for a $47 billion in lost earnings.

Depression accounts for $51 billion a year in lost productivity and absenteeism.

Lost productivity due to asthma costs business an estimated five billion dollars each year.

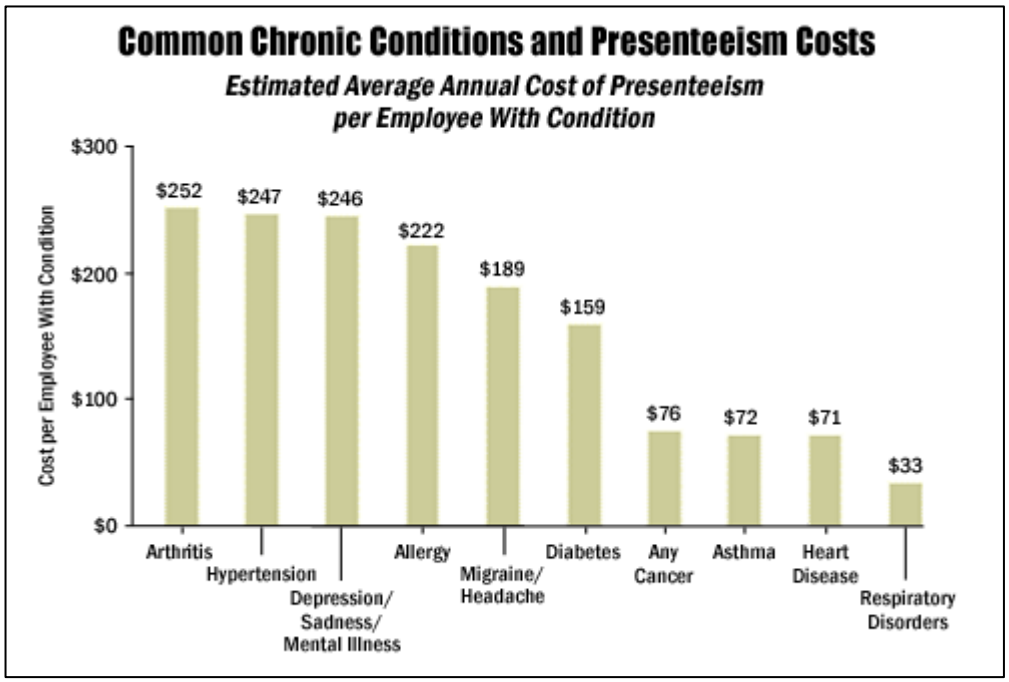
For most employers, direct health care costs are well documented and well understood. However, many organizations currently don't pay enough attention to the hidden costs of avoidable sick days and **presenteeism** — the cost of employees who are on the job but not fully functioning because of real illnesses and medical conditions, including asthma, seasonal allergies, arthritis, migraines, depression, back pain, gastrointestinal disorders and diabetes.

• One research team calculated the total cost of presenteeism in the United States to be greater than $150 billion per year.

For employers, these common conditions represent fewer direct costs than high-expense diseases, such as cancer and heart disease, but they represent higher indirect costs, because they are so prevalent:

• Depression costs U.S. employers more than $35 billion a year in reduced performance at work.

• On-the-job pain (including back pain, headaches and arthritis) costs employers nearly $47 billion a year in productivity loss.




In one study, chronic conditions alone were estimated to cost The Dow Chemical Company more than $100 million annually in lost productivity for its U.S. work force — the equivalent of 6.8 percent of total lab costs for the company.

For employers, the hidden costs of presenteeism present a frightening and motivating prospect.

These costs also represent a substantial argument for a consumer-driven approach to health care that engages employees in better managing these lifestyle risks and common chronic conditions.

# CHRONIC PAIN-RELATED CONDITIONS

•The total annual incremental cost of health care due to pain ranges from $560 billion to $635 billion (in 2011 dollars) in the United States, which combines the medical costs of pain care and the economic costs related to disability days and lost wages and productivity.

•Over half (52.7%) of the workforce surveyed reported having headache, back pain, arthritis, or other musculoskeletal pain in the past two weeks, and 12.7% of all workforce lost productive time in a two-week period due to pain.

•Headache (5.4%) was the most common pain condition prompting lost productive time: followed by back pain (3.2%), arthritis pain (2%) and other musculoskeletal pain (2%).

•Overall, workers lost an average of 4.6 hours per week of productive time due to a pain condition.

•Other musculoskeletal pain (5.5 hours/week) and arthritis or back pain (5.2 hours/week) produced the largest amounts of lost productive time.

•Headache produced, on average, 3.5 hours of lost productive time per week

•Lost productive time from common painful conditions was estimated to be $61.2 billion per year, while 76.6% of lost productive time was explained by reduced work performance, not absenteeism.

# REPETITIVE STRESS CONDITIONS

Since ancient times, people have known that movement is an essential part of life. Today, however, a typical office worker sits at a desk for eight hours a day—frequently with poor posture—and seldom stands up.

