To access electronic resources you need an NHS Athens username and password.

To register, click on the link: https://openathens.nice.org.uk/

You need to register using an NHS PC and an NHS email address.

Registration is a quick, simple process, and will give you access to a huge range of online subscription resources, including:

*For more information or help with setting up your Athens account, email: Library@uhbristol.nhs.uk*
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
<td>3</td>
</tr>
<tr>
<td>Your Friendly Local Librarian</td>
<td>3</td>
</tr>
<tr>
<td>New Activity in Up-to-Date</td>
<td>4</td>
</tr>
<tr>
<td>Cochrane Systematic Reviews</td>
<td>5</td>
</tr>
<tr>
<td>Current Awareness Database Articles related to Orthopaedics</td>
<td>6</td>
</tr>
<tr>
<td>Medical</td>
<td>6</td>
</tr>
<tr>
<td>Patient care and management</td>
<td>16</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
</tr>
<tr>
<td>Journal Tables of Contents</td>
<td>24</td>
</tr>
<tr>
<td>Journal of Bone and Joint Surgery</td>
<td>25</td>
</tr>
<tr>
<td>Journal of Orthopaedic Trauma</td>
<td>25</td>
</tr>
<tr>
<td>Injury</td>
<td>25</td>
</tr>
<tr>
<td>Strategies in Trauma and Limb Construction</td>
<td>26</td>
</tr>
<tr>
<td>Clinical Orthopaedics and Related Research</td>
<td>26</td>
</tr>
</tbody>
</table>

---

### Your Friendly Local Librarian

Whatever your information needs, the library is here to help. As your outreach librarian I offer literature searching services as well as training and guidance in searching the evidence and critical appraisal – just email me at library@uhbristol.nhs.uk

**OUTREACH:** Your Outreach Librarian can help facilitate evidence-based practise for all in the Orthopaedics team, as well as assisting with academic study and research. We can help with literature searching, obtaining journal articles and books, and setting up individual current awareness alerts. We also offer one-to-one or small group training in literature searching, accessing electronic journals, and critical appraisal. Get in touch: library@uhbristol.nhs.uk

**LITERATURE SEARCHING:** We provide a literature searching service for any library member. For those embarking on their own research it is advisable to book some time with one of the librarians for a 1 to 1 session where we can guide you through the process of creating a well-focused literature research and introduce you to the health databases access via NHS Evidence.

Please email requests to library@uhbristol.nhs.uk
Overview of joint protection

Authors; Maureen R Gecht-Silver, MPH, OTR/L; Alison M Duncombe, PT, DPT, OCS, FAAOMPT

Literature review current through: Sep 2015. | This topic last updated: Jun 02, 2015.

INTRODUCTION — Patients with unstable or painful joints may have a limited understanding of activities that increase the risk of further joint damage or that promote inflammation. This topic will review the concept of joint protection and will suggest approaches to evaluation and interventions that may promote joint health.

What is joint protection? — Joint protection is a process that includes the following two major components [1,2]:

● Individualized assessment of a patient’s activities to ascertain the potential to contribute to worsening pain, inflammation, instability, and/or deformity of an already abnormal joint

● Creation of a program to increase a patient’s functional ability that includes altered work methods, behavioral modifications, and good body mechanics and that is supplemented, if necessary, with splints, braces, or adaptive equipment designed to minimize further joint damage

General principles of acute fracture management

Authors: Richard Derby, MD; Anthony Beutler, MD


INTRODUCTION — Patients with suspected fractures require urgent and sometimes emergent evaluation to determine if serious complicating conditions exist. Such conditions, including any neurovascular injury, often require immediate surgical consultation [1,2]. Nevertheless, many fractures are uncomplicated and can be managed effectively in a non-surgical setting.
The acute management of uncomplicated fractures is reviewed below and involves the following steps:

- Initial clinical assessment
- Radiographic assessment
- Immobilization
- Pain management
- Patient education and follow-up care

Cochrane Systematic Reviews

**Whole-body cryotherapy (extreme cold air exposure) for preventing and treating muscle soreness after exercise in adults**


Authors: Joseph T Costello, Philip RA Baker, Geoffrey M Minett, Francois Bieuzen, Ian B Stewart, Chris Bleakley

First published: 18 September 2015

Assessed as up-to-date: 7 August 2015

Editorial Group: Cochrane Bone, Joint and Muscle Trauma Group

Abstract:

Background: Recovery strategies are often used with the intention of preventing or minimising muscle soreness after exercise. Whole-body cryotherapy, which involves a single or repeated exposure(s) to extremely cold dry air (below -100 °C) in a specialised chamber or cabin for two to four minutes per exposure, is currently being advocated as an effective intervention to reduce muscle soreness after exercise.

Objectives: To assess the effects (benefits and harms) of whole-body cryotherapy (extreme cold air exposure) for preventing and treating muscle soreness after exercise in adults.

**Surgical fixation methods for tibial plateau fractures**

Background: Fractures of the tibial plateau, which are intra-articular injuries of the knee joint, are often difficult to treat and have a high complication rate, including early-onset osteoarthritis. Surgical fixation is usually used for more complex tibial plateau fractures. Additionally, bone void fillers are often used to address bone defects caused by the injury. Currently there is no consensus on either the best method of fixation or bone void filler.

Objectives: To assess the effects (benefits and harms) of different surgical interventions, and the use of bone void fillers, for treating tibial plateau fractures.

Current Awareness Database Articles related to Orthopaedics

Below is a selection of articles related to orthopaedics recently added to the healthcare databases, grouped in the following categories:

- Medical
- Patient care and management
- Other

If you would like any of the following articles in full text, or if you would like a more focused search on your own topic, then get in touch: library@uhbristol.nhs.uk

Medical

**Title:** Neurological Complications Related to Elective Orthopedic Surgery: Part 1: Common Shoulder and Elbow Procedures.

**Citation:** Regional anesthesia and pain medicine, Sep 2015, vol. 40, no. 5, p. 431-442

**Author(s):** Dwyer, Tim, Henry, Patrick D G, Cholvisudhi, Phantila, Chan, Vincent W S, Theodoropoulos, John S, Brull, Richard
Abstract: Many anesthesiologists are unfamiliar with the rate of surgical neurological complications of the shoulder and elbow procedures for which they provide local anesthetic-based anesthesia and/or analgesia. Part 1 of this narrative review series on neurological complications of elective orthopedic surgery describes the mechanisms and likelihood of peripheral nerve injury associated with some of the most common shoulder and elbow procedures, including open and arthroscopic shoulder procedures, elbow arthroscopy, and total shoulder and elbow replacement. Despite the many articles available, the overall number of studied patients is relatively low. Large prospective trials are required to establish the true incidence of neurological complications following elective shoulder and elbow surgery. As the popularity of regional anesthesia increases with the development of ultrasound guidance, anesthesiologists should have a thoughtful understanding of the nerves at risk of surgical injury during elective shoulder and elbow procedures.


