

CONSORT Randomized Clinical Trial

[Effect of Nitrous Oxide on the Efficacy of the Inferior Alveolar Nerve Block in Patients with Symptomatic Irreversible Pulpitis](#)

William Stanley, Melissa Drum, John Nusstein, Al Reader, Mike Beck

Clinical Research

[Five-Year Longitudinal Assessment of the Prognosis of Apical Microsurgery](#)

Thomas von Arx, Simon S. Jensen, Stefan Hänni, Shimon Friedman

[Response of Pulp Sensibility Test Is Strongly Influenced by Periodontal Attachment Loss and Gingival Recession](#)

Cristiane Rutsatz, Simone Glesse Baumhardt, Carlos Alberto Feldens, Cassiano Kuchenbecker Rösing, Renata Grazziotin-Soares, Fernando Branco Barletta

[Tobacco Smoking and Radiographic Periapical Status: A Retrospective Case-Control Study](#)

José López-López, Enric Jané-Salas, Jenifer Martín-González, Lizett Castellanos-Cosano, José María Llamas-Carreras, Eugenio Velasco-Ortega, Juan José Segura-Egea

[Validity of Self-reported History of Endodontic Treatment in the Baltimore Longitudinal Study of Aging](#)

Maximiliano Schünke Gomes, Fernando Neves Hugo, Juliana Balbinot Hilgert, Dalva Maria Pereira Padilha, Eleanor Marie Simonsick, Luigi Ferrucci, Mark Allan Reynolds

[Comparison of the Anesthetic Efficacy between Bupivacaine and Lidocaine in Patients with Irreversible Pulpitis of Mandibular Molar](#)

Roberta Moura Sampaio, Talita Girio Carnaval, Camila Bernardeli Lanfredi, Anna Carolina Ratto Tempestini Horliana, Rodney Garcia Rocha, Isabel Peixoto Tortamano

[Anesthetic Efficacy of Combinations of 0.5 mol/L Mannitol and Lidocaine with Epinephrine for Inferior Alveolar Nerve Blocks in Patients with Symptomatic Irreversible Pulpitis](#)

Timothy Kreimer, Russell Kiser, Al Reader, John Nusstein, Melissa Drum, Mike Beck

Basic Research

Biology

[Genetic Susceptibility to Periapical Disease: Conditional Contribution of *MMP2* and *MMP3* Genes to the Development of Periapical Lesions and Healing Response](#)

Renato Menezes-Silva, Shahryar Khaliq, Kathleen Deeley, Ariadne Letra, Alexandre R. Vieira

[Low-intensity Low-frequency Ultrasound Promotes Proliferation and Differentiation of Odontoblast-like Cells](#)

Jennifer Man, Richard M. Shelton, Paul R. Cooper, Ben A. Scheven

[Basic Fibroblast Growth Factor Enhances Stemness of Human Stem Cells from the Apical Papilla](#)

Jiayuan Wu, George T.-J. Huang, Wenxi He, Ping Wang, Zhongchun Tong, Qian Jia, Liping Dong, Zhongying Niu, Longxing Ni

[Lipopolysaccharide-induced Stem Cell Factor Messenger RNA Expression and Production in Odontoblast-like Cells](#)

Sandra Helena Penha Oliveira, Vanessa Aparecida Carvalho Santos

[Vascular Endothelial Growth Factors and Receptors Are Up-regulated during Development of Apical Periodontitis](#)
Athanasia Bletsas, Anca Virtej, Ellen Berggreen

[No Evidence for DNA Double-strand Breaks Caused by Endodontic Sealers](#)
Kirsten L. Van Landuyt, Benjamin Geebelen, Mostafa Shehata, Silja L. Furche, Jürgen Durner, Bart Van Meerbeek, Reinhard Hickel, Franz X. Reichl

[Proliferation and Multilineage Potential of CXCR4-positive Human Dental Pulp Cells *In Vitro*](#)
Long Jiang, Wei-Wei Peng, Li-Fen Li, Ya Yang, Ya-Qin Zhu