Whenever the requirements of a job do not match the physical attributes of a worker, the worker is more prone to injury and lost productivity. Workplace injuries, a common cause of time off, cost employers and employees billions of dollars every year.

Some of the more common workplace injuries are carpal tunnel syndrome (a nerve entrapment at the wrist seen in computer users), low-back pain, tendinitis, bursitis, and neck pain or headaches.

Carpal tunnel syndrome (CTS) is the most expensive of all work-related injuries. Over his or her lifetime, a carpal tunnel patient pays about $30,000 in medical bills and lose hours of productivity from work absences.

CTS typically occurs in adults, with women three times more likely to develop it than men. The dominant hand is usually affected first, and the pain is typically severe. CTS is especially common in assembly-line workers in manufacturing, sewing, finishing, cleaning, meatpacking, and similar industries.

According to the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), repetitive strain injuries are the nation's most common and costly occupational health problem, affecting hundreds of thousands of American workers, and costing more than $20 billion a year in workers compensation.

Carpal tunnel syndrome results in the highest number of days lost among all work related injuries. Almost half of the carpal tunnel cases result in 31 days or more of work loss according to National Center for Health Statistics.

Approximately 260,000 carpal tunnel release operations are performed each year, with 47% of the cases considered to be work related.-National Center for Health Statistics.

A report by NIOSH revealed that more than 50% of all food cashiers, (jobs predominantly held by women), suffered some degree of carpal tunnel syndrome and other forms of repetitive strain injuries as a result of the physical demands of scanning products at high speed.

**Only 23% of all Carpal Tunnel Syndrome patients were able to return to their previous professions following surgery.**

# Forward Head Posture

The increase use of desktop monitors and mobile communication devices has created a whole new class of problems related to forward head posture.

## Dr. Cailliet, explains some of the devastating effects of FHP as follows:

1. **Head in forward posture can add up to thirty (30) pounds of abnormal leverage on the cervical spine**. This can pull the entire spine out of alignment.

2. **Forward head posture results in loss of vital capacity of the lungs**. Lung capacity is depleted by as much as 30%. This shortness of breath can then lead to heart and blood vascular disease. These breath related effects happen primarily because the loss of the cervical lordosis blocks the action of the hyoid muscles, especially the rib lifting action is necessary for complete aeration of the lungs. Loss of the cervical lordosis reduces the patient's lung and vital capacity up to 30%.

3. **Loss of gastrointestinal function:***The entire gastrointestinal system is affected; particularly the large intestine.* Loss of good bowel peristaltic function and evacuation is a common effect of forward head posture.

**4. Forward head posture causes an increase in discomfort and pain** because:*Proprioceptive signals from the first four cervical (upper neck) vertebrae are a major source of the stimuli which create the body`s pain controlling chemicals (endorphins) With inadequate endorphin production, many otherwise non painful sensation are experienced as pain. Forward head posture dramatically reduces endorphins production by limiting the range of motion of the cervical spine.

Mobile technological devices, such as digital personal assistants (PDAs) and smartphones have made our lives more convenient. We can now send e-mails, access the Internet, manage our schedules, and use spreadsheets and other office software from our phones. While this makes it easier to accomplish tasks without being tethered to an office, it has also increased the amount of time we spend using these devices, which is not without risks.

The use of handheld phones and other mobile devices have created a condition known as “text-neck”

Americans send an average of 6 billion text messages a day, according to the Census Bureau. As technology advances, allowing us to do more tasks on smaller equipment, our bodies often pay the price. With a growing potential for injuries from technologies that we rely on, it’s important to minimize the risks. One problem that is becoming more prevalent is neck strain from the over-use of mobile devices, or “text neck.”

***Text-Neck ‘global epidemic and people all over the world – especially the younger generations – are suffering the effects*.**

MSNBC TODAYS HEALTH

## STRESS RELATED CONDITIONS

Workplace stress causes approximately one million U.S. employees to miss work each day

**American Institute of Stress**

Two-thirds of both men and women say work has a significant impact on their stress level, and one in four has called in sick or taken a "mental health day" as a result of work stress.

**American Psychological Association**

Problems at work are more strongly associated with health complaints than are any other life stressor.

Workers who must take time off work because of stress, anxiety, or a related disorder will be off the job for about 21 days.

**US Bureau of Labor Statistics**

•Depression results in more days of disability than chronic health conditions such as heart disease, hypertension, and diabetes