Citation: Regional anesthesia and pain medicine, Sep 2015, vol. 40, no. 5, p. 443-454

Author(s): Dwyer, Tim, Drexler, Michael, Chan, Vincent W S, Whelan, Daniel B, Brull, Richard

Abstract: Many anesthesiologists may not be familiar with the rate of surgical neurological complications of the hip and knee procedures for which they are providing local anesthetic-based anesthesia and/or analgesia. Part 2 of this narrative review series on neurological complications of elective orthopedic surgery describes the mechanisms and likelihood of peripheral nerve injury associated with some of the most common hip and knee procedures, including arthroscopic hip and knee surgery and total hip and knee replacement. As the popularity of regional anesthesia continues to increase with the development of ultrasound guidance, anesthesiologists should have a thoughtful understanding of the nerves at risk of surgical injury during elective hip and knee procedures.

Title: Neurological Complications Related to Elective Orthopedic Surgery: Part 3: Common Foot and Ankle Procedures.

Citation: Regional anesthesia and pain medicine, Sep 2015, vol. 40, no. 5, p. 455-466

Author(s): Veljkovic, Andrea, Dwyer, Tim, Lau, Johnny T, Abbas, Kaniza Zahra, Salat, Peter, Brull, Richard

Abstract: Part III of a review series on neurological complications of orthopedic surgery, this article describes the mechanisms and likelihood of peripheral nerve injury associated with some of the most common elective foot and ankle procedures for which anesthesiologists may administer regional anesthesia. Relevant information is broadly organized according to type of surgical procedure to facilitate reference by anesthesiologists and members of the anesthesia care team. As the popularity of regional anesthesia continues to increase with the development of ultrasound guidance, anesthesiologists should have a thoughtful understanding of the nerves at risk of surgical injury during elective foot and ankle procedures.
Title: Physician-Hospital Alignment in Orthopedic Surgery.

Citation: Orthopedics, Sep 2015, vol. 38, no. 9, p. e806. (September 1, 2015)

Author(s): Bushnell, Brandon D

Abstract: The concept of "alignment" between physicians and hospitals is a popular buzzword in the age of health care reform. Despite their often tumultuous histories, physicians and hospitals find themselves under increasing pressures to work together toward common goals. However, effective alignment is more than just simple cooperation between parties. The process of achieving alignment does not have simple, universal steps. Alignment will differ based on individual situational factors and the type of specialty involved. Ultimately, there are principles that underlie the concept of alignment and should be a part of any physician-hospital alignment efforts. In orthopedic surgery, alignment involves the clinical, administrative, financial, and even personal aspects of a surgeon's practice. It must be based on the principles of financial interest, clinical authority, administrative participation, transparency, focus on the patient, and mutual necessity. Alignment can take on various forms as well, with popular models consisting of shared governance and comanagement, gainsharing, bundled payments, accountable care organizations, and other methods. As regulatory and financial pressures continue to motivate physicians and hospitals to develop alignment relationships, new and innovative methods of alignment will also appear. Existing models will mature and evolve, with individual variability based on local factors. However, certain trends seem to be appearing as time progresses and alignment relationships deepen, including regional and national collaboration, population management, and changes in the legal system. This article explores the history, principles, and specific methods of physician-hospital alignment and its critical importance for the future of health care delivery. [Orthopedics. 2015; 38(9):e806-e812.]. Copyright 2015, SLACK Incorporated.

Title: Risk level analysis for deep vein thrombosis (DVT): A study of Turkish patients undergoing major orthopedic surgery.

Citation: Journal of vascular nursing : official publication of the Society for Peripheral Vascular Nursing, Sep 2015, vol. 33, no. 3, p. 100-105 (September 2015)

Author(s): Büyükyılmaz, Funda, Şendir, Merdiye, Autar, Ricky, Yazgan, İlknur

Abstract: Deep vein thrombosis (DVT) is a prevalent problem for orthopedic patients, particularly owing to the nature of operative interventions and treatment procedures, predisposing to an high risk of DVT. This descriptive study was conducted to determine the levels of risk, the risk factors, and their odds ratio for DVT in patients undergoing major orthopedic surgery. Data were collected using a Patient Information Form and the Autar DVT Risk Assessment Scale (DVTRAS) in orthopedic wards of a university hospital on postoperative day 2. Data were analyzed using descriptive, comparative analysis, and binary logistic regression. The 102 patients (mean age, 52.58 ± 21.58 years) were hospitalized for a mean of 14.35 ± 14.56. Of the sample, 53.9% were female, 65.7% had a history of previous surgery, and 54.9% had undergone total hip/knee arthroplastic surgery, 67.6% of patients wore graduated compression stockings, and 62.7% were administered liquid infusion. Those
patients had moderate risk score (12.77 ± 5.66) in the Autar DVTRAS. According to binary logistic regression analysis, aging, obesity, immobility, and acute and chronic diseases were significant risk factors for postoperative DVT (p ≤ .05). This study highlights evidence on the degree of DVT risk, risk factors, and impact of venous thromboembolism in patients undergoing major orthopedic operations. For evidence-based clinical practice, these high-level risk factors should be taken into account in the prevention of DVT in orthopedic patients. Copyright © 2015 Society for Vascular Nursing, Inc. Published by Elsevier Inc. All rights reserved.

Title: Bibliometric Analysis of Orthopedic Literature on Total Knee Arthroplasty in Asian Countries: A 10-year Analysis.

Citation: Knee surgery & related research, Sep 2015, vol. 27, no. 3, p. 149-155, 2234-0726

Author(s): Eom, Sang Hwa, Bamne, Ankur B, Chowdhry, Madhav, Chae, Ihn Seok, Kim, Tae Kyun

Abstract: We aimed to determine the quantity and quality of research output of selected Asian countries in the field of total knee arthroplasty (TKA) in the last 10 years. Top 15 Asian countries were selected according to their gross domestic product. The Science Citation Index Expanded database was used to search for the literature published between 2004 and 2013 using "Total Knee Arthroplasty". The numbers of articles, journals and citations and the contribution of each country were analyzed. The articles were classified according to the type of study and the relative proportion of each type was analyzed. Asian surgeons have increasingly contributed to orthopedic literature on TKA for the past 10 years, but the dominant contribution came from only a few countries. The total number of articles published by Asian countries increased by 261%, with Japan producing most of the studies and China showing the maximum growth rate. The majority of studies were published in low impact factor journals. Korea published the highest proportion of articles in high impact factor journals. Clinical papers were most frequent. Our identification of research productivity pertaining to TKA among Asian countries gives a unique insight into the level of academic research in the field of TKA in these countries. There is a need to improve the quality of research to enhance the publishing power in high impact journals as well as the need for more basic research and epidemiological studies considering the unique differences among Asian patients undergoing TKA.

Title: Subacute Pain as a Predictor of Long-Term Pain Following Orthopedic Surgery: An Australian Prospective 12 Month Observational Cohort Study.

