

REFERENCES AND RESOURCES:

Prepared by the [International Academy of Oral Medicine and Toxicology](#) (IAOMT) to accompany our Dental Biocompatibility and Oral Galvanism Online Learning Video and listed by video section:

Introduction:

Clinical Research Associates. CRA Newsletter: Clinicians' Preferences. 2001;25(12):3.
[Now Gordon J. Christiansen Clinicians Report.]

Photo of [Various of Artificial Jaw Models with Dental Implants and Crowns from 123rf.](#)

FDA and Dental Materials:

Photo of [Guidelines and Regulations Binders from 123rf.](#)

U.S. Department of Health and Human Services Food and Drug Administration Center for Devices and Radiological Health. Use of International Standard ISO 10993-1, "Biological evaluation of medical devices - Part 1: Evaluation and testing within a risk management process" Guidance for Industry and Food and Drug Administration Staff. June 2016. Available from: <https://www.fda.gov/media/85865/download>

Photo of [Stack of Standards and Rules Books from 123rf.](#)

ISO/TC 194 Biological and clinical evaluation of medical devices. ISO 10993-1:2018 Biological evaluation of medical devices — Part 1: Evaluation and testing within a risk management process. 11.100.20 Biological evaluation of medical devices. August 2018. Available from: <https://www.iso.org/standard/68936.html>

Photo of [Regulatory Affairs from 123rf.](#)

Cambiaghi A. Biological Evaluation of Medical Devices as an Essential Part of the Risk Management Process: Updates and Challenges of ISO 10993-1: 2018. Available from: https://cdnmedia.eurofins.com/european-west/media/1927774/9432_biological-evaluation-of-medical-devices_whp.pdf

Photo of [Industry Knob from 123rf.](#)

Augustynek M, Cihak J, Vilimek D, Kubicek J, Penhaker M, Fiedorova K. Biocompatibility of Medical Devices and Their Risks. In 2019 8th European Workshop on Visual Information Processing (EUVIP) 2019 Oct 28 (pp. 228-231). IEEE. Available from: https://www.researchgate.net/profile/Dominik_Vilimek/publication/338368280_Biocompatibility_of_Medical_Devices_and_Their_Risks/links/5e4cf632a6fdcccd965b0d3af/Biocompatibility-of-Medical-Devices-and-Their-Risks.pdf

Photo of [Implant Files from Christina Chung](#)/ICIJ. Image reproduced with permission from the International Consortium of Investigative Journalists.

Wilson-Chapman A, Armendariz A. Readers from 50 countries share medical implant stories. International Consortium of Investigative Journalists Implant Files. November 16, 2019. Available from: https://www.icij.org/investigations/implant-files/readers-from-50-countries-share-medical-implant-stories/?utm_source=ICIJ&utm_campaign=2513b191bc-1119_WeeklyEmail&utm_medium=email&utm_term=0_992ecfdbb2-2513b191bc-82115641

Photo of [FDA and Bayer Essure Letter from FDA](#).

Photo of [FDA Immunology Devices Panel Announcement November 2019 from FDA](#).

U.S. Department of Health and Human Services Food and Drug Administration (FDA). Epidemiological Evidence on the Adverse Health Effects Reported in Relation to Mercury from Dental Amalgam: Systematic Literature Review (2010-Present). September 2019. Available from: <https://www.fda.gov/media/131151/download>

U.S. Department of Health and Human Services Food and Drug Administration (FDA). Biological Responses to Metal Implants. September 2019. Available from: <https://www.fda.gov/media/131150/download>

Kall J, Just A. Comments in reference to Docket ID No. FDA-2019-N-3767: Immunology Devices Panel of the Medical Devices Advisory Committee Meeting on Dental Amalgam and Metal Implants. October 15, 2019. Available from: <https://www.regulations.gov/contentStreamer?documentId=FDA-2019-N-3767-0026&attachmentNumber=1&contentType=pdf>

Executive Chairman of the Board, Jack Kall, DMD, MIAOMT, Testifies to the FDA 2019 [video]. Footage from FDA's Immunology Devices Panel Meeting on November 14, 2019. IAOMT YouTube Channel. Posted November 26, 2019. Available from: <https://youtu.be/OGiNIhAAcI8>

Rachal M. FDA advisers: Metal implants need beefed up ingredient labels. MedTech Dive. November 15, 2019. Available from: <https://www.medtechdive.com/news/fda-advisers-metal-implants-need-beefed-up-ingredient-labels/567412/>

Photo of [FDA Website on Computer Screen from 123rf](#).