[Gene Expression Analysis of Membrane Transport Proteins in Normal and Lipopolysaccharide-inflamed Rat Dental Pulp](#)
Naoto Ohkura, Yoshimi Shigetani, Nagako Yoshida, Kunihiko Yoshida, Takashi Okiji

Technology

[Resistance to Vertical Root Fracture of Endodontically Treated Teeth with MetaSEAL](#)
Handan Ersev, Bülent Yılmaz, Erdal Pehlivanoğlu, Ece Özcan-Çalışkan, Fehmi Raif Erişen

[Irrigant Flow beyond the Insertion Depth of an Ultrasonically Oscillating File in Straight and Curved Root Canals: Visualization and Cleaning Efficacy](#)
Maher Malki, Bram Verhaagen, Lei-Meng Jiang, Walid Nehme, Alfred Naaman, Michel Versluis, Paul Wesselink, Lucas van der Sluis

[In Vitro Evaluation of Dentin Tubule Occlusion by Densshield and Neodymium-doped Yttrium-Aluminum-Garnet Laser Irradiation](#)
Eleftherios-Terry R. Farmakis, Konstantinos Kozyrakis, Marouan G. Khabbaz, Ulrich Schoop, Franziska Beer, Andreas Moritz

[Resistance to Cyclic Fatigue Failure of a New Endodontic Rotary File](#)
Jason Bouska, Bruce Justman, Anne Williamson, Christopher DeLong, Fang Qian

[A Micro-Computed Tomography Evaluation of Mineral Trioxide Aggregate Root Canal Fillings](#)
Ahmad M. EL-Ma'aita, Alison J.E. Qualtrough, David C. Watts

[Effect of Nitrogen Ion Implantation on the Flexibility of Rotary Nickel-Titanium Instruments](#)
Marcelo dos Santos, Giulio Gavini, Evandro Luiz Siqueira, Cristiane da Costa

[Ability of Gutta-Percha and Resilon to Fill Simulated Lateral Canals by Using the Obtura II System](#)
Mário Tanomaru-Filho, Arnaldo Sant'Anna-Junior, Fábio Luis C.V. Berbert, Roberta Bosso, Juliane Maria Guerreiro-Tanomaru

[Effects of Calcium Silicate-based Materials on the Flexural Properties of Dentin](#)
Allen N. Sawyer, Sergey Y. Nikonov, Alaina K. Pancio, Li-na Niu, Kelli A. Agee, Robert J. Loushine, Roger N. Weller, David H. Pashley, Franklin R. Tay

[Resistance to Flexural Fatigue of Reciproc R25 Files under Continuous Rotation and Reciprocating Movement](#)
Giulio Gavini, Celso Luiz Caldeira, Eduardo Akisue, George Táccio de Miranda Candeiro, Dirce Akemi Sacaguti Kawakami

[In Vitro Comparison of Passive and Continuous Ultrasonic Irrigation in Simulated Lateral Canals of Extracted Teeth](#)
Pablo Castelo-Baz, Benjamín Martín-Biedma, Giuseppe Cantatore, Manuel Ruíz-Piñón, José Bahillo, Berta Rivas-Mundiña, Purificación Varela-Patiño

[Reduction of Hard-tissue Debris Accumulation during Rotary Root Canal Instrumentation by Etidronic Acid in a Sodium Hypochlorite Irrigant](#)
Frank Paqué, Dan-Krister Rechenberg, Matthias Zehnder

[The Effect of Prior Calcium Hydroxide Intracanal Placement on the Bond Strength of Two Calcium Silicate-based and an Epoxy Resin-based Endodontic Sealer](#)
Suzan Abdul Wanees Amin, Reham Saeed Seyam, Mohammed Abbas El-Samman

Effects of Bone Graft Materials on the Microhardness of Mineral Trioxide Aggregate
Erick Y. Sato, Timothy Svec, Brian Whitten, Christine M. Sedgley

The Effect of Surfactant Addition to EDTA on Microhardness of Root Dentin
Ilgin Akcay, Bilge H. Sen

Book Review

Seltzer and Bender's Dental Pulp, *2nd ed*
Christine Sedgley