Citation: Medicine, Sep 2015, vol. 94, no. 36, p. e1498. (September 2015)

Author(s): Veal, Felicity C, Bereznicki, Luke R E, Thompson, Angus J, Peterson, Gregory M, Orlikowski, Chris

Abstract: The aim of this study was to document the level of pain and functionality in the 12 months following orthopedic surgery and identify if high pain levels following discharge were associated with pain persisting at 12 months. An observational prospective cohort study was undertaken, following 87 patients (mean age 62.4 years [18-92]; 47.1% male) who required orthopedic surgery at the Royal Hobart Hospital, Australia. Following an initial
survey, patients were telephoned at 10 days, 6 weeks, 3 months, and 12 months after discharge. Postdischarge pain levels were high with 97.4% of patients suffering pain at 10 days, 81.2% at 6 weeks and 79.5% at 3 months. Pain affected the ability to undertake activities of daily living (ADLs) for 32.7% and 20.0% of patients at 10 days and 6 weeks, respectively. Twelve months after discharge, 65.5% of patients reported pain persisting at the surgical site, with 29.9% of all patients suffering moderate-severe incidental pain; and nearly one quarter of patients reported pain affected their sleep or ADLs. Average pain levels rated as moderate-severe at 10 days (P = 0.01) and 6 weeks (P = 0.02) and pain of neuropathic origin at 3 months (30.2% vs 10.3% P = 0.03) and 12 months (30.4% vs 4.9% P = 0.01) were associated with persistent pain at 12 months. Pain in the period following discharge from hospital is significant and undermanaged. Previous studies has shown that that acute pain, particularly in the first 48 hours following surgery is a predictor for long-term pain after surgery. This study adds to the current literature by showing that pain in the subacute period, following discharge from hospital is also associated with the pain persisting at 12 months. These findings have important implications for improving quality of life as well as potentially preventing persistent pain with increased follow-up and more intensive management of post-discharge pain.

Title: Effect of infant surgical orthopedic treatment on facial growth in preadolescent children with unilateral and bilateral complete cleft lip and palate.

Citation: Oral surgery, oral medicine, oral pathology and oral radiology, Sep 2015, vol. 120, no. 3, p. 291-298 (September 2015)


Abstract: To examine the impact of dentofacial infant orthopedic treatment (DFIO) on facial growth in preadolescent children with unilateral complete cleft lip and palate (UCCLP) and bilateral complete cleft lip and palate (BCCLP). This is a retrospective study of patients with UCCLP and BCCLP treated at a single center. The treatment group had DFIO, and the control group did not have DFIO. Regression models were used to compare outcomes between the study and control groups. The study sample comprised 81 patients (54 had DFIO and 27 did not have DFIO). Among those with UCCLP, those who had DFIO had a shorter maxillary length (-2.12 mm; P = .04) and shorter lower anterior facial height (-2.77 mm; P = .04) compared with controls. Among those with BCCLP, there were no significant differences between the treatment and control groups. DFIO treatment could result in shorter maxillary length and lower anterior facial height in those with UCCLP. Copyright © 2015 Elsevier Inc. All rights reserved.

Title: Peptide aptamers: Novel coatings for orthopaedic implants.

Citation: Materials science & engineering. C, Materials for biological applications, Sep 2015, vol. 54, p. 84-93 (September 2015)
**Author(s):** Kelly, Micah, Williams, Richard, Aojula, Anuriti, O'Neill, Jenna, Trzińska, Zuzanna, Grover, Liam, Scott, Robert A H, Peacock, Anna F A, Logan, Ann, Stamboulis, Artemis, de Cogan, Felicity

**Abstract:** Current processes for coating titanium implants with ceramics involve very high energy techniques with associated high cost and disadvantages such as heterogeneity of the coatings, phase transformations and inability to coat complex structures. In order to address the above problems, we propose a biomimetic hydroxyapatite coating process with the use of peptides that can bind both on titanium surfaces and hydroxyapatite. The peptides enabled homogeneous coating of a titanium surface with hydroxyapatite. The hydroxyapatite-peptide sandwich coating showed no adverse effects on cell number or collagen deposition. This makes the sandwich coated titanium a good candidate for titanium implants used in orthopaedics and dentistry. Copyright © 2015 Elsevier B.V. All rights reserved.

**Title:** Analysis of Orthopaedic Research Produced During the Wars in Iraq and Afghanistan.

**Citation:** Clinical orthopaedics and related research, Sep 2015, vol. 473, no. 9, p. 2777-2784

**Author(s):** Balazs, George C, Dickens, Jonathan F, Brelin, Alaina M, Wolfe, Jared A, Rue, John-Paul H, Potter, Benjamin K

**Abstract:** Military orthopaedic surgeons have published a substantial amount of original research based on our care of combat-wounded service members and related studies during the wars in Iraq and Afghanistan. However, to our knowledge, the influence of this body of work has not been evaluated bibliometrically, and doing so is important to determine the modern impact of combat casualty research in the wider medical community. We sought to identify the 20 most commonly cited works from military surgeons published during the Iraq and Afghanistan conflicts and analyze them to answer the following questions: (1) What were the subject areas of these 20 articles and what was the 2013 Impact Factor of each journal that published them? (2) How many citations did they receive and what were the characteristics of the journals that cited them? (3) Do the citation analysis results obtained from Google Scholar mirror the results obtained from Thompson-Reuters' Web of Science? We searched the Web of Science Citation Index Expanded for relevant original research performed by US military orthopaedic surgeons related to Operation Iraqi Freedom and Operation Enduring Freedom between 2001 and 2014. Articles citing these studies were reviewed using both Web of Science and Google Scholar data. The 20 most cited articles meeting inclusion criteria were identified and analyzed by content domain, frequency of citation, and sources in which they were cited. Nine of these studies examined the epidemiology and outcome of combat injury. Six studies dealt with wound management, wound dehiscence, and formation of heterotopic ossification. Five studies examined infectious complications of combat trauma. The median number of citations garnered by these 20 articles was 41 (range, 28-264) in Web of Science. Other research citing these studies has appeared in 279 different journals, covering 26 different medical and surgical subspecialties, from authors in 31 different countries. Google Scholar contained 97% of the Web of Science citations, but also had 31 duplicate entries and 29 citations with defective links. Modern combat casualty research by military orthopaedic surgeons is widely cited by researchers in a diverse range of subspecialties and geographic locales. This suggests that the military continues to be a source of innovation that is broadly applicable to civilian
medical and surgical practice and should encourage expansion of military-civilian collaboration to maximize the utility of the knowledge gained in the treatment of war trauma. Level IV, therapeutic study.

**Title:** No change in the distribution of types and antibiotic resistance in clinical Staphylococcus aureus isolates from orthopaedic patients during a period of 12 years.

**Citation:** European journal of clinical microbiology & infectious diseases : official publication of the European Society of Clinical Microbiology, Sep 2015, vol. 34, no. 9, p. 1833-1837

**Author(s):** Aamot, H V, Stavem, K, Skråmm, I

**Abstract:** Staphylococcus aureus (S. aureus) is the most common cause of bone and joint infections. However, limited information is available on the distribution of S. aureus geno- and phenotypes causing orthopaedic infections. The aim of this study was to identify the dominating types causing infections in orthopaedic patients, investigate if the characteristics of these types changed over time and examine if different types were more often associated with surgical site infection (SSI) than primary infection (non-SSI). All clinical S. aureus isolates collected from orthopaedic patients from 2000 through 2011 at Akershus University Hospital, Norway, were characterised by S. aureus protein A (spa) typing and tested for antibiotic resistance. A total of 548 patients with orthopaedic S. aureus infections were included, of which 326 (59 %) had SSI and 222 (41 %) had non-SSI. The median age was 62 years [range 2-97 years] and 54 % were male. Among the 242 unique spa types, t084 was the most common (7 %). Penicillin resistance was identified in 75 % of the isolates, whereas the resistances to the other antibiotics tested were <5 %. Three isolates (0.5 %) were resistant to methicillin. There was no significant difference in the distribution of geno- and phenotypes over time and there was no difference in types between SSI and non-SSI. In this large collection of S. aureus from orthopaedic patients, the S. aureus infections, regardless of origin, were heterogeneous, mainly resistant to penicillin, stable over time and consisted of similar types as previously found in both carrier and other patient populations.