**National Committee for Quality Assurance**

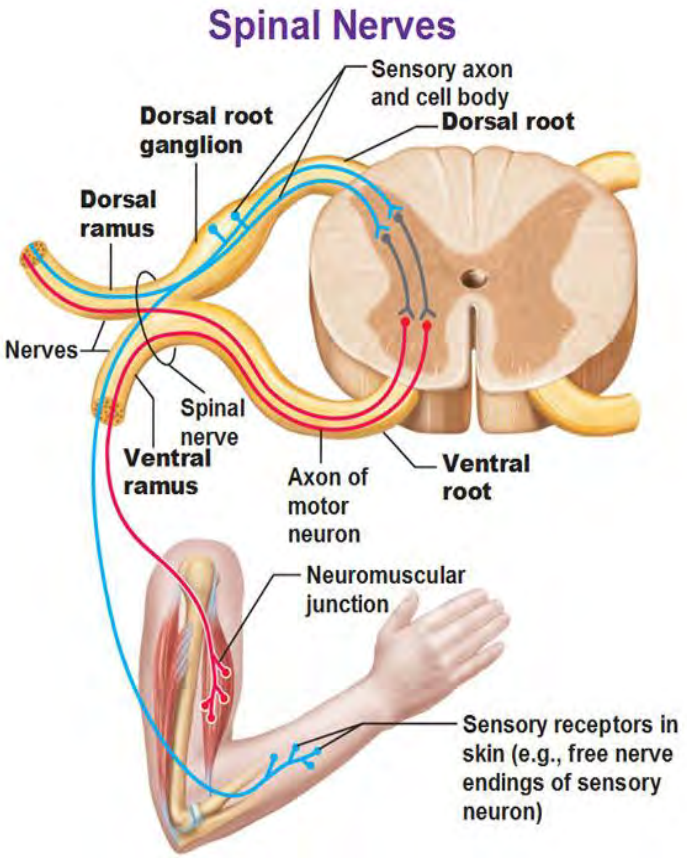
Depression can cause changes in thinking, mood and behavior. These symptoms can flow from personal life into professional life, oftentimes affecting performance at work. According to the Center for Disease Control and Prevention, twenty-seven percent of those with depression reported serious difficulties in their work and home lives.

## Impact on Quality of Life

- Almost two-thirds (59%) reported an impact on their overall enjoyment of life.
- More than three quarters of patients (77%) reported feeling depressed.
- 70% said they have trouble concentrating.
- 74% said their energy level is impacted by their pain.
- 86% reported an inability to sleep well

# THE SPINE-NERVOUS SYSTEM STRESS CONNECTION

One common denominator that all of the previous mentioned health issues often have is the role that the spine and nervous system plays in the causation and contribution of these issues. Though it widely accepted that spinal problems contribute to neck and back pain, a growing body of research show the relationship between spinal issues and a wide range of health issues,.




## CARPAL TUNNEL

A study published in the medical journal The Lancet, found evidence of cervical neuritis (nerve irritation) in over 70% of all carpal tunnel syndrome patients.

90% of all carpal tunnel syndrome patients are found to have nerve root irritation in their cervical spine, a condition known as “double crush phenomena”.

**Journal of Neurology**

## HEADACHES

Over 70% of all headaches arise from problems with the cervical spine and its related structures.

**Canadian Family Physician**

Headaches are frequently caused by compression of cervical nerve roots and prolonged tension of the neck muscles.

**Basic Neurology**

Headaches are more frequently caused by spinal stress than any other condition.