U.S. Department of Health and Human Services Food and Drug Administration (FDA). Metals Used in Medical Devices. FDA website. Available from: <https://www.fda.gov/medical-devices/products-and-medical-procedures/metals-used-medical-devices>

Adverse Reactions to Metal Implants and Devices

Video of [Zinc in Beaker from Pixabay](#) by user [SciFirst](#).

Video of [Digital Tooth Implant from Pixabay](#) by user [F1Digitals](#).

Photo of [Dental Amalgam Filling from 123rf](#).

Just A, Kall J. Autoimmune Diseases and Metal Implants And Devices. ChampionsGate, FL: IAOMT; 2019. Available from: www.theSMARTchoice.com/wp-content/uploads/Metal-Implants-and-Autoimmunity.pdf

Sterzl I, Procházková J, Hrdá P, Bártová J, Matucha P, Stejskal VD. Mercury and nickel allergy: risk factors in fatigue and autoimmunity. *Neuro Endocrinol Lett*. 1999; 20:222. Available from: <http://www.melisa.org/pdf/nialler.pdf>

Photo of [Oral Lichen Planus from Wikimedia Commons](#). Taken from article by Lieutenant Rachel L. Werner DC USN, Commander S. Marc Stokes DC USN, Colonel Christopher Fielding DC USA. The dynamics of oral lichen planus and lichenoid mucositis. *Clinical Update* [Publication of the Naval Postgraduate Dental School; Navy Medicine Professional Development Center in Bethesda, Maryland]. 2014; 36(5): 1.

Photo of [X-Ray of Knee from Pixabay](#) by user [Taokinesis](#) Dr. Manuel González Reyes.

Photo of [Brain Inflammation from Pixabay](#) by user [VSRao](#).

Just A, Kall J. Autoimmune Diseases and Metal Implants And Devices. ChampionsGate, FL: IAOMT; 2019. Available from: www.theSMARTchoice.com/wp-content/uploads/Metal-Implants-and-Autoimmunity.pdf

Photo of Dr. Vera Stejskal courtesy of [MELISA Diagnostics](#).

Stejskal V. Metals as a common trigger of inflammation resulting in non-specific symptoms: diagnosis and treatment. *The Israel Medical Association Journal: IMAJ*. 2014 Dec;16(12):757. Available from: <http://www.melisa.org/wp-content/uploads/2015/01/Metals-as-a-Common-Trigger-of-Inflammation.pdf>

Photo of [Depressed Man from Pixabay](#) by user [whoismargot](#) Małgorzata Tomczak.

Photo of [Emotional Female from Pixabay](#) by user [1388843](#).

Photo of [Pile of Jewelry from Pixabay](#) by user [PublicDomainPictures](#).

Photo of [Jean Buttons from Pixabay](#) by user [MichaelGaida](#) <https://500px.com/michael-gaida>.

Just A, Kall J. Autoimmune Diseases and Metal Implants And Devices. ChampionsGate, FL: IAOMT; 2019. Available from: www.theSMARTchoice.com/wp-content/uploads/Metal-Implants-and-Autoimmunity.pdf

Stejskal V. Metals as a common trigger of inflammation resulting in non-specific symptoms: diagnosis and treatment. *The Israel Medical Association Journal: IMAJ*. 2014 Dec;16(12):757. Available from: <http://www.melisa.org/wp-content/uploads/2015/01/Metals-as-a-Common-Trigger-of-Inflammation.pdf>

Sterzl I, Prochazkova J, Hrda P, Matucha P, Bartova J, Stejskal V. Removal of dental amalgam decreases anti-TPO and anti-Tg autoantibodies in patients with autoimmune thyroiditis. *Neuroendocrinology Letters*. 2006 Dec;27:103. Available from: http://www.melisa.org/pdf/Sterzl_Am_2006.pdf

Kall J, Robertson K, Sukel AP, Just A. International Academy of Oral Medicine and Toxicology (IAOMT) Position Statement against Dental Mercury Amalgam Fillings for Medical and Dental Practitioners, Dental Students, and Patients. ChampionsGate, FL: IAOMT; 2019. Available from: <https://iaomt.org/wp-content/uploads/IAOMT-Position-Paper-Dental-Mercury-Amalgam-Full.pdf>

Video of [Crowd 1 from Pixabay](#) by user [Coverr-Free-Footage](#).