**Title:** Fast three-dimensional superimposition of cone beam computed tomography for orthopaedics and orthognathic surgery evaluation.

**Citation:** International journal of oral and maxillofacial surgery, Sep 2015, vol. 44, no. 9, p. 1188-1196 (September 2015)

**Author(s):** Weissheimer, A, Menezes, L M, Koerich, L, Pham, J, Cevidan, L H S

**Abstract:** The aim of this study was to validate a method for fast three-dimensional (3D) superimposition of cone beam computed tomography (CBCT) in growing patients and adults (surgical cases). The sample consisted of CBCT scans of 18 patients. For 10 patients, as the gold standard, the spatial position of the pretreatment CBCT was reoriented, saved as a reoriented volume, and then superimposed on the original image. For eight patients, four non-growing and four growing, the pre- and post-treatment scans were superimposed. Fast voxel-based superimposition was performed, with registration at the anterior cranial base. This superimposition process took 10-15s. The fit of the cranial base superimposition was verified by qualitative visualization of the semi-transparent axial, sagittal, and coronal cross-sectional slices of all corresponding anatomical structures. Virtual 3D surface models of the
skull were generated via threshold segmentation, and superimposition errors in the reoriented models and the results of treatment for the treated cases were evaluated by 3D surface distances on colour-coded maps. The superimposition error of the spatial reorientation and for growing and non-growing patients was <0.5mm, which is acceptable and clinically insignificant. The voxel-based superimposition method evaluated was reproducible in different clinical conditions, rapid, and applicable for research and clinical practice. Copyright © 2015 International Association of Oral and Maxillofacial Surgeons. Published by Elsevier Ltd. All rights reserved.

**Title:** Strontium- and calcium-containing, titanium-stabilised phosphate-based glasses with prolonged degradation for orthopaedic tissue engineering.

**Citation:** Journal of biomaterials applications, Sep 2015, vol. 30, no. 3, p. 300-310

**Author(s):** Al Qaysi, Mustafa, Walters, Nick J, Foroutan, Farzad, Owens, Gareth J, Kim, Hae-Won, Shah, Rishma, Knowles, Jonathan C

**Abstract:** Strontium- and calcium-releasing, titanium-stabilised phosphate-based glasses with a controlled degradation rate are currently under development for orthopaedic tissue engineering applications. Ca and/or Sr were incorporated at varying concentrations in quaternary phosphate-based glasses, in order to promote osteoinduction. Ti was incorporated at a fixed concentration in order to prolong degradation. Glasses of the general formula (P2O5)-(Na2O)-(TiO2)-(CaO)-(SrO) were prepared via the melt-quench technique. The materials were characterised by energy-dispersive X-ray spectroscopy, X-ray diffraction, (31)P magic angle spinning nuclear magnetic resonance, Fourier transform infrared spectroscopy, differential thermal analysis and density determination. The dissolution rate in distilled water was determined by measuring mass loss, ion release and pH change over a two-week period. In addition, the cytocompatibility and alkaline phosphatase activity of an osteoblast-like cell line cultured on the surface of glass discs was assessed. The glasses were shown to be amorphous and contained Q(1), Q(2) and Q(3) species. Fourier transform infrared spectroscopy revealed small changes in the glass structure as Ca was substituted with Sr and differential thermal analysis confirmed a decrease in crystallisation temperature with increasing Sr content. Degradation and ion release studies also showed that mass loss was positively correlated with Sr content. These results were attributed to the lower electronegativity of Sr in comparison to Ca favouring the formation of phosphate-based mineral phases. All compositions supported cell proliferation and survival and induced at least 2.3-fold alkaline phosphatase activity relative to the control. Glass containing 17.5 mol% Sr had 3.6-fold greater alkaline phosphatase activity than the control. The gradual release of Ca and Sr supported osteoinduction, indicating their potential suitability in orthopaedic tissue engineering applications. © The Author(s) 2015.

---

**Title:** Responsiveness of the Chinese Versions of the Japanese Orthopaedic Association Cervical Myelopathy Evaluation Questionnaire and Neck Disability Index in Postoperative Patients With Cervical Spondylotic Myelopathy.

**Citation:** Spine, Sep 2015, vol. 40, no. 17, p. 1315-1321 (September 1, 2015)
Author(s): Chien, Andy, Lai, Dar-Ming, Cheng, Chih-Hsiu, Wang, Shwu-Fen, Hsu, Wei-Li, Wang, Jaw-Lin

Abstract: Prospective cohort study. To evaluate the postoperative responsiveness of the Chinese versions of the Japanese Orthopaedic Association Cervical Myelopathy Evaluation Questionnaire (JOACMEQ) and the Neck Disability Index (NDI) in a cohort of patients with cervical spondylotic myelopathy. We have recently completed the translation and cross-cultural adaptation of a Chinese version of JOACMEQ. However, the postoperative responsiveness of the Chinese JOACMEQ and how it compares with the more commonly used NDI remain undetermined. Forty-five patients with cervical spondylotic myelopathy undergoing surgical decompression were recruited. All patients completed the Chinese JOACMEQ and the NDI preoperatively and again at 3-month follow-up together with an 11-point Global Rating of Change scale. Patients were dichotomized either as "Improved" or "Stable" on the basis of Global Rating of Change. Paired t test, standardized effect sizes, and Guyatt responsiveness index were used to determine internal responsiveness. External responsiveness was evaluated by the area under the receiver operating characteristic curve and the minimal clinically important change was determined as the optimal cutoff point for patient discrimination anchor-based on Global Rating of Change classification. Bladder function and quality of life (QOL) domains (P < 0.03) of the JOACMEQ and the NDI (P = 0.004) reached statistically significant difference with the paired t test. After the dichotomization, the standardized effect size was strong for the QOL domain in the improved group (0.85) and the Cervical spine function (0.97) in the stable group, respectively. Based on the Guyatt responsiveness index, strong responsiveness was found for the Bladder function (0.88) and QOL (0.76) domains of the JOACMEQ and moderate responsiveness (0.55) for the NDI. The Bladder function (area = 0.82; minimal clinically important change = 6) and QOL (0.83; minimal clinically important change = 8.5) also produced largest area under the receiver operating characteristic curve. Bladder function and QOL domains of the JOACMEQ seem to demonstrate the strongest postoperative responsiveness and thus may be more appropriate than NDI when attempting to determine treatment efficacy in cervical spondylotic myelopathy.