**Journal of Occupational Trauma**

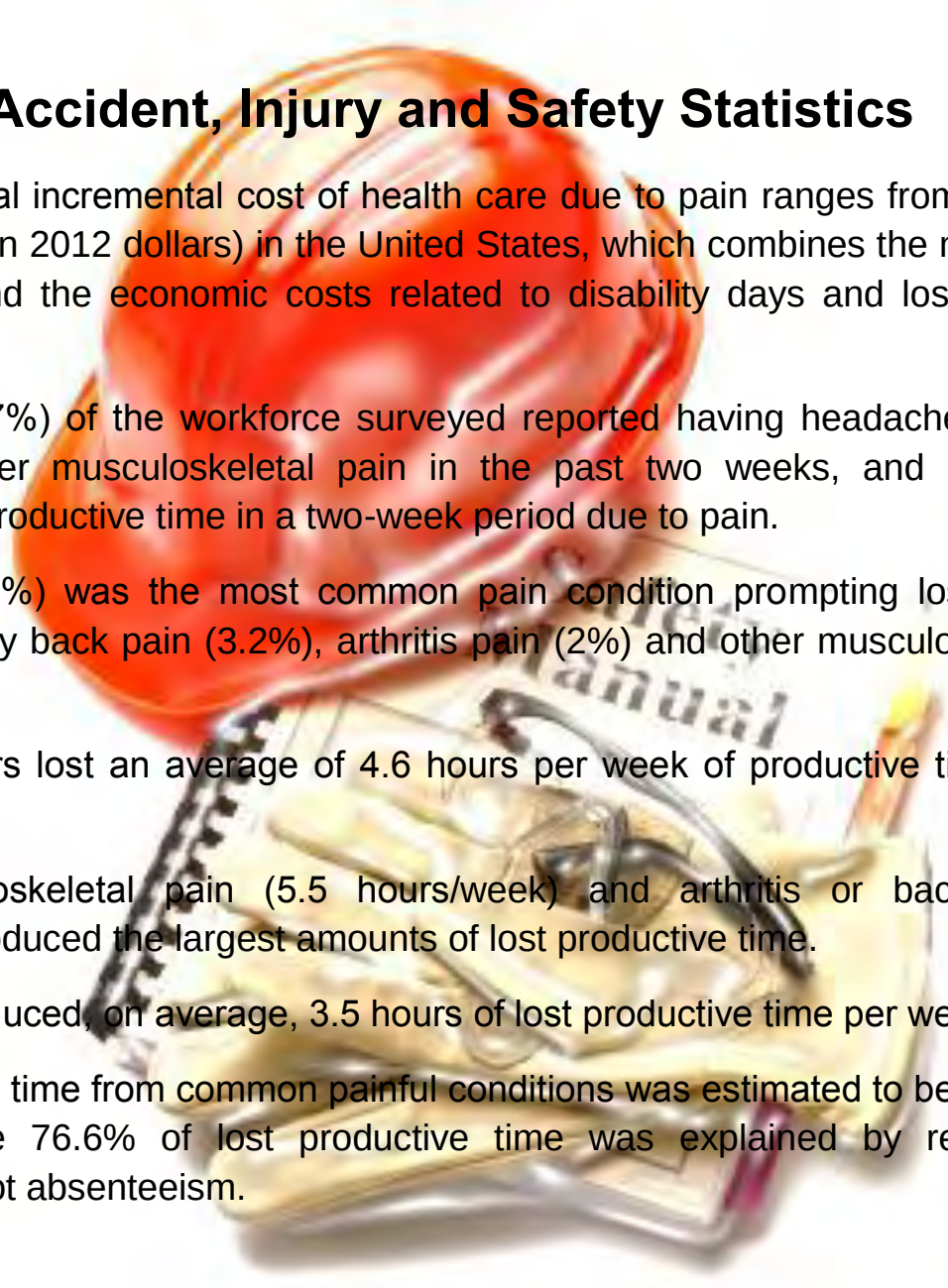
**STRESS RELATED DEPRESSION**

"In fact, it takes an incredibly strong person to bear the burden of the depression condition. The name, "hypothalmo-pituitary-adrenal-axis dysfunction" is an appropriate jargony medical description that is accurate but would never make it into the headlines."

**Dr. Philip Goldsmith, Neuroscientist**

With few exceptions, hormone deficiency or hormone excess is the result of pathologic manifestations in the neural pathways that supply the hypothalamus."

**Harrison's Principles of Internal Medicine**



# Accident, Injury and Safety Statistics

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Increasing evidence supports the need for workplace wellness programs and more companies than ever are implementing health and wellness strategies to reduce injuries, health care costs and long-term disability.

With additional benefits such as reduced absenteeism, higher productivity, reduced use of health care benefits and increased morale and loyalty, it's not surprising more and more employers are choosing to implement workplace wellness programs within their companies.

**Preventable health conditions makes up approximately 80% of the burden of all health conditions and 90% of all health care costs. Employers are beginning to realize they can take advantage of this statistic and work to provide services to decrease the occurrence of those preventable diseases**.

Despite the United States spending more on health care than any other industrialized nation in the world, it remains the unhealthiest. With increased research and data on workplace wellness programs, it is becoming apparent there are very real benefits to implementing workplace wellness programs.

Employee wellness programs are now considered a potential high return on investment for employers due to rising health care costs. In fact, research now suggests employers get an average of $3.48 back in reduced health care costs and $5.82 in lower absenteeism cost for every dollar spent on employee wellness. Employers who live more healthy lifestyles have reduced sick leave, improved work performance, decrease health insurance costs, increased productivity and reduced overall costs.

There are many real benefits to workplace wellness programs. There is increasing evidence to support implementation of programs in all types of companies and businesses, big or small.

**Decreased on-the-job productivity and employee absence because of health result in significant costs to employers above and beyond medical spending. Health-related work losses are estimated to cost US employers more than $260 billion each year, and may cost some companies more than direct medical expenditures.**

# Workplace Wellness Programs: The Benefits

Escalating health care costs continue to remain an issue of great concern for many health professionals, employers and insurance companies.

While the United States spends more on health care than any other industrialized nation in the world, its citizens are not the healthiest, in many respects.

Employees with more risk factors, including being overweight, smoking and having diabetes not only cost more to insure, they also pay more for health care than individuals with less risk factors.

To take a stand against this startling fact, many employers are now offering some type of workplace wellness program to offset the rising costs of health care.

Aside from helping improve the health of already at-risk employees, workplace wellness programs also have a huge impact on healthy individuals, raising awareness so employees with fewer risk factors remain in a lower cost group.

People spend more awake hours at work than anywhere else, on average 50 hours a week, so it's up to employers to take aggressive action towards implementing workplace wellness programs. Corporate wellness programs play a key role in maintaining and improving employee relations and morale. Bottom line, a healthy, motivated workforce is vitally important to a company as a whole.

# Workplace wellness program can do the following:

## Reduce absenteeism:

It has been shown healthier employees spend fewer days away from work due to illness, saving the company thousands, even millions, of dollars on down time and temporary employment. Additionally, because good health typically carries over into better family choices, your employees could possibly miss less work caring for sick family members.