Video of [Crowd 2 from Pixabay](#) by user [Coverr-Free-Footage](#).

Kall J, Robertson K, Sukel AP, Just A. International Academy of Oral Medicine and Toxicology (IAOMT) Position Statement against Dental Mercury Amalgam Fillings for Medical and Dental Practitioners, Dental Students, and Patients. ChampionsGate, FL: IAOMT; 2019. <https://iaomt.org/wp-content/uploads/IAOMT-Position-Paper-Dental-Mercury-Amalgam-Full.pdf>

Kall J, Just A, Aschner M. What is the risk? Dental amalgam, mercury exposure, and human health risks throughout the lifespan. *Epigenetics, the Environment, and Children's Health across Lifespans*. David J. Hollar, ed. Springer. 2016. pp. 159-206 (Chapter 7). Abstract available from: http://link.springer.com/chapter/10.1007/978-3-319-25325-1_7

Video of [DNA 1 from Pixabay](#) by user [NewHumanDesigns](#).

Video of [DNA 2 from Pixabay](#) by user [motionstock](#) Delhi/India.

Just A, Kall J. A Comprehensive Review of the Toxic Effects of Mercury in Dental Amalgam Fillings on the Environment and Human Health. ChampionsGate, FL: IAOMT; 2019. Available from: <https://files.iaomt.org/wp-content/uploads/Comprehensive-Review-Dental-Mercury.pdf>

Allergies and Sensitivities to Dental Materials

Photo of [Atrophic, Erythematous Lesion from Wikimedia Commons](#): Taken from article by Lieutenant Rachel L. Werner DC USN, Commander S. Marc Stokes DC USN, Colonel Christopher Fielding DC USA. The dynamics of oral lichen planus and lichenoid mucositis. *Clinical Update* [Publication of the Naval Postgraduate Dental School; Navy Medicine Professional Development Center in Bethesda, Maryland]. 2014; 36(5): 1.

Kennedy D, Just A. Metal Allergies, Genetic Susceptibility to Mercury, and Toxic Dental Materials Other than Mercury. ChampionsGate, FL: IAOMT; 2014. Available from: <https://iaomt.org/wp-content/uploads/Metal-allergies-toxic-materials.pdf>

Hosoki M, Nishigawa K. Book Chapter “Dental Metal Allergy” in *Contact Dermatitis*, edited by Young Suck Ro, ISBN 978-953-307-577-8, InTech, December 12, 2011. Available from: <http://www.intechopen.com/download/get/type/pdfs/id/25247>

Video of [Periodic Table of Elements from Pixabay](#) by user [tommyvideo](#) Tomislav Jakupec.

Photo of [Hand, Foot, and Mouth from Pixabay](#) by user [mohamed_hassan](#).

Kennedy D, Just A. Metal Allergies, Genetic Susceptibility to Mercury, and Toxic Dental Materials Other than Mercury. ChampionsGate, FL: IAOMT; 2014. Available from: <https://iaomt.org/wp-content/uploads/Metal-allergies-toxic-materials.pdf>

Video of [Microscope from Pixabay](#) by user [tommyvideo](#) Tomislav Jakupec.

Kennedy D, Just A. Metal Allergies, Genetic Susceptibility to Mercury, and Toxic Dental Materials Other than Mercury. ChampionsGate, FL: IAOMT; 2014. Available from: <https://iaomt.org/wp-content/uploads/Metal-allergies-toxic-materials.pdf>

Photo of [Woman with Pierced Ear from Pixabay](#) by user [littleprince2](#) HYUN CHAE LIM.

Photo of [Man with Pierced Ear from Pixabay](#) by user [macdestroir](#) Mac Destroir.

Photo of [Harvard University from Pixabay](#) by user [12019](#).

Kennedy D, Just A. Metal Allergies, Genetic Susceptibility to Mercury, and Toxic Dental Materials Other than Mercury. ChampionsGate, FL: IAOMT; 2014. Available from: <https://iaomt.org/wp-content/uploads/Metal-allergies-toxic-materials.pdf>

Kaplan M. Infections may trigger metal allergies. *Nature*. May 2, 2007. Available from: <http://www.nature.com/news/2007/070430/full/news070430-6.html>

Teo ZW, Schalock PC. Hypersensitivity reactions to implanted metal devices: facts and fictions. *J Investig Allergol Clin Immunol*. 2016 Jan 1;26(5):280. Available from: <https://pdfs.semanticscholar.org/698e/e81a0e73f24113646ef6e9d0ec9f34b7e135.pdf>

Photo of [Digital Crowd of People from Pixabay](#) by user [8385](#).