Title: Tessier No. 3 and No. 4 clefts: Sequential treatment in infancy by pre-surgical orthopedic skeletal contraction, comprehensive reconstruction, and novel surgical lengthening of the ala base-canthal distance.

Citation: Journal of cranio-maxillo-facial surgery : official publication of the European Association for Cranio-Maxillo-Facial Surgery, Sep 2015, vol. 43, no. 7, p. 1261-1268

Author(s): Spolyar, John L, Hnatiuk, Mark, Shaheen, Kenneth W, Mertz, Jennifer K, Handler, Lawrence F, Jarial, Ravinder, Camilo Roldán, J

Abstract: Repair of facial clefts implies wide tissue mobilization with multi-stage surgical treatment. Authors propose pre-surgical orthopedic correction for naso-oro-ocular clefts and a novel surgical option for Tessier No. 3 cleft. Two male infants, a Tessier No. 3 cleft (age 7 months) and another Tessier No. 4 (age 3 months), were treated with a modified orthopedic Latham device with additional septo-premaxillary molding and observed to age four years. Tessier No. 3 orthopedic measurements were obtained by image corrected cephalometric analysis. Subsequent repair included tissue expansion on Tessier No. 4 and naso-frontal Rieger flap combined with myocutaneous upper lid flap on Tessier No. 3.
Orthopedic movements ranged from 18.5 mm in bi-planar to 33 mm in oblique analyses. Tissue margins became aligned with platform normalization. Tissue expansion on Tessier No. 4 improved distances from ala base-lower lid and subalar base-lip. The naso-frontal flap combined with myocutaneous upper lid flap on Tessier No. 3 had similar achievement, but also sufficiently lengthened ala base-canthal distance. Repairs were facilitated by pre-surgical orthopedic correction. The naso-frontal flap combined with an upper lid myocutaneous flap seems viable as a single-stage option to lengthen ala base-canthal distance to advance repair achievement in unilateral Tessier No. 3. Copyright © 2015 European Association for Cranio-Maxillo-Facial Surgery. Published by Elsevier Ltd. All rights reserved.

Title: Value of monoenergetic dual-energy CT (DECT) for artefact reduction from metallic orthopedic implants in post-mortem studies.

Citation: Skeletal radiology, Sep 2015, vol. 44, no. 9, p. 1287-1294 (September 2015)

Author(s): Filograna, Laura, Magarelli, Nicola, Leone, Antonio, Guggenberger, Roman, Winklhofer, Sebastian, Thali, Michael John, Bonomo, Lorenzo

Abstract: The aim of this ex vivo study was to assess the performance of monoenergetic dual-energy CT (DECT) reconstructions to reduce metal artefacts in bodies with orthopedic devices in comparison with standard single-energy CT (SECT) examinations in forensic imaging. Forensic and clinical impacts of this study are also discussed. Thirty metallic implants in 20 consecutive cadavers with metallic implants underwent both SECT and DECT with a clinically suitable scanning protocol. Extrapolated monoenergetic DECT images at 64, 69, 88, 105, 120, and 130 keV and individually adjusted monoenergy for optimized image quality (OPTkeV) were generated. Image quality of the seven monoenergetic images and of the corresponding SECT image was assessed qualitatively and quantitatively by visual rating and measurements of attenuation changes induced by streak artefact. Qualitative and quantitative analyses showed statistically significant differences between monoenergetic DECT extrapolated images and SECT, with improvements in diagnostic assessment in monoenergetic DECT at higher monoenergies. The mean value of OPTkeV was 137.6 ± 4.9 with a range of 130 to 148 keV. This study demonstrates that monoenergetic DECT images extrapolated at high energy levels significantly reduce metallic artefacts from orthopedic implants and improve image quality compared to SECT examination in forensic imaging.

Title: Cancer Prevalence among a Cross-sectional Survey of Female Orthopedic, Urology, and Plastic Surgeons in the United States.

Citation: Women's health issues : official publication of the Jacobs Institute of Women's Health, Sep 2015, vol. 25, no. 5, p. 476-481 (2015 Sep-Oct)

Author(s): Chou, Loretta B, Lerner, Lori B, Harris, Alex H S, Brandon, Ashley J, Girod, Sabine, Butler, Lesley M

Abstract: Exposure to ionizing radiation from fluoroscopy performed during surgery, although low and within established limits, remains a health concern among surgeons. Estimates of breast cancer prevalence among women across surgery specialties with different patterns of fluoroscopy use are needed to evaluate this concern. Female U.S.
surgeons in urology, plastics, and orthopedics were identified using national directories and mailed surveys to collect information on occupational and medical history, including cancer diagnoses. Standardized prevalence ratios (SPRs) and 95% CIs were calculated by dividing the observed number of cancers among female surgeons in each specialty by the expected number, based on the gender-specific, age-specific, and race-specific cancer prevalence statistics in the general U.S. Standard fluoroscopy use more than once per week was common among urologists (54%) and orthopedists (37%); the same frequency of mini fluoroscopy use was only common among orthopedics (31%) and hardly ever used by urologists. Plastic surgeons reported very infrequent use of any fluoroscopy. For orthopedic surgeons, a significantly greater than expected prevalence of any cancer (SPR, 1.85; 95% CI, 1.19-2.76) and breast cancer (SPR, 2.90; 95% CI, 1.66-4.71) were observed. There was no difference between the observed and expected prevalence of any cancer or breast cancer for urology or plastics. Using the first available cancer prevalence data comparing female surgeons across three specialties, we report that orthopedic surgeons have a greater than expected prevalence of cancer that may or may not be owing to occupational exposure to ionizing radiation. Copyright © 2015 Jacobs Institute of Women’s Health. All rights reserved.

Patient care and management

**Title:** Psychological Distress After Orthopedic Trauma: Prevalence in Patients and Implications for Rehabilitation.

**Citation:** PM & R : the journal of injury, function, and rehabilitation, Sep 2015, vol. 7, no. 9, p. 978-989 (September 2015)

**Author(s):** Vincent, Heather K, Horodyski, MaryBeth, Vincent, Kevin R, Brisbane, Sonya T, Sadasivan, Kalia K

**Abstract:** Orthopedic trauma is an unforeseen life-changing event. Serious injuries include multiple fractures and amputation. Physical rehabilitation has traditionally focused on addressing functional deficits after traumatic injury, but important psychological factors also can dramatically affect acute and long-term recovery. This review presents the effects of orthopedic trauma on psychological distress, potential interventions for distress reduction after trauma, and implications for participation in rehabilitation. Survivors commonly experience post-traumatic stress syndrome, depression, and anxiety, all of which interfere with functional gains and quality of life. More than 50% of survivors have psychological distress that can last decades after the physical injury has been treated. Early identification of patients with distress can help care teams provide the resources and support to offset the distress. Several options that help trauma patients navigate their short-term recovery include holistic approaches, pastoral care, coping skills, mindfulness, peer visitation, and educational resources. The long-term physical and mental health of the trauma survivor can be enhanced by strategies that connect the survivor to a network of people with similar experiences or injuries, facilitate support groups, and social support networking (The
Opioid Use, Satisfaction, and Pain Intensity After Orthopedic Surgery.