## Control Increasing Health Care Costs:

Today, employers have a vested interest in health-related issues and reducing unnecessary medical costs that consume corporate profits and employee paychecks. For many companies, medical costs can consume half of corporate profits…or more!

## Improve Productivity:

While it is not as easily measured as the increase in health care costs, improved employee morale and productivity plays a big role in the success of a company or business.

## Improve Presenteeism:

Presenteeism is a new phenomenon occurring when employees are at work but do not feel as productive as usual due to stress, depression, injury or illness.

## Reduce Injuries:

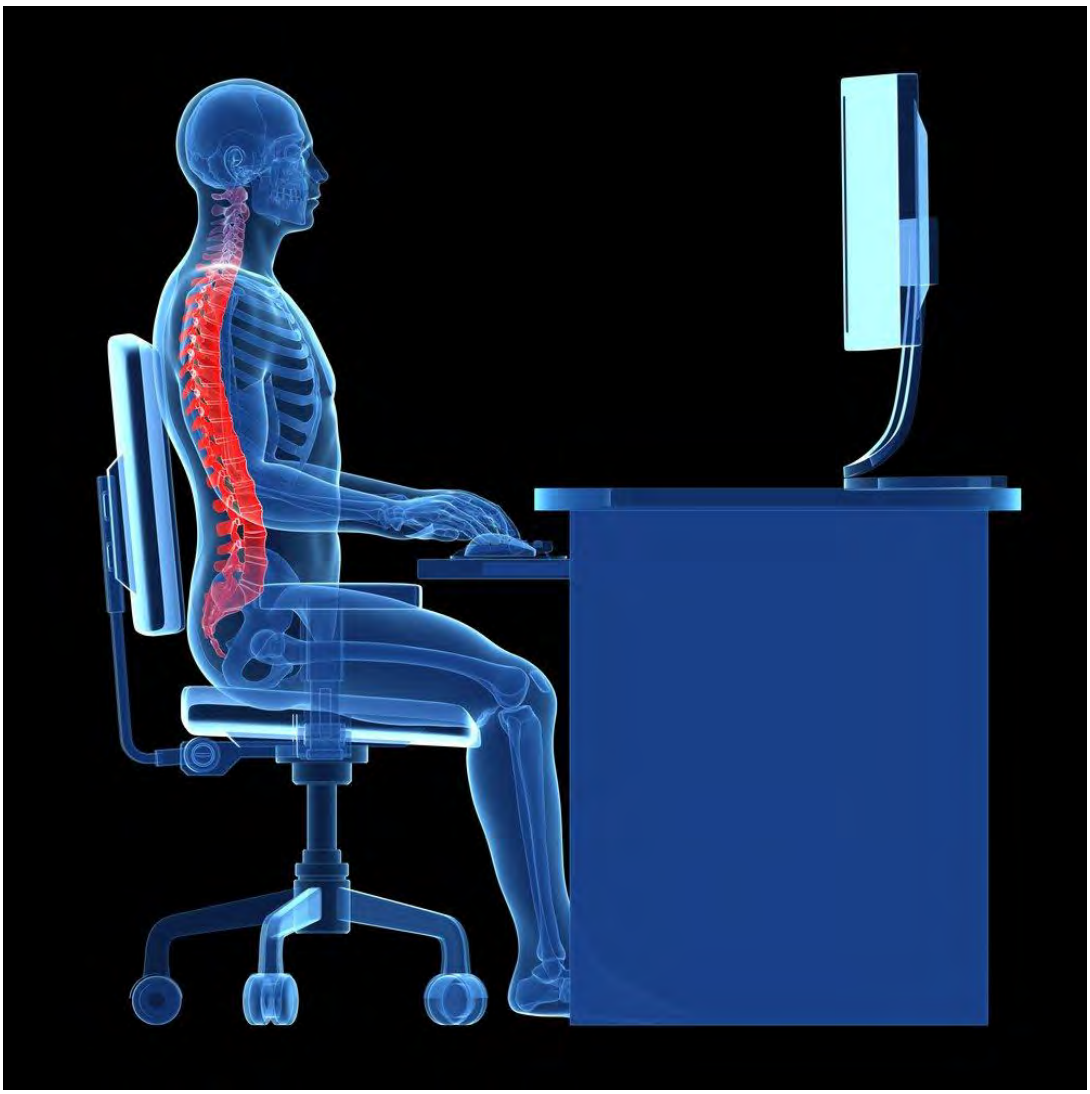
Healthy employees with less risk factors are at a lower risk for injury than those unhealthy employees with more risk factors. Classes are a popular means of trying to prevent injury, including spinal health classes, smoking cessation courses, back care programs and stress management lectures. More examples of workplace wellness programs courses include health education classes, subsidized use of fitness facilities; internal policies that promote healthy behavior and any other activity, policy or environmental change that affect the health of an employee.

