

THE TRUTH OF CHIROPRACTIC PRACTICE: ANSWERS TO MISINFORMATION ABOUT CHIROPRACTIC

*NEWS ARTICLES AND RESEARCH FINDINGS ON CHIROPRACTIC PRACTICE
AND CLINICAL BENEFITS*

James M. Cox, DC, DACBR, FICC, FACO(H), HonDLitt
September 12, 2018



**SIR WILLIAM OSLER, 1ST BARONET, FRS FRCP WAS A CANADIAN PHYSICIAN AND
ONE OF THE FOUR FOUNDING PROFESSORS OF JOHNS HOPKINS HOSPITAL.
BORN: JULY 12, 1849, BRADFORD WEST GWILLIMBURY, CANADA
DIED: DECEMBER 29, 1919, OXFORD, UNITED KINGDOM**

Notable Quotes:

- Medicine is a science of uncertainty and an art of probability.
- One of the first duties of the physician is to educate the masses not to take medicine.
- He who studies medicine without books sails an uncharted sea, but he who studies medicine without patients does not go to sea at all.
- We are here to add what we can to life, not to get what we can from life.
- The desire to take medicine is perhaps the greatest feature which distinguishes man from animals.
- The best preparation for tomorrow is to do today's work superbly well.
- Look wise, say nothing, and grunt. Speech was given to conceal thought.
- The greater the ignorance the greater the dogmatism.



HARVARD HEALTH LETTER

"WHERE TO TURN FOR LOW BACK PAIN RELIEF
IN MOST CASES, A PRIMARY CARE DOCTOR OR
CHIROPRACTOR CAN HELP YOU RESOLVE THE PROBLEM."

PUBLISHED: NOVEMBER 2017

- Since you shouldn't try to diagnose your own back pain, make your first call to a professional who can assess your problem, such as a primary care physician or a chiropractor. "Both can serve as the entry point for back pain," says Dr. Matthew Kowalski, a chiropractor with the Osher Clinical Center for Integrative Medicine at Harvard-affiliated Brigham and Women's Hospital. "And 35% to 42% of people with their first episode of back pain will consult a chiropractor."
- Chiropractors often work in conjunction with other doctors, and they can prescribe diet, exercise, and stretching programs. "A well-trained chiropractor will sort out whether you should be in their care or the care of a physical therapist or medical doctor," Dr. Kowalski explains.
- But for back sprains, strains, and herniated discs, a visit to your primary care physician or chiropractor may be all it takes to feel better. Make that initial call if back pain is interfering with your day.



HARVARD HEALTH LETTER

"WHERE TO TURN FOR LOW BACK PAIN RELIEF
IN MOST CASES, A PRIMARY CARE DOCTOR OR
CHIROPRACTOR CAN HELP YOU RESOLVE THE PROBLEM."

PUBLISHED: NOVEMBER 2017

- Low back pain is one of the most common complaints on the planet. And you may wonder where to turn when you start experiencing some of those aches or twinges in the lower part of your back. Take heart. "In most cases, you won't need a specialist," says Dr. Robert Shmerling, a rheumatologist at Harvard-affiliated Beth Israel Deaconess Medical Center.
- But some causes of low back pain, such as a narrowing of the spinal canal (spinal stenosis), may require a specialist. "A referral makes sense when conservative measures have failed to address your back pain, symptoms aren't improving or are getting worse, or there's a suspicion that surgery might be needed," says Dr. Shmerling.



THE UPSHOT: THE NEW HEALTH CARE
CREDIT JOSHUA BRIGHT FOR THE NEW YORK TIMES
MAY 1, 2017

- *For Bad Backs, It May Be Time to Rethink Biases About Chiropractors*
- Author: Aaron E. Carroll is a professor of pediatrics at Indiana University School of Medicine who blogs on health research and policy at The Incidental Economist and makes videos at Healthcare Triage. Follow him on Twitter at @aaronecarroll.
- Spinal manipulation or physical therapy such as heat and stretches (above) seem as effective as traditional approaches to help lower back pain.
- “A physician like me might suggest any number of potential treatments and therapies. But one I never considered was a referral for spinal manipulation.”
- “It appears I may have been mistaken. For initial treatment of lower back pain, it may be time for me (and other physicians) to rethink our biases.”
- “Spinal manipulation — along with other less traditional therapies like heat, meditation and acupuncture — seems to be as effective as many other more medical therapies we prescribe, and as safe, if not safer.”



A LARGE SURVEY OF BACK PAIN PATIENTS FROM 2002 THROUGH 2008 FOUND THAT **MORE THAN 30% SOUGHT CHIROPRACTIC CARE**, SIGNIFICANTLY MORE THAN THOSE WHO SOUGHT MASSAGE, ACUPUNCTURE OR HOMEOPATHY.

- The *Journal of the American Medical Association* researchers looked for new studies since 2011, as well as those that had been performed before. The evidence from 15 randomized controlled trials, which included more than 1,700 patients, showed that spinal manipulation caused an improvement in pain of about 10 points on a 100-point scale. The evidence from 12 randomized controlled trials — which overlapped, but not completely with the other trials — of almost 1,400 patients showed that spinal manipulation also resulted in improvements in function.
- In February, in *Annals of Internal Medicine* and the American College of Physicians released new clinical practice guidelines for the noninvasive treatment of subacute back pain. They recommended that patients should try heat, massage, acupuncture or spinal manipulation as first-line therapies.
- Medication and surgery can also lead to harms. We shouldn't forget that prescription pain medications, like opioids, can lead to huge costs, especially when they're misused.
- Because they fear those potential harms, some physicians are hesitant to refer patients to chiropractors or physical therapists for care. But in all the studies summarized above, there were really no serious adverse events reported.
- Studies have shown that, in general, users of complementary and alternative medicine spend less over all for back pain than users of only traditional medicine.



LINGNER H, BLASE L, GROBHENNIG A, SCHMIEMANN G. MANUAL THERAPY APPLIED BY GENERAL PRACTITIONERS FOR NONSPECIFIC LOW BACK PAIN: RESULTS OF THE MANRÜCK PILOT-STUDY. CHIROP MAN THERAP. 2018 SEP 3;26:39. DOI: 10.1186/S12998-018-0202-2. ECOLLECTION 2018.

- AFTER CHIROPRACTIC ESTABLISHES SPINAL MANIPULATION BENEFITS, MEDICAL DOCTORS STEAL IT AND IN 2 ½ HOURS LEARN TO DO IT?????
- AFTER GERMAN GENERAL PRACTITIONERS RECEIVED A SINGLE 2 ½ HOUR TRAINING SESSION IN MANUAL THERAPY, THEY DID IT TO PATIENTS WITH LBP. RESULTS: MANUAL THERAPY LED TO FASTER PAIN REDUCTION, REDUCED ANALGESIC USE AND IMPROVED FUNCTIONAL CAPACITY. CONCLUSIONS: BEFORE VERIFYING THE ENCOURAGING FINDINGS THAT ADDITIONAL MT MAY LEAD TO FASTER PAIN REDUCTION AND REDUCED ANALGESIC USE VIA AN RCT, THE SETTING, PATIENTS' STRUCTURE, AND INCLUSION CRITERIA SHOULD BE CONSIDERED MORE CLOSELY.



PRAZ C, DUCKI J1,2, CONNAISSA ML1,2, TERRIER P1, VUISTINER P1, LÉGER B1, LUTHI F. WORKING TOGETHER AND BEING PHYSICALLY ACTIVE ARE NOT ENOUGH TO ADVISE UNIFORMLY AND ADEQUATELY LOW BACK PAIN PATIENTS: A CROSS-SECTIONAL STUDY. PAIN RES MANAG. 2018 JUN 26;2018:4128913. DOI: 10.1155/2018/4128913.

- COMMONLY CHIROPRACTIC IS NOT INCLUDED IN INTERDISCIPLINARY TREATMENT OF LOW BACK PAIN IN SUCH STUDIES. *HOW CAN THAT BE WHEN WE ARE THE LARGEST PROFESSION TREATING SPINE PAIN NON SURGICALLY? HOW DO AUTHORS CONDITION THEIR MINDSET TO EXCLUDE CHIROPRACTIC?* THEIR FEAR OVERCOMES THEIR DESIRE TO GIVE THE BEST SPINE CARE IN MY OPINION. - JMC



BREUER, B; CRUCIANI, R; PORTENOY, RK. PAIN MANAGEMENT BY PRIMARY CARE PHYSICIANS, PAIN PHYSICIANS, CHIROPRACTORS, AND ACUPUNCTURISTS: A NATIONAL SURVEY. SOUTHERN MEDICAL JOURNAL 103 (8). AUG 2010. P.738-747

- *BETH ISRAEL DEACONESS MED CTR, DEPT PAIN MED & PALLIAT CARE, 1ST AVE & 16TH ST, NEW YORK, NY 10003 USA*
- PRIMARY CARE PHYSICIANS TREAT APPROXIMATELY 52% OF CHRONIC PAIN PATIENTS, PAIN PHYSICIANS TREAT 2%, CHIROPRACTORS TREAT 40%, AND ACUPUNCTURISTS TREAT 7%.
- PRIMARY CARE PHYSICIANS ARE LEAST LIKELY TO FEEL CONFIDENT IN THEIR ABILITY TO MANAGE MUSCULOSKELETAL PAIN AND NEUROPATHIC PAIN.