Citation: Psychosomatics, Sep 2015, vol. 56, no. 5, p. 479-485 (2015 Sep-Oct)

Author(s): Nota, Sjoerd P F T, Spit, Silke A, Voskuyl, Timothy, Bot, Arjan G J, Hageman, Michiel G J S, Ring, David

Abstract: Patients in other countries use fewer opioids than patients in the United States with satisfactory pain relief. This study tested the null hypothesis that opioid intake after orthopedic surgery does not influence satisfaction with pain management. A total of 232 orthopedic surgical inpatients completed measures of pain self-efficacy and symptoms of depression at enrollment and commonly used measures of pain intensity, satisfaction with pain relief, and satisfaction with hospital staff attention to pain approximately 14 days after surgery. Inpatient opioid intake per 24-hour period was quantified. At a phone evaluation approximately 2 weeks after discharge from the hospital, patients who were always satisfied with their pain relief in hospital and always satisfied with staff attention to pain used significantly less opioids on day 1 compared with patients who were not always satisfied. There were no differences in satisfaction by type of surgery. The final multivariable model for not always satisfied with pain relief included greater opioid use on day 1 (odds ratio = 1.2), and preadmission diagnosis of depression (odds ratio = 2.6). Greater opioid use on day 1 was the only factor associated with less than always satisfied with the staff attention to pain relief (odds ratio = 1.3). Patients who take more opioids report less satisfaction with pain relief and greater pain intensity. Evidence-based interventions to increase self-efficacy merit additional study for the management of postoperative pain. Prognostic, Level 1.

The Opioid Epidemic: Impact on Orthopaedic Surgery.

Citation: The Journal of the American Academy of Orthopaedic Surgeons, Sep 2015, vol. 23, no. 9, p. e36., 1067-151X (September 2015)

Author(s): Levin, Paul, Mir, Hassan R

Short-form mini nutritional assessment as a useful method of predicting the development of postoperative delirium in elderly patients undergoing orthopedic surgery.

Citation: General Hospital Psychiatry, Sep 2015, (Sep 1, 2015), 0163-8343 (Sep 1, 2015)

Author(s): Chu, Che-Sheng, Liang, Chih-Kuang, Chou, Ming-Yueh, Lin, Yu-Te, Hsu, Chien-Jen, Chou, Po-Han, Chu, Chin-Liang

Abstract: OBJECTIVE: Postoperative delirium (POD) is a major cause for concern among elderly patients undergoing surgery, often resulting in poor outcome. It is therefore...
important to predict and prevent POD. The aim of this study was to evaluate the Mini Nutritional Assessment Short-Form (MNA-SF) as a predictor of POD after orthopedic surgery. METHODS: Elderly patients undergoing orthopedic surgery between April 2011 and March 2013 were included in the study (n=544; mean age, 74.24±7.92 years). The MNA-SF was used to evaluate preoperative nutritional status. Delirium was assessed daily after surgery using the confusion assessment method. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision criteria were used to confirm delirium diagnosis. Univariate and multivariate logistic regression analyses were performed to identify key factors associated with POD. RESULTS: POD occurred in 52 patients (9.6%). According to the MNA-SF, 17.5% of subjects were at risk of undernutrition. Adjusting for all potential factors in the final model, age, male gender and lower Mini-Mental State Examination and higher Charlson Comorbidity Index scores were associated with significantly increased likelihood of POD. Subjects who were identified preoperatively as at risk of undernutrition were 2.85 times more likely to develop POD compared to normally nourished subjects (odds ratio: 2.85, 95% confidence interval: 1.19–6.87). CONCLUSIONS: These results suggest that the MNA-SF is a simple and effective tool that can be used to predict incident delirium in elderly patients after orthopedic surgery.
Abstract: The Cerebral Palsy Computerized Adaptive Test (CP-CAT) is a parent-reported outcomes instrument for measuring lower and upper-extremity function, activity, and global health across impairment levels and a broad age range of children with cerebral palsy (CP). This study was performed to examine whether the Lower Extremity/Mobility (LE) CP-CAT detects change in mobility following orthopaedic surgery in children with CP. This multicenter, longitudinal study involved administration of the LE CP-CAT, the Pediatric Outcomes Data Collection Instrument (PODCI) Transfer/Mobility and Sports/Physical Functioning domains, and the Timed "Up & Go" test (TUG) before and after elective orthopaedic surgery in a convenience sample of 255 children, four to twenty years of age, who had CP and a Gross Motor Function Classification System (GMFCS) level of I, II, or III. Standardized response means (SRMs) and 95% confidence intervals (CIs) were calculated for all measures at six, twelve, and twenty-four months following surgery. SRM estimates for the LE CP-CAT were significantly greater than the SRM estimates for the PODCI Transfer/Mobility domain at twelve months, the PODCI Sports/Physical Functioning domain at twelve months, and the TUG at twelve and twenty-four months. When the results for the children at GMFCS levels I, II, and III were grouped together, the improvements in function detected by the LE CP-CAT at twelve and twenty-four months were found to be greater than the changes detected by the PODCI Transfer/Mobility and Sports/Physical Functioning scales. The LE CP-CAT outperformed the PODCI scales for GMFCS levels I and III at both of these follow-up intervals; none of the scales performed well for patients with GMFCS level II. The results of this study showed that the LE CP-CAT displayed superior sensitivity to change than the PODCI and TUG scales after musculoskeletal surgery in children with CP. Copyright © 2015 by The Journal of Bone and Joint Surgery, Incorporated.

Other

Title: Nova Scotia targets orthopedic wait times.

Citation: CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne, Sep 2015, vol. 187, no. 12, p. E362. (September 8, 2015)

Author(s): Casey, Quentin

Title: No Evidence for Race and Socioeconomic Status as Independent Predictors of 30-Day Readmission Rates Following Orthopedic Surgery.

Citation: American journal of medical quality : the official journal of the American College of Medical Quality, Sep 2015, vol. 30, no. 5, p. 484-488 (September 2015)

Author(s): Hunter, Tracey, Yoon, Richard S, Hutzler, Lorraine, Band, Philip, Liublinksa, Victoria, Slover, James, Bosco, Joseph A
Abstract: The Centers for Medicare & Medicaid Services considers readmissions within 30 days of discharge to be a quality indicator. Hospitals' and eventually physicians' readmission rates will be used to determine payment for services. It is imperative that health care providers understand which patients are at risk for readmission so that they can apply the appropriate preventive interventions. The research team analyzed all orthopedic admissions and readmissions at their institution from September 2008 to April 2011 in this study. Preparing for the next stage in health care reform, identifying any preoperative factors that may place certain patients into a "high-risk" category for readmission following an orthopedic procedure is of paramount importance. This data analysis of more than 13 000 patients noted that race-based and income-based risk factors did not translate into significant risk factors or predictors of 30-day readmission following orthopedic admission. © The Author(s) 2014.

Title: Evaluating Device Design and Cleanability of Orthopedic Device Models Contaminated with a Clinically Relevant Bone Test Soil.