## Improve Employee Morale and Retention:

Employee turnover is expensive and an employee wellness program is an added benefit to encourage employee retention. Company sponsored workplace wellness programs send a clear message to employees that management values their well-being.

## POTENTIAL ACTION STEPS FOR A COMPREHENSIVE PROGRAM

- Designating a Workplace Wellness Program Leader
- Conducting an employee interest survey
- Providing an opportunity for health screening
- Administering an annual physical activity campaign
- Holding a healthy eating in-service/lunch & learn program
- Scheduling of Ergonomic and Safety Analysis
- Establishing an in-house workplace wellness program library
- Disseminating a monthly wellness program newsletter
- Implementing healthy policies and procedures
- Supporting family and community health efforts



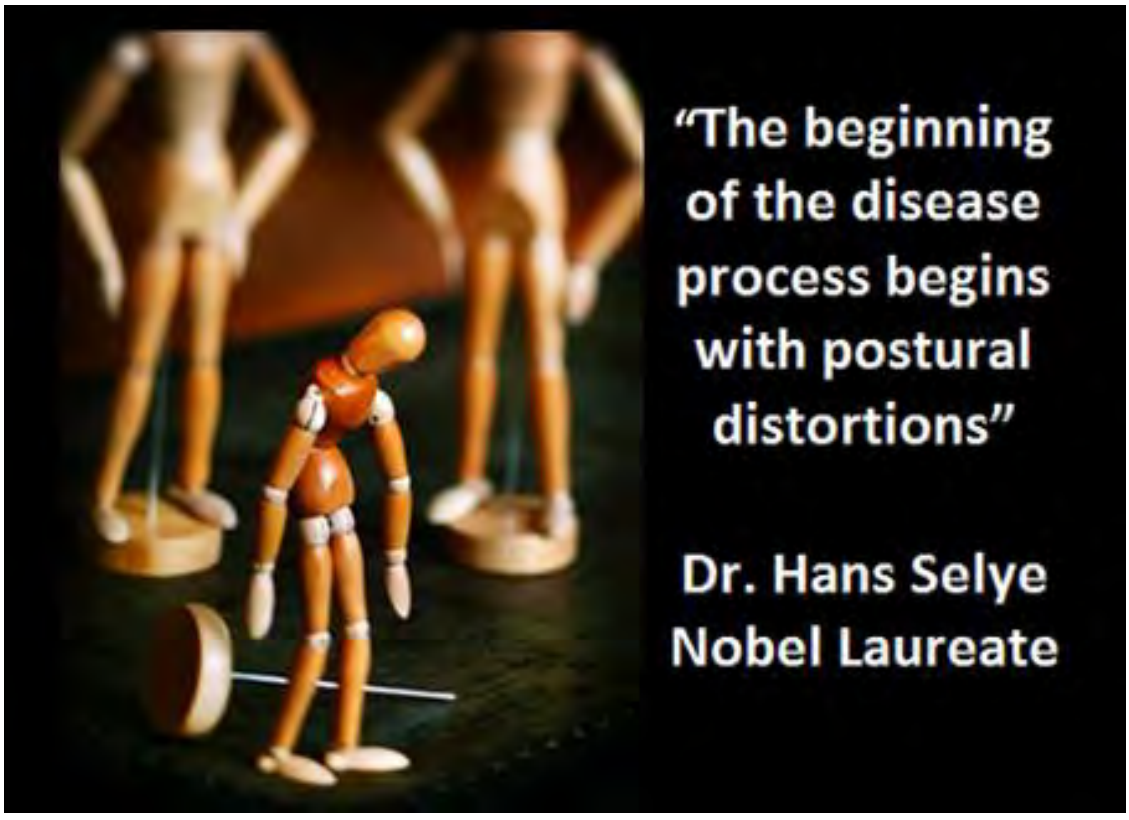
# CHIROPRACTIC

Chiropractic is a health care system that is founded on the premise that a proper functioning nervous system is essential to overall health and function of the human body. Doctors of Chiropractic detect and correct vertebral subluxations by physically adjusting the spine. This restores the nervous system to an optimum level of function, which maximizes the body's inherent healing potential.

Chiropractic adjustments restore normal nerve function; improve spinal biomechanics, range of motion, reflex arcs, and posture, all of which are essential to a properly functioning nervous system

Doctors of Chiropractic have never claimed that they can "cure" illnesses and other related conditions, and not all health problems can be attributed to vertebral subluxations, but clinical and case study research has demonstrated that correcting subluxations can lead to an improvement and restoration of health.