LIN CWC; HAAS M; MAHER CG; MACHADO LAC; VAN TULDER MW. COST-EFFECTIVENESS OF GUIDELINE-ENDORSED TREATMENTS FOR LOW BACK PAIN: A SYSTEMATIC REVIEW. EUROPEAN SPINE JOURNAL 20 (7). JUL 2011. 1024-38

- LBP CARE ENDORSED BY THE GUIDELINES OF THE AMERICAN COLLEGE OF PHYSICIANS AND THE AMERICAN PAIN SOCIETY INTERDISCIPLINARY REHABILITATION, EXERCISE, ACUPUNCTURE, SPINAL MANIPULATION OR COGNITIVE-BEHAVIOURAL THERAPY WERE COST-EFFECTIVE IN PEOPLE WITH SUB-ACUTE OR CHRONIC LBP. MASSAGE ALONE WAS UNLIKELY TO BE COST-EFFECTIVE
- 26 STUDIES INCLUDED



NAKASHIMA, HIROAKI MD*; YUKAWA, YASUTSUGU MD†; SUDA, KOTA MD‡;
YAMAGATA, MASATSUNE MDS; UETA, TAKAYOSHI MD¶; KATO, FUMIHIKO MD‡.
CERVICAL DISC PROTRUSION CORRELATES WITH THE SEVERITY OF CERVICAL DISC
DEGENERATION: A CROSS-SECTIONAL STUDY OF 1211 RELATIVELY HEALTHY
VOLUNTEERS. SPINE. 01 JULY 2015 - VOLUME 40 - ISSUE 13 - P E774-E779DOI:
10.1097/BRS.0000000000000953

- IN 1211 PEOPLE AGED 20 TO 70, PFIRRMANN CLASSIFICATION OF DISC DEGENERATION SHOWED THAT **MILD DISC DEGENERATION WAS VERY COMMON, INCLUDING 98.0% OF BOTH SEXES IN THEIR 20'S**. THE SEVERITY OF CERVICAL DISC DEGENERATION SIGNIFICANTLY INCREASED WITH AGE IN BOTH SEXES AT EVERY LEVEL. THE DISC DEGENERATION PREDOMINANTLY OCCURRED AT C5-C6 AND C6-C7.



MIR QASEEM, MD, PHD, MHA; TIMOTHY J. WILT, MD, MPH; ROBERT M. MCLEAN,
MD; AND MARY ANN FORCIEA, MD. NONINVASIVE TREATMENTS FOR ACUTE,
SUBACUTE, AND CHRONIC LOW BACK PAIN: A CLINICAL PRACTICE GUIDELINE
FROM THE AMERICAN COLLEGE OF PHYSICIANS. ANN INTERN
MED.DOI:10.7326/M16-2367ANNALS.ORGFOR AUTHOR AFFILIATIONS, SEE END OF
TEXT. THIS ARTICLE WAS PUBLISHED AT ANNALS.ORG ON 14 FEBRUARY 2017

- A systematic review of randomized, controlled trials and systematic reviews published through April 2015 on noninvasive pharmacologic and nonpharmacologic treatments for low back pain and updated searches were performed through November 2016 suggest spinal manipulation for acute, subacute and chronic low back pain. (strong recommendation)



STOCKENDAH MJ, KJAER P, HARTVIGSEN J, KONGSTED: NATIONAL CLINICAL GUIDELINES FOR NON-SURGICAL TREATMENT OF PATIENTS WITH RECENT ONSET LOW BACK PAIN OR LUMBAR RADICULOPATHY. **EUR SPINE J.** 2018 JAN;27(1):60-75. DOI: 10.1007/S00586-017-5099-2. EPUB 2017 APR 20. RECEIVED: 31 JANUARY 2017 / REVISED: 19 MARCH 2017 / ACCEPTED: 10 APRIL 2017. SPRINGER-VERLAG BERLIN HEIDELBERG 2017

- 20 non-surgical interventions for recent onset lbp or radiculopathy treatment includes manual therapy, exercise and patient education.
- The guidelines recommend against acupuncture, routine use of imaging, targeted treatment, extraforaminal glucocorticoid injection, paracetamol, NSAIDs, and opioids.



RASMUSSEN C, NIELSEN GL, HANSEN VK, JENSEN OK, SCHIOETT-CHRISTENSEN B. RATES OF LUMBAR DISC SURGERY BEFORE AND AFTER IMPLEMENTATION OF MULTIDISCIPLINARY NONSURGICAL SPINE CLINICS. **SPINE.** 2005 NOV 1;30(21):2469-73

- The rates of lumbar disc surgery for sciatica patients with and without low back pain treated non surgically in a multidisciplinary spine clinic
- The rate of elective, first-time disc surgeries decreased by approximately two thirds



KREKOUKIAS G1, GELALIS ID1,2, XENAKIS T1, GIOFTSOS G3, DIMITRIADIS Z4, SAKELLARI V3. SPINAL MOBILIZATION VS CONVENTIONAL PHYSIOTHERAPY IN THE MANAGEMENT OF CHRONIC LOW BACK PAIN DUE TO SPINAL DISK DEGENERATION: A RANDOMIZED CONTROLLED TRIAL. J MAN MANIP THER. 2017 MAY;25(2):66-73. DOI: 10.1080/10669817.2016.1184435. EPUB 2016 JUN 23.

- Manual therapy spinal mobilization is preferable to conventional physiotherapy in order to reduce the pain intensity and disability in subjects with chronic lbp and associated disk degeneration. The findings of this study may lead to the establishment of spinal mobilization as one of the most preferable approaches for the management of lbp due to disk degeneration.



HERMAN PM, KOMMAREDDI M, SORBERO ME, RUTTER CM, HAYS RD, HILTON LG, RYAN GW, COULTER ID. CHARACTERISTICS OF CHIROPRACTIC PATIENTS BEING TREATED FOR CHRONIC LOW BACK AND NECK PAIN. J MANIPULATIVE PHYSIOL THER. 2018 AUG 15. PII: S0161-4754(17)30248-8. DOI: 10.1016/J.JMPT.2018.02.001. [EPUB AHEAD OF PRINT]

- 90% of 6342 patients treated with chiropractic for chronic low back and neck pain reported high satisfaction with the care, few used narcotics and avoiding surgery was the most important reason they chose chiropractic care.



DUBOIS J, SCALA E, FAOUZI M, DECOSTERD I, BURNAND B, RODONDI PY.
 CHRONIC LOW BACK PAIN PATIENTS' USE OF, LEVEL OF KNOWLEDGE OF AND
 PERCEIVED BENEFITS OF COMPLEMENTARY MEDICINE: A CROSS-SECTIONAL
 STUDY AT AN ACADEMIC PAIN CENTER. BMC COMPLEMENT ALTERN MED.
 2017 APR 4;17(1):193. DOI: 10.1186/S12906-017-1708-1.

- MORE THAN THREE-QUARTERS OF CLBP PATIENTS IN OUR SAMPLE DID USE CM TO TREAT THEIR CLBP.



ROGER CHOU, MD; RICHARD DEYO, MD, MPH; JANNA FRIEDLY, MD; ANDREA SKELLY, PHD,
 MPH; ROBIN HASHIMOTO, PHD; MELISSA WEIMER, DO, MCR; ROCHELLE FU, PHD; TRACY
 DANA, MLS; PAUL KRAEGEL, MSW; JESSICA GRIFFIN, MS; SARA GRUSING, BA; AND ERIKA D.
 BRODT, BS: NONPHARMACOLOGIC THERAPIES FOR LOW BACK PAIN: A SYSTEMATIC REVIEW
 FOR AN AMERICAN COLLEGE OF PHYSICIANS CLINICAL PRACTICE GUIDELINE. ANNALS OF
 INTERNAL MEDICINE 2017;166(7):493-505.

- Background: A 2007 American College of Physicians guideline addressed nonpharmacologic treatment options for low back pain from current evidence on non-pharmacologic therapies for acute or chronic nonradicular or radicular low back pain from MEDLINE (January 2008 through February 2016), Cochrane Central Register of Controlled Trials, CochraneDatabase of Systematic Reviews, and reference lists.
- **Evidence continues to support the effectiveness of exercise, psychological therapies, multidisciplinary rehabilitation, spinal manipulation, massage, and acupuncture for chronic low back pain.**
- Funding Source: Agency for Healthcare Research and Quality. (PROSPERO: CRD42014014735) Ann Intern Med.2017;166:xxx-xxx. doi:10.7326/M16-2459Annals.org
- The American College of Physicians (ACP) and American Pain Society (APS) recommended spinal manipulation as a treatment option for acute low back pain and several nonpharmacologic therapies for sub-acute or chronic low back pain.



OH H, LEE S, LEE K, JEONG M. THE EFFECTS OF FLEXION-DISTRACTION AND DROP TECHNIQUES ON DISORDERS AND FERGUSON'S ANGLE IN FEMALE PATIENTS WITH LUMBAR INTERVERTEBRAL DISC HERNIATION. *J PHYS THER SCI*. 2018 APR;30(4):536-539. DOI: 10.1589/JPTS.30.536. EPUB 2018 APR 13.