Citation: Biomedical instrumentation & technology / Association for the Advancement of Medical Instrumentation, Sep 2015, vol. 49, no. 5, p. 354-362, 0899-8205 (2015 Sep-Oct)

Author(s): Lucas, Anne D, Nagaraja, Srinidhi, Gordon, Edward A, Hitchins, Victoria M

Abstract: Reusable medical devices need to be cleaned prior to disinfection or sterilization and subsequent use to prevent infections. The cleanability of medical devices depends in part on the design of the device. This study examined how models of orthopedic medical devices of increasing complexity retain calcium phosphate bone cement, a relevant test soil for these devices. The dye Alizarin Red S and micro-computed tomography (μCT) were used to assess the amount and location of bone cement debris in a series of model orthopedic devices. Testing was performed after soiling and cleaning once, and soiling and cleaning 10 times. The color change of the dye after reacting with the bone cement was useful for indicating the presence of bone cement in these models. High-resolution μCT analysis provided the volume and location of the bone cement. Models that were more complex retained significantly more bone debris than simpler designs. Model devices repeatedly soiled and cleaned 10 times retained significantly more bone debris than those soiled and cleaned once. Significantly more bone cement was retained in the more complex lumen structures. This information may be useful in designing reusable orthopedic devices, and other complex medical devices with lumens.

Title: Are radiologists superior to orthopaedic surgeons in diagnosing instability-related shoulder lesions on magnetic resonance arthrography? A multicenter reproducibility and accuracy study.

Citation: Journal of shoulder and elbow surgery / American Shoulder and Elbow Surgeons ... [et al.], Sep 2015, vol. 24, no. 9, p. 1405-1412 (September 2015)

Author(s): van Grinsven, Susan, Nijenhuis, Thijs A, Konings, Peer C, van Kampen, Albert, van Loon, Corné J M
Abstract: We compared the diagnostic reproducibility and accuracy of musculoskeletal radiologists with orthopaedic shoulder surgeons in 2 large medical centers in assessing magnetic resonance arthrograms (MRAs) of patients with traumatic anterior shoulder instability. Forty-five surgically confirmed MRAs were assessed by 4 radiologists, 4 orthopaedic surgeons, 2 radiologic teams, and 2 orthopaedic teams. During MRA assessment and surgery, the same 7-lesion scoring form was used. \( \kappa \) Coefficients, sensitivity, specificity, and differences in percentage of agreement or correct diagnosis (\( P < .05 \), McNemar test) were calculated per lesion and overall per the 7 lesion types. The overall \( \kappa \) between the individual radiologists (\( \kappa = 0.51, \kappa = 0.46 \)) and orthopaedic surgeons (\( \kappa = 0.46, \kappa = 0.41 \)) was moderate. Although the overall percentage of agreement between the radiologists was slightly higher than that between the orthopaedic surgeons in both centers (80.0% vs 77.5% and 75.2% vs 73.7%), there was no significant difference. In each medical center, however, the most experienced orthopaedic surgeon was exceedingly more accurate than both radiologists per the 7 lesion types (81.9% vs 72.4%/74.6% and 76.5% vs 67.3%/73.7%). In 3 of 4 cases, this difference was significant. Overall accuracy improvement through consensus assessment was merely established for the weakest member of each team. Experienced orthopaedic surgeons are more accurate than radiologists in assessing traumatic anterior shoulder instability-related lesions on MRA. In case of diagnosis disagreement, these orthopaedic surgeons should base their treatment decision on their own MRA interpretation. Copyright © 2015 Journal of Shoulder and Elbow Surgery Board of Trustees. Published by Elsevier Inc. All rights reserved.

Title: Sufficient Competence to Enter the Unsupervised Practice of Orthopaedics: What Is It, When Does It Occur, and Do We Know It When We See It? AOA Critical Issues.


Author(s): Pellegrini, Vincent D, Ferguson, Peter C, Cruess, Richard, Cruess, Sylvia, Briggs, Timothy W R

Abstract: The goal of residency programs is to provide an educational venue with graduated responsibility and increasing levels of independence as preparation for entering the unsupervised practice of medicine. Surgical programs are required to both cultivate and convey skills pursuant to three fundamental domains: a sufficient fund of knowledge, technical competence in surgical procedures, and a degree of professionalism to enable ethical independent practice. Never before has the expectation that residency programs provide graduated responsibility in preparation for entering the unsupervised practice of medicine been so clearly articulated as it has by Nasca in the recent Accreditation Council for Graduate Medical Education (ACGME) work-hour guideline revisions. The Royal College of Physicians and Surgeons has provided similar guidance in Canada. Yet, as we progress further into the second decade of work-hour restrictions, it is unclear that we have adequately defined or can recognize the critical end points essential to trainee competency. What is clear is that we must achieve these end points in a manner different from that prior to the introduction of work-hour restrictions. We present the current state of thinking from North America and contrast this with the evolving medical educational process in the United Kingdom. Copyright © 2015 by The Journal of Bone and Joint Surgery, Incorporated.
**Title:** A Validated Orthopaedic Surgical Simulation Model for Training and Evaluation of Basic Arthroscopic Skills.

**Citation:** The Journal of bone and joint surgery. American volume, Sep 2015, vol. 97, no. 17, p. 1465-1471 (September 2, 2015)

**Author(s):** Coughlin, Ryan P, Pauyo, Thierry, Sutton, J Carl, Coughlin, Larry P, Bergeron, Stephane G

**Abstract:** To our knowledge, there is currently no validated educational model to evaluate and teach basic arthroscopic skills that is widely accessible to orthopaedic residency training programs. The primary objective was to design and to validate a surgical simulation model by demonstrating that subjects with increasing level of training perform better on basic arthroscopic simulation tasks. The secondary objective was to evaluate inter-rater and intra-rater reliability of the model. Prospectively recruited participants were divided by level of training into four groups. Subjects performed six basic arthroscopic tasks using a box model: (1) probing, (2) grasping, (3) tissue resection, (4) shaving, (5) tissue liberation and suture-passing, and (6) knot-tying. A score was calculated according to time required to complete each task and deductions for technical errors. A priori total global score, of a possible 100 points, was calculated by averaging scores from all six tasks using equal weights. A total of forty-nine participants were recruited for this study. Participants were grouped by level of training: Group 1 (novice: fifteen medical students and interns), Group 2 (junior residents: twelve postgraduate year-2 or postgraduate year-3 residents), Group 3 (senior residents: sixteen postgraduate year-4 or postgraduate year-5 residents), and Group 4 (six arthroscopic surgeons). The mean total global score (and standard deviation) differed significantly between groups (p < 0.001): 29.0 ± 13.6 points for Group 1, 40.3 ± 12.1 points for Group 2, 57.6 ± 7.4 points for Group 3, and 72.4 ± 3.0 points for Group 4. Pairwise comparison with Tukey correction confirmed construct validity by showing significant improvement in overall performance by increasing level of training between all groups (p < 0.05). The model proved to be highly reliable with an intraclass correlation coefficient of 0.99 for both inter-rater and intra-rater reliability. A simulation model was successfully designed to teach and evaluate basic arthroscopic skills showing good construct validity. This arthroscopic simulation model is inexpensive, valid, and reliable and has the potential to be implemented in other training programs. Copyright © 2015 by The Journal of Bone and Joint Surgery, Incorporated.