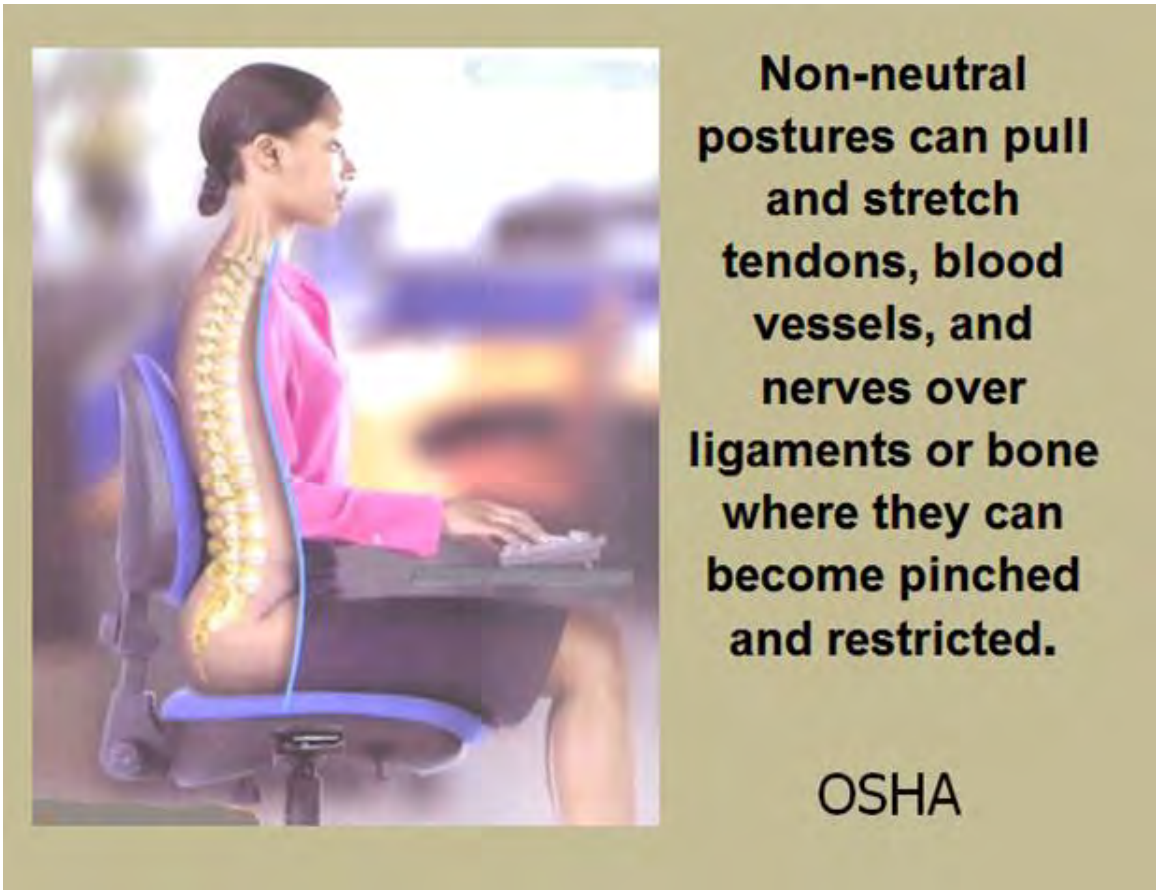
Doctors of Chiropractic are experts in spinal structure and body mechanics. Chiropractic adjustments are aimed at restoring and maintaining the structural integrity of the body by correcting spinal and postural distortions. Chiropractors emphasize the importance of posture to overall health, a concept that has been often overlooked in traditional methods of health care.



# POSTURE AND HEALTH

- Posture and normal physiology are interrelated.
- Posture affects and moderates every physiological function from breathing to hormonal production.
- Abnormal posture is evident in patients with chronic and stress-related illnesses.
- Homeostasis and nervous system function are ultimately connected with posture.
- Despite the considerable evidence that posture affects physiology and function, the significant  nfluence of posture on health is not addressed by most physicians.

**AMERICAN JOURNAL OF PAIN MANAGEMENT**



Workers compensation studies in multiple states indicate a 45-55% saving in overall costs when treatments are provided by a chiropractor instead of a traditional practioners.