- FLEXION-DISTRACTION AND DROP TECHNIQUES MAY BE AN EFFECTIVE INTERVENTION TO IMPROVE DISORDERS AND FERGUSON'S ANGLE IN FEMALE PATIENTS WITH LUMBAR INTERVERTEBRAL DISC HERNIATION



CHUNG J, HWANGBO G2, PARK J3, LEE S3. EFFECTS OF MANUAL THERAPY USING JOINT MOBILIZATION AND FLEXION-DISTRACTION TECHNIQUES ON CHRONIC LOW BACK PAIN AND DISC HEIGHTS. *J PHYS THER SCI*. 2014 AUG;26(8):1259-62. DOI: 10.1589/JPTS.26.1259. EPUB 2014 AUG 30.

¹DEPARTMENT OF REHABILITATION SCIENCE, GRADUATE SCHOOL DAEGU UNIVERSITY, REPUBLIC OF KOREA.
²DEPARTMENT OF PHYSICAL THERAPY, COLLEGE OF REHABILITATION SCIENCE, DAEGU UNIVERSITY, REPUBLIC OF KOREA.
³DEPARTMENT OF PHYSICAL THERAPY

- MANUAL THERAPY USING JOINT MOBILIZATION TECHNIQUES AND FLEXION-DISTRACTION TECHNIQUES IS CONSIDERED AN EFFECTIVE INTERVENTION FOR ADDRESSING LOW BACK PAIN AND DISC HEIGHTS IN PATIENTS WITH CHRONIC LOW BACK PAIN.



AILLIET L1, RUBINSTEIN SM2, HOEKSTRA T1,2, VAN TULDER MW2, DE VET HCW1.
LONG-TERM TRAJECTORIES OF PATIENTS WITH NECK PAIN AND LOW BACK
PAIN PRESENTING TO CHIROPRACTIC CARE: A LATENT CLASS GROWTH
ANALYSIS. EUR J PAIN. 2017 SEP 4. DOI: 10.1002/EJP.1094.

- **90% OF PATIENTS WITH NECK PAIN OR LOW BACK PAIN PRESENTING TO CHIROPRACTORS HAVE A 30% IMPROVEMENT WITHIN 6 WEEKS AND THEN SHOW A TRAJECTORY OF SYMPTOMS CHARACTERIZED BY PERSISTENT OR FLUCTUATING PAIN OF LOW OR MEDIUM INTENSITY. ONLY A MINORITY EITHER EXPERIENCE A RAPID COMPLETE RECOVERY OR DEVELOP CHRONIC SEVERE PAIN.**



WHEDON JM1, TOLER AWJ1, GOEHL JM2, KAZAL LA2. ASSOCIATION BETWEEN
UTILIZATION OF CHIROPRACTIC SERVICES FOR TREATMENT OF LOW-BACK
PAIN AND USE OF PRESCRIPTION OPIOIDS. J ALTERN COMPLEMENT MED.
2018 FEB 22. DOI: 10.1089/ACM.2017.0131. [EPUB AHEAD OF PRINT]

- AMONG NEW HAMPSHIRE ADULTS WITH OFFICE VISITS FOR NONCANCER LOW-BACK PAIN, THE LIKELIHOOD OF FILLING A PRESCRIPTION FOR AN OPIOID ANALGESIC WAS SIGNIFICANTLY LOWER FOR RECIPIENTS OF SERVICES DELIVERED BY DOCTORS OF CHIROPRACTIC COMPARED WITH NONRECIPIENTS



SHOU L, RANGER TA, PEIRIS W, CICUTTINI FM1, UROUHART DM, BRIGGS AM, WLUKA AE.
 PATIENTS' PERCEIVED NEEDS FOR ALLIED HEALTH, AND COMPLEMENTARY AND
 ALTERNATIVE MEDICINES FOR LOW BACK PAIN: A SYSTEMATIC SCOPING REVIEW.
 HEALTH EXPECT. 2018 JUL 7. DOI: 10.1111/HEX.12676.
 [EPUB AHEAD OF PRINT]

- PATIENTS' PERCEIVED NEEDS FOR ALLIED HEALTH, AND COMPLEMENTARY AND ALTERNATIVE MEDICINES FOR LOW BACK PAIN: A SYSTEMATIC SCOPING REVIEW OF 44 STUDIES SHOWED 3 AREAS OF NEED EMERGED:
 - (I) PHYSIOTHERAPY WAS VIEWED AS IMPORTANT, PARTICULARLY WHEN INDIVIDUALLY TAILORED. HOWEVER, PATIENTS HAD CONCERNS ABOUT ADHERENCE, ADVERSE OUTCOMES AND CORRECT EXERCISE TECHNIQUE.
 - (II) CHIROPRACTIC THERAPY WAS PERCEIVED TO BE EFFECTIVE AND NEEDED BY SOME PATIENTS, BUT OTHERS WERE CONCERNED ABOUT ADVERSE OUTCOMES.
 - (III) AN INCONSISTENT NEED FOR CAM WAS IDENTIFIED WITH SOME PATIENTS PERCEIVING A NEED, WHILE OTHERS QUESTIONING THE LEGITIMACY AND SHORT-TERM DURATION OF THESE THERAPIES.
- CONCLUSIONS: NEED FOR MORE PATIENT-CENTRED GUIDELINES AND SERVICE MODELS FOR LBP.



DENNIS S, WATTS , PAN Y, BRITT H. THE LIKELIHOOD OF GENERAL PRACTITIONERS REFERRING PATIENTS TO PHYSIOTHERAPISTS IS LOW FOR SOME HEALTH PROBLEMS: SECONDARY ANALYSIS OF THE BETTERING THE EVALUATION AND CARE OF HEALTH (BEACH) OBSERVATIONAL STUDY. J PHYSIOTHER. 2018 JUN 11. PII: S1836-9553(18)30056-0. DOI: 10.1016/J.JPHYS.2018.05.006. [EPUB AHEAD OF PRINT]

- THERE WERE 6904 REFERRALS TO A PHYSIOTHERAPIST FROM 775893 GP ENCOUNTERS, WHICH EQUATED TO 0.89%.
- MOST REFERRALS MADE TO PHYSIOTHERAPISTS WERE FOR MUSCULOSKELETAL PROBLEMS. HOWEVER, EVEN AMONG THE MOST COMMONLY REFERRED PROBLEMS (SUCH AS BACK COMPLAINTS AND OSTEOARTHRITIS), THE LIKELIHOOD OF REFERRAL WAS LOW WHEN THEY PRESENTED AS A NEW PROBLEM.



ZHENG P, KAO MC, KARAYANNIS NV, SMUCK M. STAGNANT PHYSICAL THERAPY REFERRAL RATES ALONGSIDE RISING OPIOID PRESCRIPTION RATES IN PATIENTS WITH LOW BACK PAIN IN THE UNITED STATES 1997-2010. SPINE (PHILA PA 1976). 2017 MAY 1;42(9):670-674. DOI: 10.1097/BRS.0000000000001875.

- STAGNANT PHYSICAL THERAPY REFERRAL RATES ALONGSIDE RISING OPIOID PRESCRIPTION RATES IN PATIENTS WITH LOW BACK PAIN IN THE UNITED STATES 1997-2010. BETWEEN 1997 AND 2010, WE ESTIMATED 170 MILLION VISITS FOR LBP LEADING TO 17.1 MILLION PT REFERRALS. AVERAGE PROPORTION OF PCP VISITS ASSOCIATED WITH PT REFERRALS REMAINED STABLE AT ABOUT 10.1%.



FORTE ML, MAIERS M. FUNCTIONAL LIMITATIONS IN ADULTS WHO UTILIZE CHIROPRACTIC OR OSTEOPATHIC MANIPULATION IN THE UNITED STATES: ANALYSIS OF THE 2012 NATIONAL HEALTH INTERVIEW SURVEY. J MANIPULATIVE PHYSIOL THER. 2017 NOV - DEC;40(9):668-675. DOI: 10.1016/J.JMPT.2017.07.015.

- **8.5% OF US ADULTS WHO REPORTED RECEIVING MANIPULATION, 97.6% SAW CHIROPRACTORS.**
- MOST ADULTS WERE UNDER AGE 65 (83.7%), FEMALE (56.6%), AND WHITE (85.1%).



ANGST F, ANGST J, AJDACIC-GROSS V, AESCHLIMANN A, RÖSSLER W. EPIDEMIOLOGY OF BACK PAIN IN YOUNG AND MIDDLE-AGED ADULTS: A LONGITUDINAL POPULATION COHORT SURVEY FROM AGE 27-50 YEARS. PSYCHOSOMATICS. 2017 JUN 1. PII: S0033-3182(17)30144-5. DOI: 10.1016/J.PSYM.2017.05.004. [EPUB AHEAD OF PRINT]

- EPIDEMIOLOGY OF BACK PAIN IN YOUNG AND MIDDLE-AGED ADULTS.
- OF 499 SUBJECTS, 68.9% EVER EXPERIENCED LUMBAR PAIN AND 60.7% EVER EXPERIENCED CERVICAL BACK PAIN.
- LUMBAR BACK PAIN WAS SIGNIFICANTLY ASSOCIATED WITH CARDIOVASCULAR DISEASE, OBESITY, ASTHMA, TRANQUILLIZER DEPENDENCE AND OTHER COMORBIDITIES.
- SIGNIFICANT ASSOCIATIONS WITH CERVICAL BACK PAIN WERE OBSERVED FOR SPECIFIC PHOBIA, PANIC ATTACKS, AND OTHER COMORBIDITIES.