---


**Citation:** Clinical orthopaedics and related research, Sep 2015, vol. 473, no. 9, p. 2762-2764

**Author(s):** Jevsevar, David S, Bozic, Kevin J

---

**Title:** Mental imagery and learning: a qualitative study in orthopaedic trauma surgery.

**Citation:** Medical education, Sep 2015, vol. 49, no. 9, p. 888-900 (September 2015)

**Author(s):** Ibrahim, Edward F, Richardson, Martin D, Nestel, Debra
Abstract: Good preparation for surgical procedures has been linked to better performance and enhanced learning in the operating theatre. Mental imagery is increasingly used to enhance performance in competitive sport and there has been recent interest in applying this in surgery. This study aims to identify the mental imagery components of preoperative preparation in orthopaedic trauma surgery and to locate these practices in existing socio-material theory in order to produce a model useful for surgical skills training. Semi-structured interviews were conducted with nine orthopaedic surgeons. Participants were identified by personal recommendation as regularly performing complex trauma operations to a high standard, and by affiliation to an international instruction course in trauma surgery. Interviews were audio-recorded and transcripts were independently analysed using thematic analysis. Analysis revealed that surgeons interact intensively with multiple colleagues and materials during their preparatory activities. Such interactions stimulate mental imagery in order to build strategy and rehearse procedures, which, in turn, stimulate preparatory interactions. Participants identified the discussion of a preoperative 'plan' as a key engagement tool for training junior surgeons and as a form of currency by which a trainee may increase his or her participation in a procedure. Preoperative preparation can be thought of as a socio-material ontology requiring a surgeon to negotiate imaginal, verbal and physical interactions with people, materials and his or her own mental imagery. Actor-network theory is useful for making sense of these interactions and for allowing surgeons to interrogate their own preparative processes. We recommend supervisors to use a form of preoperative plan as a teaching tool and to encourage trainees to develop their own preparatory skills. The ability of a trainee to demonstrate sound preparation is an indicator of readiness to perform a procedure. © 2015 John Wiley & Sons Ltd.

Title: ICD 10: A Primer for the Orthopedic Foot and Ankle Surgeon.
Citation: Foot & ankle international, Sep 2015, vol. 36, no. 9, p. 1110-1116
Author(s): Gonzalez, Tyler, Chiodo, Christopher
Abstract: The use of the 10th Revision of the International Classification of Diseases (ICD-10) will likely be required as of October 2015. ICD-10 was developed to increase the specificity and accuracy of disease and injury reporting. The number of diagnostic codes in this system has increased substantially, and approximately half of all ICD-10 codes are related to the musculoskeletal system, whereas 25% of all codes are related to fractures. For most foot and ankle injuries, the new code structure includes location, laterality, degree of healing, and encounter type. At the provider level, navigating this system will initially be a complex task. Understanding the ICD-10 code structure, properly training appropriate staff, and financially preparing for implementation will minimize potential practice disruption. © The Author(s) 2015.

Title: Journey in Orthopedic Science.
Citation: Journal of orthopaedic science : official journal of the Japanese Orthopaedic Association, Sep 2015, vol. 20, no. 5, p. 803-804 (September 2015)
Author(s): Kimura, Tomoatsu
Title: Barriers to Women Entering the Field of Orthopedic Surgery.

Citation: Orthopedics, Sep 2015, vol. 38, no. 9, p. 530-533 (September 1, 2015)

Author(s): Miller, Emily K, LaPorte, Dawn M

Title: Proximal Femoral Fractures: What the Orthopedic Surgeon Wants to Know.


Author(s): Sheehan, Scott E, Shyu, Jeffrey Y, Weaver, Michael J, Sodickson, Aaron D, Khurana, Bharti

Abstract: Each year, more than 250,000 hip fractures occur in the United States, resulting in considerable patient mortality and morbidity. The various types of adult proximal femoral fractures require different treatment strategies that depend on a variety of considerations, including the location, morphologic features, injury mechanism, and stability of the fracture, as well as the patient's age and baseline functional status. The authors discuss femoral head, femoral neck, intertrochanteric, and subtrochanteric fractures in terms of injury mechanisms, specific anatomic and biomechanical features, and important diagnostic and management considerations, including the diagnostic utility of imaging modalities. The authors review clinically important classification systems, such as the Pipkin, Garden, Pauwels, and Evans-Jensen classification systems, with emphasis on differentiating subchondral insufficiency fractures from avascular necrosis of the femoral head and typical subtrochanteric fractures from atypical (often bisphosphonate-related) subtrochanteric fractures. In addition, the authors describe the potential complications and management strategies for each fracture type on the basis of the patient's age and physical condition. A clear understanding of these considerations allows the radiologist to better provide appropriate and relevant diagnostic information and management guidance to the orthopedic surgeon. Online supplemental material is available for this article. (©)RSNA, 2015.

Title: Proximal Femoral Fractures: What the Orthopedic Surgeon Wants to Know-Erratum.


Author(s): Sheehan, Scott E, Shyu, Jeffrey Y, Weaver, Michael J, Sodickson, Aaron D, Khurana, Bharti

Journal Tables of Contents

The most recent issues of the following journals:

- Journal of Bone and Joint Surgery
- Journal of Orthopaedic Trauma
- Injury
- Strategies in Trauma and Limb Construction
- Clinical Orthopaedics and Related Research

Click on the links for abstracts. If you would like any of these papers in full text then get in touch: librarys@uhbristol.nhs.uk

**Journal of Bone and Joint Surgery**

**October 7, 2015: volume 97, issue 19**

http://jbjs.org/content/97/19?current-issue=y

**Journal of Orthopaedic Trauma**

**October 2015 - Volume 29 - Issue 10**

http://journals.lww.com/jorthotrauma/pages/currenttoc.aspx

**Injury**

**October 2015 Volume 46, Issue 10**

http://www.injuryjournal.com/current
Strategies in Trauma and Limb Construction
Volume 10, Issue 2, August 2015
http://link.springer.com/journal/11751/10/2/page/1

Clinical Orthopaedics and Related Research
Volume 473, Number 11 / November, 2015
UpToDate is the leading evidence-based clinical decision support system, designed for use at the point of care.

It contains more than 9,500 searchable topics across the following specialities:

- Adult and paediatric emergency medicine
- Allergy and immunology
- Cardiovascular medicine
- Dermatology
- Drug therapy
- Endocrinology and diabetes mellitus
- Family medicine
- Gastroenterology and hepatology
- General surgery
- Geriatrics
- Haematology
- Hospital Medicine
- Infectious diseases
- Nephrology and hypertension
- Neurology
- Obstetrics and gynaecology
- Oncology
- Paediatrics
- Primary care internal medicine
- Psychiatry
- Pulmonary, critical care and sleep medicine
- Rheumatology

How to access UpToDate

You can access UpToDate from any computer via www.uptodate.com. You will need your NHS Athens username (register through http://openathens.nice.org.uk/).
Library Opening Times

Staffed hours: 8am-5pm, Mon-Fri
Swipe-card access: 7am-11pm 7 days a week

Level 5, Education and Research Centre
University Hospitals Bristol

Contact your outreach librarian:

Jo Hooper, outreach librarian

library@uhbristol.nhs.uk  Ext. 20103