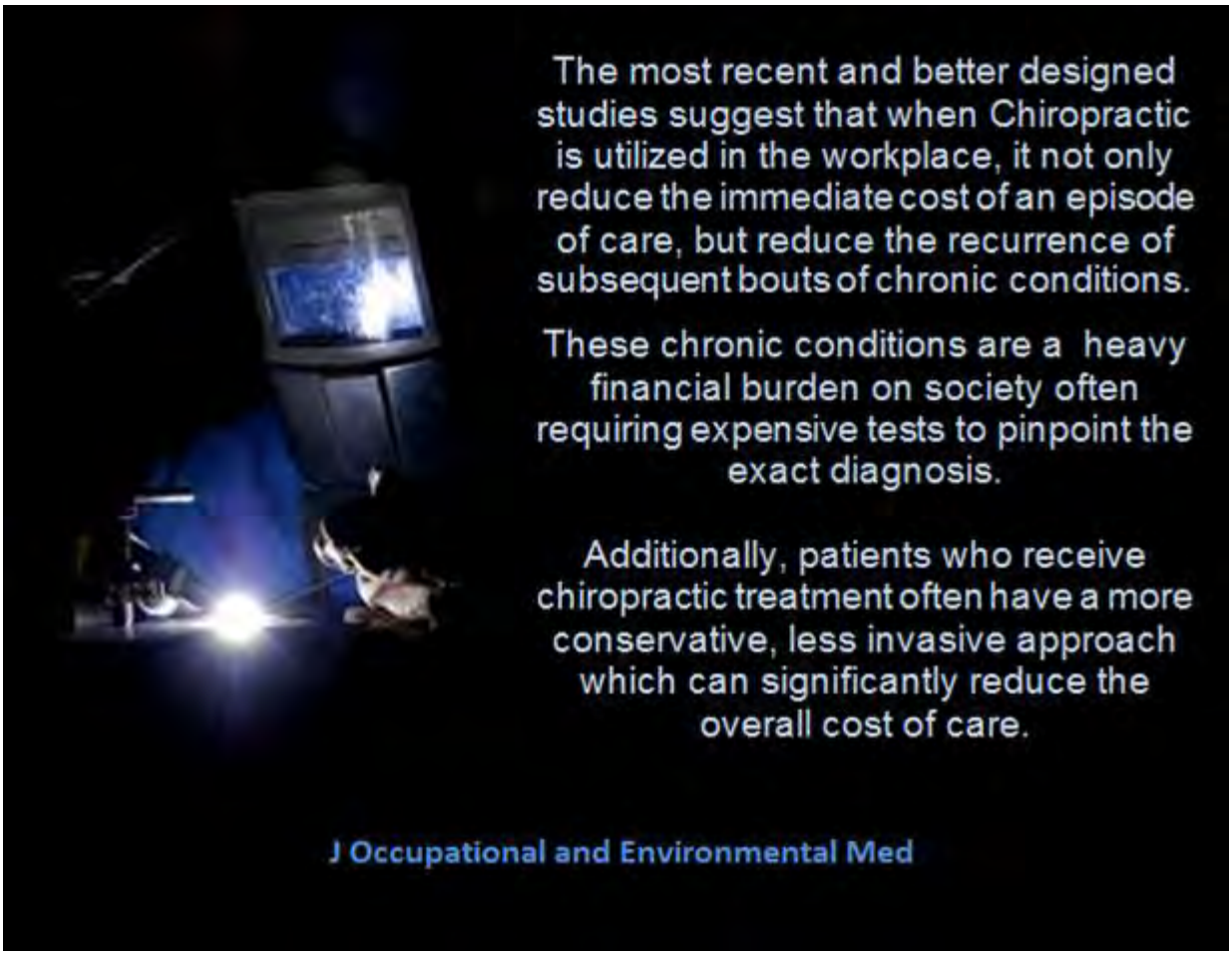
**The Magna Report**

58% of those using Chiropractic considered it an essential part of their health insurance package.

**The Gallup Organization**

Chiropractic patients were three times more satisfied with their care than patients of family practice physicians."

**Western Journal of Medicine**




**90% of world class athletes use Chiropractic care on a regular basis to not only prevents injuries, but to ensure maximum performance-Do you want maximum performance from your employees?**

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# THE EDUCATION AND TRAINING OF A DOCTOR OF CHIROPRACTIC

Educational requirements for doctors of chiropractic are among the most stringent of any of the health care professions. The typical applicant at a chiropractic college has already acquired nearly four years of pre-medical undergraduate college education, including courses in biology, inorganic and organic chemistry, physics, psychology and related lab work. Once accepted into an accredited chiropractic college, the requirements become even more demanding — four to five academic years of professional study are the standard. Because of the hands-on nature of chiropractic, and the intricate adjusting techniques, a significant portion of time is spent in clinical training.

Doctors of chiropractic — who are licensed to practice in all 50 states, the District of Columbia, and in many nations around the world — undergo a rigorous education in the healing sciences, similar to that of medical doctors. In some areas, such as anatomy, physiology, rehabilitation, nutrition and public health, they receive more intensive education than their MD counterparts.

Like other primary health care doctors, chiropractic students spend a significant portion of their curriculum studying clinical subjects related to evaluating and caring for patients. Typically, as part of their professional training, they must complete a minimum of a one-year clinical-based program dealing with actual patient care. In total, the curriculum includes a minimum of 4,200 hours of classroom, laboratory and clinical experience. The course of study is approved by an accrediting agency which is fully recognized by the U.S. Department of Education. This has been the case for more than three decades.

Records from insurance and court cases have constantly shown that chiropractic is the safest portal of entry health care available to the public today. Although no healthcare procedures are 100% safe, chiropractic stands on its record of safety and effectiveness unmatched in healthcare.

The chiropractic adjustment is a safe, efficient procedure which is performed nearly one million times every working day in the United States.

There is a singular lack of actuarial data that would justify concluding that chiropractic care is in any way harmful or dangerous. Chiropractic care is non-invasive, therefore, the body's response to chiropractic care is far more predictable than its reactions to drug treatments or surgical procedures. Of the nearly one million adjustments given every day in this country, complications are exceedingly rare.

**COMPLIMENTS OF**

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