PENNEY LS1, RITENBAUGH C2, DEBAR LL3, ELDER C4, DEYO RA5. PROVIDER AND PATIENT PERSPECTIVES ON OPIOIDS AND ALTERNATIVE TREATMENTS FOR MANAGING CHRONIC PAIN: A QUALITATIVE STUDY. BMC FAM PRACT. 2017 MAR 24;17(1):164. DOI: 10.1186/S12875-016-0566-0.

- **MAKING ACUPUNCTURE AND CHIROPRACTIC CARE MORE EASILY ACCESSIBLE MIGHT LEAD TO MORE SATISFACTION FOR PATIENTS AND PROVIDERS, AND PROVIDE IMPORTANT INPUT TO POLICY MAKERS.**



KENT P, KEATING J: THE EPIDEMIOLOGY OF LOW BACK PAIN IN PRIMARY CARE. CHIROPRACTIC & OSTEOPATHY 2005, 13:13
DOI:10.1186/1746-1340-13-13

PETER M KENT 1, AND JENNIFER L KEATING, SCHOOL OF PHYSIOTHERAPY, LA TROBE UNIVERSITY, MELBOURNE, VICTORIA, AUSTRALIA 2. PHYSIOTHERAPY, MONASH UNIVERSITY, MELBOURNE, VICTORIA, AUSTRALIA.

- 61% of recent onset LBP sufferers seek care and are more intense LBP and sciatica.
- 1 in 3 resolve completely in 12 weeks.
- 1 in 10 do not resolve.
- South Manchester Study: 90% of LBP sufferers sought medical care within 3 months. HOWEVER - 79% not resolved at 3 months; 75% not resolved at 12 months.



KOVACS, FM; FERNANDEZ, C; CORDERO, A; MURIEL, A; GONZALEZ-LUJAN, L; DEL REAL, MTG. NON-SPECIFIC LOW BACK PAIN IN PRIMARY CARE IN THE SPANISH NATIONAL HEALTH SERVICE: A PROSPECTIVE STUDY ON CLINICAL OUTCOMES AND DETERMINANTS OF MANAGEMENT. BMC HEALTH SERVICES RESEARCH 6. MAY 17 2006. P.NIL_1-NIL_12 BIOMED CENTRAL LTD, LONDON

- 60 DAYS FOLLOWING START OF MEDICAL TREATMENT FOR LOW BACK PAIN, 37% STILL HAD PAIN AND 10% WERE WORSE.

**" THE WORLD WE HAVE MADE AS A RESULT
OF THE LEVEL OF THINKING WE HAVE
DONE THUS FAR CREATES PROBLEMS WE
CANNOT SOLVE AT THE SAME LEVEL OF
THINKING AT WHICH WE CREATED THEM" "**
- ALBERT EINSTEIN

KNOWLEDGE IS POWER. APPLIED KNOWLEDGE IS WISDOM

Thanks to Kurt Olding DC, FACO, for this input

**\$313,167.00 GRANT FOR STUDY OF
BIOMECHANICS OF LOW BACK FLEXION-
DISTRACTION MANIPULATION**

Gudavalli R, Cox J: National College of Chiropractic
Patwardhan A, Lorenz M: Loyola Stritch School of Medicine

awarded by Health Resources and Services Administration of the Department of Health and
Human Services of Public Health Service - 1994 - 1997



CHIROPRACTIC DEMONSTRATION PROJECT: CHIROPRACTIC FLEXION-DISTRACTION VS MEDICAL TREATMENT OF LOW BACK PAIN

\$432,000 Grant awarded by Health Resources and Services Administration of the Department of Health and Human Services of Public Health Service - 1997 - 2000

Comparison of Flexion Distraction Adjustments at National College of Chiropractic Compared with Medical Treatment at Loyola University Stritch School of Medicine



GUDAVALLI R. ET AL. A RANDOMIZED CLINICAL TRIAL AND SUBGROUP ANALYSIS TO COMPARE FLEXION-DISTRACTION WITH ACTIVE EXERCISE FOR CHRONIC LOW BACK PAIN. EUR SPINE J 2006;15(6):1070-82

- A RCT comparing Cox® flexion distraction spinal manipulation to medical care showed
- Flexion distraction treated patients had significantly greater relief from pain
- Patients with radiculopathy did significantly better with flexion distraction than medical care



**DECREASE IN PERCEIVED PAIN BY GROUP:
MILD TO SEVERE CHRONIC PATIENTS COMPARISON**

	<u>FD</u>		<u>ATEP</u>	
	n	Mean	n	Mean
Chronic Moderate/Severe	64	27.22	45	13.78
Recurrent mild	14	34.83	4	1.6
Chronic recurrent/severe	14	12.99	10	25.81
Radiculopathy	19	26.47	19	10.91

9th Interdisciplinary World Congress
on Low Back and Pelvic Girdle Pain

PROGRESS IN EVIDENCE BASED DIAGNOSIS AND TREATMENT

SINGAPORE 31-10 ~ 3-11// 2016
MARINA BAY SANDS
EXPO and CONVENTION CENTRE



**OUTCOMES OF CHIROPRACTIC DISTRACTION SPINAL
MANIPULATION ON POST-SURGICAL CONTINUED LOW BACK
AND RADICULAR PAIN PATIENTS: A RETROSPECTIVE CASE
SERIES STUDY**

Cox J.M.1, Gudavalli, M.R.2

1 Post Graduate, National University of Health Sciences, Lombard, IL, USA; Chiropractic Medicine, Inc., Fort Wayne, IN, USA; 2 Palmer Center for Chiropractic Research, Palmer College of Chiropractic, Davenport, IA, USA

“ CONCLUSION - GREATER THAN 50% PAIN RELIEF FOLLOWING CHIROPRACTIC DISTRACTION SPINAL MANIPULATION WAS SEEN IN 81% OF PSCP PATIENTS RECEIVING A MEAN OF 11 TREATMENT VISITS OVER A 49 DAY PERIOD OF ACTIVE CARE. FURTHER SYSTEMATIC AND RANDOMIZED CLINICAL STUDIES ARE REQUIRED TO DETERMINE THE BENEFITS OF SPINAL MANIPULATION FOR POST-SURGICAL CONTINUED PAIN PATIENTS. ”

1000 CASES STUDY

30 chiropractic clinics reporting on 20 consecutive cases of low back or sciatic pain on a 293 variable Fortran examination form

Cox JM, Feller J, Cox-Cid J. Distraction Chiropractic Adjusting: Clinical Application And Outcomes Of 1000 Cases. Top Clin Chiropractic 1996;3(3):45-59





OVERALL PATIENT RESPONSE OF 1000 CASE STUDY REGARDLESS OF DIAGNOSIS

Response	# Patients	% of total	Cumulative %
EXCELLENT	460	47.1	47.1
VERY GOOD	134	13.7	60.8
GOOD	97	9.9	70.7
FAIR	72	7.4	78.1
POOR	40	4.1	82.2
SURGERY	34	3.5	85.7
STOPPED/NOT START CARE	104	10.6	96.3
EXAM/NOT TREATED	36	3.7	100



FINAL CONCLUSION ON DAYS AND VISITS FOR MAXIMAL IMPROVEMENT UNDER CHIROPRACTIC CARE (1000 cases)

Condition	Less than 90 days	More than 91 days	More than 20 visits	More than 30 visits
DISCOGENIC SPONDYLOSIS	93%	7%	28%	17%
DISC HERNIATION	86%	14%	1A - 56% 15 - 36%	1A - 30% 15 - 30%
SPRAIN STRAIN	93%	9%	29%	8%
TRANSITIONAL SEGMENT	93%	7%	30%	6%
FACET SYNDROME	90%	10%	1A - 33% 15 - 30%	1A - 39% 15 - 39%
SPONDYLOLISTHESIS	95%	5%	1A - 55% 15 - 27%	1A - 33% 15 - 30%
ALL CONDITIONS	93%	9%	29%	17%
	29 days		12 treatments	

NIH CERVICAL SPINE STUDY OF COX® FLEXION DISTRACTION SPINAL MANIPULATION BIOMECHANICS

Loyola Stritch School of Medicine and Hines VA Hospital
Palmer College of Chiropractic



M. R. GUDAVALLI,¹ T. POTLURI,² G. CARANDANG,² R. M. HAVEY,² L. I. VORONOV,² J. M. COX,³ R. M. ROWELL,¹ R. A. KRUSE,⁴ G. C. JOACHIM,⁵ A. G. PATWARDHAN,^{2,6} C. N. R. HENDERSON,⁷ AND C. GOERTZ. INTRADISCAL PRESSURE CHANGES DURING MANUAL CERVICAL DISTRACTION: A CADAVERIC STUDY. EVIDENCE-BASED COMPLEMENTARY AND ALTERNATIVE MEDICINE VOLUME 2013 (2013), ARTICLE ID

- Interdisciplinary!

- 1Palmer Center for Chiropractic Research, 741 Brady Street, Davenport, IA 52803, USA
- 2Hines VA Hospital, 5000 South 5th Avenue, Hines, IL 60141, USA
- 3Cox Chiropractic Medicine, Inc., 3125 Hobson Road, Fort Wayne, IN 46805, USA
- 4Chiropractic Care, Ltd., 2417 183rd Street, Homewood, IL 60430, USA
- 5Aaron Chiropractic Clinic, 3476 Stellhorn Road, Fort Wayne, IN 46815, USA
- 6Loyola University Stritch School of Medicine, 2160 S. First Avenue, Maywood, IL 60153, USA
- 7Henderson Technical Consulting, 5961 Broken Bow Lane, Port Orange, FL 32127, USA



MIR GUDAVALLI, T POTLURI, G CARANDANG, RM HAVEY, LI VORONOV, J M COX, RM ROWELL, RA KRUSE, GC JOACHIM, AG PARTWARDEN, C HENDERSON, C GOERTZ. INTRADISCAL PRESSURE CHANGES DURING MANUAL CERVICAL DISTRACTION: A CADAVERIC STUDY. HINDAWI PUBLISHING CORP. EVIDENCE BASED COMPLEMENTARY AND ALTERNATIVE MEDICINE. VOLUME 2013 ARTICLE ID 954134, 10 PGS HTTP://DX.DOI.ORG/10.1155/2013/954134

- INTRADISCAL PRESSURE REDUCTIONS WERE MEAN (sd):
 - C4-C5 - 502 MM
 - C5-C6 - 367 MM
 - C6-C7 - 414 MM
 - C7-T1 - 6 MM
- Traction forces were 87 Newtons (19.3 lbs)



M. RAM GUDAVALLI¹, STACIE A. SALSURY¹, ROBERT D. VINING¹, CYNTHIA R. LONG¹, ERINCE CORBER¹, AVINASH G. PATWARDHAN² AND CHRISTINE M. GOERTZ¹. DEVELOPMENT OF AN ATTENTION-TOUCH CONTROL FOR MANUAL CERVICAL DISTRACTION: A PILOT RANDOMIZED CLINICAL TRIAL FOR PATIENTS WITH NECK PAIN. TRIALS 2015, 16:259 DOI:10.1186/S13063-015-0770-6.

- Abstract: Manual cervical distraction (MCD) is a traction-based therapy performed with a manual contact over the cervical region producing repeating cycles while patients lie prone. A mixed-methods, pilot randomized clinical trial in adults with chronic neck pain was done.
- 48 Participants were allocated to three traction force ranges of MCD: low force/minimal intervention (0-20 N), medium force (21-50 N), or high force (51-100 N). Traction forces were measured at each treatment. Patient-reported outcomes included a pain visual analogue scale (VAS), Neck Disability Index (NDI), Credibility and Expectancy Questionnaire (CEQ), and adverse effects.
- **Neck pain VAS demonstrated a benefit for high traction force MCD compared to the low force group. Participants in the medium traction force group demonstrated improvements in NDI compared to the low force group, as did participants in the high traction force group favored the high force group.** No serious adverse events were documented.
- Conclusions: This pilot study demonstrated the feasibility of a clinical trial protocol and the utility of a traction-based, minimal intervention as an attention-touch control for future efficacy trials of MCD for patients with neck pain.
- Trial registration: ClinicalTrials.gov NCT01765751 (Registration Date 30 May 2012)



HECKMANN JG: HERNIATED CERVICAL INTERVERTEBRAL DISCS WITH RADICULOPATHY: AN OUTCOME STUDY OF CONSERVATIVELY OR SURGICALLY TREATED PATIENTS. J SPINAL DISORDERS 1999; 12(5)

- Conservatively treated cervical spine disc herniation patients without myelopathy responded better than surgical treated patients.



HOPPENFELD, JD. CERVICAL FACET ARTHROPATHY AND OCCIPITAL NEURALGIA: HEADACHE CULPRITS. CURRENT PAIN AND HEADACHE REPORTS 2010;14 (6):418-423

- CERVICAL FACET ARTHROPATHY AND OCCIPITAL NEURALGIA CAUSE CERVICOGENIC HEADACHE



BECKER, WJ. CERVICOGENIC HEADACHE: EVIDENCE THAT THE NECK IS A PAIN GENERATOR. HEADACHE 50 (4). APR 2010. P.698-704

- HEADACHES ARE CAUSED BY NECK PAIN GENERATORS IN THE FACET JOINTS



CHAIBI A; TUCHIN PJ; RUSSELL MB. MANUAL THERAPIES FOR MIGRAINE: A SYSTEMATIC REVIEW. JOURNAL OF HEADACHE AND PAIN 12 (2). APR 2011. P.127-133

- CHIROPRACTIC IS AS EFFECTIVE IN RELIEVING MIGRAINE AS DRUG



MUHEREMU A1, SUN Y2. ATYPICAL SYMPTOMS IN PATIENTS WITH CERVICAL SPONDYLOSIS MIGHT BE THE RESULT OF STIMULATION ON THE DURA MATER AND SPINAL CORD. MED HYPOTHESES. 2016 JUN;91:44-6. DOI: 10.1016/J.MEHY.2016.04.006. EPUB 2016 APR 7.

- PATIENTS WITH CERVICAL SPONDYLOSIS OFTEN PRESENT WITH SOME ATYPICAL SYMPTOMS SUCH AS VERTIGO, HEADACHE, PALPITATION, NAUSEA, ABDOMINAL DISCOMFORT, TINNITUS AND BLURRED VISION AND HYPOMNESIA. ALTHOUGH THERE ARE A FEW HYPOTHESES ABOUT THE ETIOLOGY OF THOSE SYMPTOMS, 1 OF THE MORE ACCEPTABLE EXPLANATIONS IS THAT THOSE SYMPTOMS ARE THE RESULTS OF STIMULATION OF THE SYMPATHETIC NERVES IN THE POSTERIOR LONGITUDINAL LIGAMENT AND THE DURA MATER.



PENG B1 PANG X, LI D, YANG H. CERVICAL SPONDYLOSIS AND HYPERTENSION: A CLINICAL STUDY OF 2 CASES. MEDICINE (BALTIMORE). 2015 MAR;94(10):E618.

- PATIENTS WITH CERVICAL SPONDYLOSIS ARE OFTEN ACCOMPANIED WITH VERTIGO. 2 PATIENTS WITH CERVICAL SPONDYLOSIS WITH CONCOMITANT CERVICAL VERTIGO AND HYPERTENSION WHO WERE TREATED SUCCESSFULLY WITH ANTERIOR CERVICAL DISCECTOMY AND FUSION.
- STIMULATION OF SYMPATHETIC NERVE FIBERS IN PATHOLOGICALLY DEGENERATIVE DISC COULD PRODUCE SYMPATHETIC EXCITATION, AND INDUCE A SYMPATHETIC REFLEX TO CAUSE CERVICAL VERTIGO AND HYPERTENSION.
- EARLY TREATMENT FOR RESOLUTION OF SYMPTOMS OF CERVICAL SPONDYLOSIS MAY HAVE A BENEFICIAL IMPACT ON CARDIOVASCULAR DISEASE RISK IN PATIENTS WITH CERVICAL SPONDYLOSIS.

SHORTCOMINGS OF MEDICAL TREATMENT OF THE SPINE

James M. Cox, DC, DACBR



EPSTEIN NE. ARE RECOMMENDED SPINE OPERATIONS EITHER UNNECESSARY
OR TOO COMPLEX? EVIDENCE FROM SECOND OPINIONS. SURG NEUROL INT.
2013 OCT 29;4(SUPPL 5):S353-8.

AUTHOR INFORMATION: CHIEF OF NEUROSURGICAL SPINE AND EDUCATION, WINTHROP UNIVERSITY
HOSPITAL, MINEOLA, NY, 11501, AND LONG ISLAND NEUROSURGICAL ASSOCIATES, P.C., 410 LAKEVILLE RD., NEW
HYDE PK. NY 11042, USA.

- OF 183 SECOND OPINIONS SEEN OVER 20 MONTHS, THE SECOND OPINION SURGEON DOCUMENTED THAT PREVIOUS SPINE SURGEONS RECOMMENDED "UNNECESSARY" (60.7%), THE "WRONG" (33.3%), OR THE "RIGHT" (6%) OPERATIONS.



FRIEDMAN, BW; O'MAHONY, S; MULVEY, L; DAVITT, M; CHOI, H; XIA, SJ; ESSES, D; BIJUR, PE; GALLAGHER, EJ. ONE-WEEK AND 3-MONTH OUTCOMES AFTER AN EMERGENCY DEPARTMENT VISIT FOR UNDIFFERENTIATED MUSCULOSKELETAL LOW BACK PAIN. ANNALS OF EMERGENCY MEDICINE 59 (2). FEB 2012. P.128-133

- THREE MONTHS AFTER EMERGENCY DEPARTMENT VISIT FOR LOW BACK PAIN, 48% OF PATIENTS REPORTED FUNCTIONAL IMPAIRMENT, 42% REPORTED MODERATE OR SEVERE PAIN, AND 46% REPORTED ANALGESIC USE WITHIN THE PREVIOUS 24 HOURS



FROHOLDT, A; REIKERAAS, O; HOLM, I; KELLER, A; BROX, JI. NO DIFFERENCE IN 9-YEAR OUTCOME IN CLBP PATIENTS RANDOMIZED TO LUMBAR FUSION VERSUS COGNITIVE INTERVENTION AND EXERCISES. EUROPEAN SPINE JOURNAL VOL 21 NO 12, 2012

- AFTER 9 YEARS, NO DIFFERENCE WAS FOUND IN RELIEVING CHRONIC LOW BACK PAIN TREATED WITH SPINAL FUSION VERSUS COGNITIVE INTERVENTION AND EXERCISES



GAMACHE FW. (NEUROLOGICAL SURGERY, NEW YORK PRESBYTERIAN-WEILL/CORNELL, NEW YORK, NY, USA.): THE VALUE OF "ANOTHER" OPINION FOR SPINAL SURGERY: A PROSPECTIVE 14-MONTH STUDY OF ONE SURGEON'S EXPERIENCE. SURG NEUROL INT. 2012;3(SUPPL 5):S350-4. 2012NOV 26.

- AUTHOR RECOMMENDED NO SURGERY FOR 69 (44.5%) PATIENTS ON SECOND OPINION.



FOULONGNE E, DERREY S, OULD SLIMANE M, LEVEQUE S, TOBENAS AC, DUJARDIN F, FRÉGER P, CHASSAGNE P, PROUST F. (DEPARTMENT OF ORTHOPEDICS, ROUEN UNIVERSITY HOSPITAL, 1, RUE DE GERMONT, 76091ROUEN CEDEX, FRANCE.): LUMBAR SPINAL STENOSIS: WHICH PREDICTIVE FACTORS OF FAVORABLE FUNCTIONAL RESULTS AFTER DECOMPRESSIVE LAMINECTOMY? NEUROCHIRURGIE. 2012 DEC 13. PII: S0028-3770(12)

- THE LONG-TERM RESULTS OF SURGICAL TREATMENT OF LUMBAR SPINAL STENOSIS WERE MODERATE WITH AN IMPROVED OUTCOME IN 49.5% OF CASES IN THIS STUDY.



HAYDEN, JA; DUNN, KM; VAN DER WINDT, DA; SHAW, WS. WHAT IS THE PROGNOSIS OF BACK PAIN? BEST PRACTICE & RESEARCH IN CLINICAL RHEUMATOLOGY 24 (2). APR 2010. P.167-179

- 60-80% OF HEALTH-CARE CONSULTERS WILL CONTINUE TO HAVE PAIN AFTER A YEAR.



HAUGEN, AJ; GROVLE, L; BROX, JI; NATVIG, B; KELLER, A; SOLDAL, D; GROTE, M. ESTIMATES OF SUCCESS IN PATIENTS WITH SCIATICA DUE TO LUMBAR DISC HERNIATION DEPEND UPON OUTCOME MEASURE. EUROPEAN SPINE JOURNAL 20 (10). OCT 2011. P.1669-1675

- *WHAT IS THE SURGICAL SUCCESS FOR LUMBAR DISC HERNIATION CAUSING SCIATICA? HERE IS THE ANSWER:*
- A 12-MONTH MULTICENTER OBSERVATIONAL STUDY WAS CONDUCTED ON 466 PATIENTS WITH SCIATICA AND LUMBAR DISC HERNIATION. IT SHOWED THE SUCCESS RATES AT 12 MONTHS VARIED FROM 49 TO 58% DEPENDING ON THE MEASURE USED.



RADCLIFF, K; HILIBRAND, A; LURIE, JD; TOSTESON, TD; DELASOTTA, L; RIHN, J; ZHAO, WY: THE IMPACT OF EPIDURAL STEROID INJECTIONS ON THE OUTCOMES OF PATIENTS TREATED FOR LUMBAR DISC HERNIATION A SUBGROUP ANALYSIS OF THE SPORT TRIAL. JOURNAL OF BONE AND JOINT SURGERY-AMERICAN VOLUME 94A (15). AUG 1 2012. P.1353-1358

- **EPIDURAL STEROID INJECTIONS SHOW NO BENEFIT FOR PATIENTS WITH LUMBAR HERNIATED DISCS**



CERVERA-IRIMIA J, TOMÉ-BERMEJO F. CAUDAL EPIDURAL STEROID INJECTION IN THE TREATMENT OF CHRONIC DISCOGENIC LOW BACK PAIN. COMPARATIVE, PROSPECTIVE AND RANDOMIZED STUDY. REV ESP CIR ORTOP TRAUMATOL. 2013 JUL 10.

- **THE PRESENT STUDY HAS NOT DEMONSTRATED THE SUPERIORITY OF CAUDAL EPIDURAL STEROID INJECTION (CESI) OVER NSAIDS IN TREATING CHRONIC LOW BACK PAIN OF DISC ORIGIN.**
- **INFORM PATIENTS ABOUT REALISTIC EXPECTATIONS ON THE SUCCESS OF TREATMENT.**



BUCHBINDER R1, JOHNSTON RV, RISCHIN KJ, HOMIK J, JONES CA, GOLMOHAMMADI K, KALLMES DF. PERCUTANEOUS VERTEBROPLASTY FOR OSTEOPOROTIC VERTEBRAL COMPRESSION FRACTURE. COCHRANE DATABASE SYST REV. 2018 APR 5;4:CD006349. DOI: 10.1002/14651858.CD006349.PUB3. [EPUB AHEAD OF PRINT]

- PERCUTANEOUS VERTEBROPLASTY FOR OSTEOPOROTIC VERTEBRAL COMPRESSION FRACTURE. OUR UPDATED REVIEW OF 21 TRIALS DOES NOT SUPPORT A ROLE FOR VERTEBROPLASTY FOR TREATING ACUTE OR SUBACUTE OSTEOPOROTIC VERTEBRAL FRACTURES IN ROUTINE PRACTICE. WE FOUND NO DEMONSTRABLE CLINICALLY IMPORTANT BENEFITS COMPARED WITH PLACEBO (SHAM PROCEDURE) AND SUBGROUP ANALYSES INDICATED THAT THE RESULTS DID NOT DIFFER ACCORDING TO DURATION OF PAIN ≤ 6 WEEKS VERSUS > 6 WEEKS. PATIENTS SHOULD BE INFORMED ABOUT BOTH THE HIGH- TO MODERATE-QUALITY EVIDENCE THAT SHOWS NO IMPORTANT BENEFIT OF VERTEBROPLASTY AND ITS POTENTIAL FOR HARM.**



KARAARSLAN N1, YILMAZ I2, SIRIN DY3, OZBEK H2, KAPLAN N4, KAYA YE5, AKYUVA Y6, GURBUZ MS7, OZNAM K8, ATES O9. PREGABALIN TREATMENT FOR NEUROPATHIC PAIN MAY DAMAGE INTERVERTEBRAL DISC TISSUE. EXP THER MED. 2018 AUG;16(2):1259-1265. DOI: 10.3892/ETM.2018.6289. EPUB 2018 JUN 12.

- PREGABALIN HAS A TOXIC EFFECT ON NP/AF CELL CULTURES CONTAINING PRIMARY HUMAN INTERVERTEBRAL DISC TISSUE. IN SUMMARY, THE USE OF PHARMACOLOGICAL AGENTS CONTAINING PGB MAY SUPPRESS THE PROLIFERATION AND DIFFERENTIATION OF NP/AF CELLS AND/OR TISSUES, WHICH SHOULD BE CONSIDERED WHEN DECIDING ON AN APPROPRIATE TREATMENT REGIME.**

COMPARISON OF CHIROPRACTIC VERSUS SURGICAL AND DRUG OUTCOMES IN SPINE TREATMENT

James M. Cox, DC, DACBR



YANAMADALA V1, KIM Y, BUCHLAK QD, WRIGHT AK, BABINGTON J, FRIEDMAN A, MECKLENBURG RS, FARROKHI F, LEVEQUE JC, SETHI RK. MULTIDISCIPLINARY EVALUATION LEADS TO THE DECREASED UTILIZATION OF LUMBAR SPINE FUSION: AN OBSERVATIONAL COHORT PILOT STUDY. SPINE (PHILA PA 1976). 2017 JAN 6. DOI: 10.1097/BRS.0000000000002065. [EPUB AHEAD OF PRINT]

- 100 of 137 PATIENTS HAD BEEN RECOMMENDED FOR LUMBAR SPINE FUSION BY AN OUTSIDE SURGEON. CONSENSUS OPINION OF THE MULTIDISCIPLINARY CONFERENCE ADVOCATED FOR **NON-OPERATIVE MANAGEMENT IN 58 PATIENTS (58%) WHO HAD BEEN PREVIOUSLY RECOMMENDED FOR SPINAL FUSION BY ANOTHER INSTITUTION.**
- FURTHERMORE, THE SURGICAL TREATMENT PLAN WAS REVISED AS A PRODUCT OF THE CONFERENCE IN 28% (16) OF THE PATIENTS WHO ULTIMATELY UNDERWENT SURGERY WITH ZERO 30-DAY COMPLICATIONS IN SURGICAL PATIENTS.



DUBOURG G1, ROZENBERG S, FAUTREL B, VALLS-BELLEC I, BISSERY A, LANG T, FAILLOT T, DUPLAN B, BRIANCON D, LEVY-WEIL F, MORLOCK G, CROUZET J, GATFOSSE M, BONNET C, HOUVENAGEL E, HARY S, BROCCO O, POIRAUDEAU S, BEAUDREUIL J, DE SAUVERZAC C, DURIEUX S, LEVADE MH, ESPOSITO P, MAITROT D, GOUPILLE P, VALAT JP, BOURGEOIS P. A PILOT STUDY ON THE RECOVERY FROM PARESIS AFTER LUMBAR DISC HERNIATION. SPINE (PHILA PA 1976). 2002 JUL 1;27(13):1426-31; DISCUSSION 1431

- 67 patients with paresis after lumbar disc herniation found 39 (58%) were treated surgically and 28 (42%) medically. Surgically treated patients differed from medically treated patients by a higher rate of extruded herniation, a higher number of paretic muscles and a longer course of sciatica. The only significant difference between recovered and not recovered patients was mean age at inclusion (43 vs. 51 years, $P = 0.034$). **There were no significant differences between improved and not improved patients. Moreover, the outcome was not different in the two treatment groups: there were 17 (53%) improvements in surgically treated patients, including 8 (25%) recoveries, and 14 (56%) improvements in medically treated patients, including 8 (40%) recoveries.**
- **CONCLUSION: This pilot study showed no difference between surgical or medical management for recovery or improvement in patients with discogenic paresis. Actually non surgically treated paresis patients showed better outcomes than surgically treated patients. These results need confirmation by a randomized study.**



AMMENDOLIA C1, CÔTÉ P2, SOUTHERST D3, SCHNEIDER M4, BUDGELL B3, BOMBARDIER C5, HAWKER G5, RAMPERSAUD YR6. COMPREHENSIVE NON-SURGICAL TREATMENT VERSUS SELF-DIRECTED CARE TO IMPROVE WALKING ABILITY IN LUMBAR SPINAL STENOSIS: A RANDOMIZED TRIAL. ARCH PHYS MED REHABIL. 2018 JUN 20. PII: S0003-9993(18)30362-9. DOI: 10.1016/J.APMR.2018.05.014. [Epub AHEAD OF PRINT]

- 104 PARTICIPANTS WITH NEUROGENIC CLAUDICATION AND IMAGING CONFIRMED LSS WERE RANDOMIZED. THE MEAN AGE WAS 70.6 YEARS, 57% WERE FEMALE, 84% HAD LEG SYMPTOMS FOR MORE THAN 12-MONTHS AND THE MEAN MAXIMUM WALKING CAPACITY WAS 328.7M.
- A SIX-WEEK STRUCTURED COMPREHENSIVE TRAINING PROGRAM OR A SIX-WEEK SELF-DIRECTED PROGRAM.
- MAIN OUTCOME MEASURES: CONTINUOUS WALKING DISTANCE IN METERS (M) MEASURED BY THE SELF-PACED WALK TEST (SPWT) AND PROPORTION OF PARTICIPANTS ACHIEVING AT LEAST 30% IMPROVEMENT (MCID) IN THE SPWT AT 6-MONTHS.
- CONCLUSIONS: A COMPREHENSIVE CONSERVATIVE PROGRAM DEMONSTRATED SUPERIOR, LARGE AND SUSTAINED IMPROVEMENTS IN WALKING ABILITY AND CAN BE A SAFE NON-SURGICAL TREATMENT OPTION FOR PATIENTS WITH NEUROGENIC CLAUDICATION DUE TO LSS.



ALENTADO VJ1, LUBELSKI D2, STEINMETZ MP3, BENZEL EC2, MROZ TE2. OPTIMAL DURATION OF CONSERVATIVE MANAGEMENT PRIOR TO SURGERY FOR CERVICAL AND LUMBAR RADICULOPATHY: A LITERATURE REVIEW. GLOBAL SPINE J. 2014 DEC;4(4):279-86. DOI: 10.1055/S-0034-1387807. EPUB 2014 AUG 28.

- **FROM CLEVELAND CLINIC: OPTIMAL TIMING FOR SURGERY FOLLOWING CERVICAL AND/OR LUMBAR RADICULOPATHY IS 4-8 WEEKS OF ONSET OF SYMPTOMS.**
- COX F/D SPINAL MANIPULATION HAS ALWAYS TAUGHT THE 50% RULE: IF NOT 50% RELIEF IN A MONTH, ORDER IMAGING AND CONSIDER CONSULTATION WITH A PAIN CONTROL DOCTOR OR NEUROSURGEON



ALBERT, HANNE B. PT, MPH, PHD; MANNICHE, CLAUS MD, PHD, MED SCI. THE EFFICACY OF SYSTEMATIC ACTIVE CONSERVATIVE TREATMENT FOR PATIENTS WITH SEVERE SCIATICA: A SINGLE-BLIND, RANDOMIZED, CLINICAL, CONTROLLED TRIAL. SPINE: 01 APRIL 2012 - VOLUME 37 - ISSUE 7 - P 531-542

- **PAPER SHOWS NON SURGICAL CARE FOR SURGICAL DISC HERNIATION PATIENTS IS EQUAL TO SURGERY**
- **181 CONSECUTIVE PATIENTS WITH RADICULAR PAIN BELOW THE KNEE WERE EXAMINED AT THE BASELINE, AT 8 WEEKS, AND AT 1 YEAR AFTER THE TREATMENT. ALL WERE SURGICAL CANDIDATES FOR LUMBAR DISC SURGERY.**



VALAT, JP; GENEVAY, S; MARTY, M; ROZENBERG, S; KOES, B. BEST PRACTICE & RESEARCH IN CLINICAL RHEUMATOLOGY 24 (2). APR 2010. P.241-252

- SCIATICA TREATMENT IS EQUAL WITH SURGERY OR CONSERVATIVE CARE UNLESS PROGRESSIVE NEUROLOGICAL DEFICITS ARE PRESENT.



FAIRBANK, J ET AL: RANDOMIZED CONTROLLED TRIAL TO COMPARE SURGICAL STABILIZATION OF THE LUMBAR SPINE WITH AN INTENSIVE REHABILITATION PROGRAM FOR PATIENTS WITH CHRONIC LOW BACK PAIN. THE MRC STABILIZATION TRIAL. BRITISH MED J 330(7502):MAY 28, 2005,P1233-39

- 349 18-55 y/o chronic low back patients
- Compare surgical stabilization compared with intense rehabilitation
- NO EVIDENCE THAT SURGERY WAS ANY MORE BENEFICIAL THAN INTENSIVE REHABILITATION.
- SURGERY COST MORE, POTENTIAL RISK – NOT COST EFFECTIVE



FARAJ SSA1, HAANSTRA TM1, MARTIJN H1, DE KLEUVER M2, VAN ROYEN BJ1. FUNCTIONAL OUTCOME OF NON-SURGICAL AND SURGICAL MANAGEMENT FOR DE NOVO DEGENERATIVE LUMBAR SCOLIOSIS: A MEAN FOLLOW-UP OF 10 YEARS. SCOLIOSIS SPINAL DISORD. 2017 DEC 5;12:35. DOI: 10.1186/S13013-017-0143-X. ECOLLECTION 2017.

- FUNCTIONAL OUTCOME OF NON-SURGICAL AND SURGICAL MANAGEMENT FOR DEGENERATIVE LUMBAR SCOLIOSIS AT 10 YEARS:
- NO SIGNIFICANT DIFFERENCE IN FUNCTIONAL OUTCOME WAS FOUND.
- THESE RESULTS INDICATE THAT NON-SURGICAL MANAGEMENT OF PATIENTS WITH DNDLS MAY LEAD TO ADEQUATE FUNCTIONAL OUTCOME AFTER LONG PERIODS OF TIME, WITH NO CROSSOVER TO SURGERY



ZAINA, FABIO MD; TOMKINS-LANE, CHRISTY PHD; CARRAGEE, EUGENE MD; NEGRINI, STEFANO MD . SURGICAL VERSUS NONSURGICAL TREATMENT FOR LUMBAR SPINAL STENOSIS. SPINE: 15 JULY 2016 - VOLUME 41 - ISSUE 14 - P E857-E868

- NO CONCLUSION OF THIS REVIEW WHETHER SURGICAL OR NONSURGICAL TREATMENT IS BETTER FOR INDIVIDUALS WITH LSS. NEVERTHELESS, WE CAN REPORT ON THE HIGH RATE OF EFFECTS REPORTED IN THREE OF FIVE SURGICAL GROUPS, RANGING FROM 10% TO 24%. NO SIDE EFFECTS WERE REPORTED FOR ANY OF THE CONSERVATIVE TREATMENT OPTIONS.



DEYO R ET AL: SPINE 12(3): 1987

- 33% of 27,810 people chose chiropractors as their treating physician for low back pain in the National Health and Nutrition Examination Survey (NHANE)



NGUYEN TH, RANDOLPH DC, TALMAGE J, SUCCOP P, TRAVIS R. LONG-TERM OUTCOMES OF LUMBAR FUSION AMONG WORKERS' COMPENSATION SUBJECTS: AN HISTORICAL COHORT STUDY. SPINE. 36(4):320-331, FEBRUARY 15, 2011.

- 725 lumbar fusion cases were compared to 725 controls who were randomly selected from a pool of WC subjects with chronic low back pain diagnoses with dates of injury between January 1, 1999 and December 31, 2001. The study ended on January 31, 2006.
- Main outcomes were reported as RTW status 2 years after the date of injury (for controls) or 2 years after date of surgery (for cases). Disability, reoperations, complications, opioid usage, and deaths were also determined.



CONTINUE NGUYEN STUDY

- 2 years after fusion surgery, 26% (n = 188) of fusion cases had RTW, while 67% (n = 483) of nonsurgical controls had
- Reoperation rate was 27% (n = 194) for surgical patients.
- 36% of lumbar fusion subjects had complications.
- Permanent disability rates were 11% (n = 82) for surgical cases and 2% (n = 11) for nonoperative controls.
- For lumbar fusion subjects, daily opioid use increased 41% after surgery, with 76% (n = 550) of cases continuing opioid use after surgery.
- Total number of days off work was more prolonged for surgical cases compared to controls, 1140 and 316 days, respectively.
- Conclusion. Lumbar fusion for the diagnoses of disc degeneration, disc herniation, and/or radiculopathy in a WC setting is associated with significant increase in disability, opiate use, prolonged work loss, reoperation, and poor RTW status.



BERGER E: LATE POSTOPERATIVE RESULTS IN 1000 WORK RELATED LUMBAR SPINE CONDITIONS. SURGICAL NEUROLOG 2000; 54(2):101-6

- 600 single-operated Workers Compensation Low Back Patients showed
 - 71% did not return to work 4 years later
- 400 multiple-operated backs showed
 - 95% did not return to work 4 years later



ATLAS S, KELLER RB, WU YA, DEYO RA, SINGER DE: LONG TERM OUTCOMES OF SURGICAL AND NON SURGICAL MANAGEMENT OF SCIATICA SECONDARY TO LUMBAR DISC HERNIATION: 10 YEAR RESULTS FROM THE MAINE LUMBAR SPINE STUDY. SPINE 30(8) APRIL 15, 2005

- 400 patients with sciatica resulting from a lumbar disc herniation treated surgically or non-surgically were followed over a 10 year period.
- By 10 years, 25% of surgical patients had undergone at least one additional lumbar spine operation, and 25% of non surgical patients had at least one lumbar spine surgery.
- At 10 year follow-up, 69% of surgically treated patients and 61% of those treated non surgically reported improvement in their predominant symptom of back or leg pain.



ATLAS SJ, KELLER RB, SU YA, DEYO RA, SINGER DE. LONG TERM OUTCOMES OF SURGICAL AND NONSURGICAL MANAGEMENT OF LUMBAR SPINAL STENOSIS: 8 TO 10 YEAR RESULTS FROM THE MAINE LUMBAR SPINE STUDY. SPINE 30(8). APRIL 15, 2005

- 97 patients with low back and leg pain due to spinal stenosis were treated surgically or non-surgically.
- After 8 - 10 years, 53% of surgically treated and 50% of non-surgically treated patients reported that their predominant symptom of low back pain was improved.
- Both groups were satisfied with their current status in 55% of surgical and 49% of nonsurgically treated patients.



COHEN, SP; GUPTA, A; STRASSELS, SA; CHRISTO, PJ; ERDEK, MA; GRIFFITH, SR; KURIHARA, C; BUCKENMAIER, CC III; CORNBLATH, D; VU, TN. EFFECT OF MRI ON TREATMENT RESULTS OR DECISION MAKING IN PATIENTS WITH LUMBOSACRAL RADICULOPATHY REFERRED FOR EPIDURAL STEROID INJECTIONS A MULTICENTER, RANDOMIZED CONTROLLED TRIAL. ARCHIVES OF INTERNAL MEDICINE 172 (2). JAN 23 2012. P.134-142

- *NOTE: AN IMPORTANT POINT IN THIS STUDY IS THAT OF THOSE RECEIVING AN EPIDURAL STEROID INJECTION RADICULOPATHY, 1 OF 3 RECEIVE SOME RELIEF. THIS IS CITED IN OTHER STUDIES AND IS NOT AN ISOLATED OUTCOME.*
JMC

- NO DIFFERENCE IN OUTCOME WAS SEEN AT 3 MONTHS FOLLOWING ESI.
- MAGNETIC RESONANCE IMAGING DOES NOT IMPROVE OUTCOMES IN PATIENTS WHO ARE CLINICAL CANDIDATES FOR ESI AND HAS ONLY A MINOR EFFECT ON DECISION MAKING



PINTO, RZ; MAHER, CG; FERREIRA, ML; FERREIRA, PH; HANCOCK, M; OLIVEIRA, VC; MCLACHLAN, AJ; KOES, B. DRUGS FOR RELIEF OF PAIN IN PATIENTS WITH SCIATICA: SYSTEMATIC REVIEW AND META-ANALYSIS. BRITISH MEDICAL JOURNAL 344. FEB 13 2012. P.NIL_3-NIL_17

- *THIS IS AMAZING! WHAT IS THE BENEFIT OF DRUGS TO RELIEVE SCIATICA? NOTE THIS IS LEVEL 1 RESEARCH – META-ANALYSIS!!!*
- EFFICACY OF NON-STEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDS), CORTICOSTEROIDS, ANTIDEPRESSANTS, ANTICONVULSANTS, MUSCLE RELAXANTS, AND OPIOID ANALGESICS RANGED FROM MODERATE TO LOW QUALITY.



MCMORLAND G SUTER E CASHA S DU PLESSIS SJ HURLBERT RJ. MANIPULATION OR MICRODISKECTOMY FOR SCIATICA? A PROSPECTIVE RANDOMIZED CLINICAL STUDY. JOURNAL MANIPULATIVE PHYSIOL THER. 2010 OCT;33(8):576-584

- 60% of patients with sciatica who had failed other medical management benefited from spinal manipulation to the same degree as if they underwent surgical intervention. Of 40% left unsatisfied, subsequent surgical intervention confers excellent outcome.
- Patients with symptomatic LDH failing medical management should consider spinal manipulation followed by surgery if warranted.



CIFUENTES, M; WILLETTS, J; WASIAK, R. HEALTH MAINTENANCE CARE IN WORK-RELATED LOW BACK PAIN AND ITS ASSOCIATION WITH DISABILITY RECURRENCE. JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE 53 (4). APR 2011. P.396-404

- CHIROPRACTIC IS SUPERIOR TO PHYSICAL THERAPY AND PHYSICIAN CARE FOR WORK RELATED LOW BACK PAIN DISABILITY RECURRENCE IN WORK-RELATED NONSPECIFIC LBP
- THE USE OF HEALTH MAINTENANCE CARE PROVIDED BY PHYSICAL THERAPIST OR PHYSICIAN SERVICES WAS ASSOCIATED WITH A HIGHER DISABILITY RECURRENCE THAN IN CHIROPRACTIC SERVICES OR NO TREATMENT



CERVERA-IRIMIA J, TOMÉ-BERMEJO F. CAUDAL EPIDURAL STEROID INJECTION IN THE TREATMENT OF CHRONIC DISCOGENIC LOW BACKPAIN. COMPARATIVE, PROSPECTIVE AND RANDOMIZED STUDY. REV ESP CIR ORTOP TRAUMATOL. 2013 JUL 10.

- **THE PRESENT STUDY HAS NOT DEMONSTRATED THE SUPERIORITY OF CAUDAL EPIDURAL STEROID INJECTION (CESI) OVER NSAIDS IN TREATING CHRONIC LOW BACK PAIN OF DISC ORIGIN.**



RADCLIFF, K; HILIBRAND, A; LURIE, JD; TOSTESON, TD; DELASOTTA, L; RIHN, J; ZHAO, WY: THE IMPACT OF EPIDURAL STEROID INJECTIONS ON THE OUTCOMES OF PATIENTS TREATED FOR LUMBAR DISC HERNIATION A SUBGROUP ANALYSIS OF THE SPORT TRIAL. JOURNAL OF BONE AND JOINT SURGERY-AMERICAN 2012;94A (15):1353-1358

- EPIDURAL STEROID INJECTIONS SHOW NO BENEFIT FOR PATIENTS WITH LUMBAR HERNIATED DISCS.



KEENEY, BENJAMIN J. PHD*; FULTON-KEHOE, DEBORAH PHD, MPH†; TURNER, JUDITH A. PHD‡,§; EARLY PREDICTORS OF LUMBAR SPINE SURGERY AFTER OCCUPATIONAL BACK INJURY: RESULTS FROM A PROSPECTIVE STUDY OF WORKERS IN WASHINGTON STATE. SPINE: 15 MAY 2013 - VOLUME 38 - ISSUE 11
- P 953-964

- **APPROXIMATELY 42.7% OF WORKERS WHO FIRST SAW A SURGEON HAD SURGERY, IN CONTRAST TO ONLY 1.5% OF THOSE WHO SAW A CHIROPRACTOR**



MARY E. FRANK, MD, BOARD MEMBER OF THE AMERICAN ACADEMY OF FAMILY PHYSICIANS, AMNEWS STAFF, DEC. 23/30, 2002

- Quote from National Academy of Sciences:
- "An average of about 17 years is required for new knowledge generated by randomized clinical trials to be incorporated into practice, and even then application is highly uneven...and there are insufficient tools and incentives to promote rapid adoption of best practices."



UP-COMING WEBINARS

- The Truth About Chiropractic Practice – Conclusion
 - Available on FRIDAY – check www.coxtechnic.com for link
- The DRG
 - September 26, 2018
- Myelopathy
 - November 14, 2018
- Osteopathic Techniques Incorporated into the Cox® Technic System
 - December 4, 2018
- ONLINE/ON DEMAND 24/7 – CE available
 - <https://coxtechnic.digitalchalk.com/dc/guest/login>

THANK YOU FOR STUDYING WITH ME,
FOR BEING THE BACK PAIN SPECIALIST
YOU ARE AND INCORPORATING
COX® TECHNIC INTO YOUR PRACTICE!

info@CoxTechnic.com

www.CoxTechnic.com – research, seminars, information

www.CoxTRC.com

www.CoxTechnicComplete.com

www.CoxTable.com

<https://coxtechnic.digitalchalk.com> – recorded webinars access portal

1-800-441-5577