Video of [Watch Passing Time from Pixabay](#) by user [josemdelaa](#) José Manuel de Laá.

Kennedy D, Just A. Metal Allergies, Genetic Susceptibility to Mercury, and Toxic Dental Materials Other than Mercury. ChampionsGate, FL: IAOMT; 2014. Available from: <https://iaomt.org/wp-content/uploads/Metal-allergies-toxic-materials.pdf>

Djerassi E, Berova N. The possibilities of allergic reactions from silver amalgam restorations. *Internat Dent J.* 1969; 19(4):481-8.

Photo of [Red Skin Rash from Pixabay](#) by user [Hans](#) Hans Braxmeier.

Photo of [Woman Itching Arm from Pixabay](#) by user [nastya-gepp](#) Anastasia Gepp.

Kennedy D, Just A. Metal Allergies, Genetic Susceptibility to Mercury, and Toxic Dental Materials Other than Mercury. ChampionsGate, FL: IAOMT; 2014. Available from: <https://iaomt.org/wp-content/uploads/Metal-allergies-toxic-materials.pdf>

Photo of [Depressed Man Silhouette from Pixabay](#) by user [PublicDomainPictures](#).

Photo of [Man Taking Pills from Pixabay](#) by user [ElisaRiva](#).

Photo of [Wheelchair at Beach from Pixabay](#) by user [StockSnap](#).

Photo of [Pregnancy Test from Pixabay](#) by user [JuliaFiedler](#) Julia Fiedler.

Photo of [Cancer Magnifying Glass Newspaper from Pixabay](#) by user [PDPics](#).

Kennedy D, Just A. Metal Allergies, Genetic Susceptibility to Mercury, and Toxic Dental Materials Other than Mercury. ChampionsGate, FL: IAOMT; 2014. Available from: <https://iaomt.org/wp-content/uploads/Metal-allergies-toxic-materials.pdf>

Lupus Foundation of America. People with Lupus Exhibit Increased Need for Dental Management. January 8, 2020. Available from: <https://www.lupus.org/news/people-with-lupus-exhibit-increased-need-for-dental-management#>

Photo of [Dentist and Hygienist from Pixabay](#) by user [skeeze](#).

Kennedy D, Just A. Metal Allergies, Genetic Susceptibility to Mercury, and Toxic Dental Materials Other than Mercury. ChampionsGate, FL: IAOMT; 2014. Available from: <https://iaomt.org/wp-content/uploads/Metal-allergies-toxic-materials.pdf>

Removing Dental Metals

[Before and After Photos of Teeth from Amalgam Removal](#) courtesy of Dr. Michael Rehme.

Kall J, Robertson K, Sukel AP, Just A. International Academy of Oral Medicine and Toxicology (IAOMT) Position Statement against Dental Mercury Amalgam Fillings for Medical and Dental Practitioners, Dental Students, and Patients. ChampionsGate, FL: IAOMT; 2019. Available from: <https://iaomt.org/wp-content/uploads/IAOMT-Position-Paper-Dental-Mercury-Amalgam-Full.pdf>

International Academy of Oral Medicine and Toxicology (IAOMT). The Safe Mercury Amalgam Removal Technique (SMART) with Scientific References. Last updated July 19, 2019. Available from: <https://iaomt.org/resources/safe-removal-amalgam-fillings/>

Alternatives to Dental Amalgam and Other Dental Metals

Photo of [Metal Teeth Denture from Pixabay](#) by user [NinaMarie](#) Nina Edmondson.

Photo of [Woman's Mouth from Pixabay](#) by user [Tumisu](#).

Photo of [Woman Using a Microscope from Pixabay](#) by user [ernestoeslava](#) Ernesto Eslava.

Laske M, Opdam NJ, Bronkhorst EM, Braspenning JC, Huysmans MC. Longevity of direct restorations in Dutch dental practices. Descriptive study out of a practice based research network. *Journal of Dentistry*. 2016 Mar 1;46:12-7. Available from: <https://repository.ubn.ru.nl/bitstream/handle/2066/201886/201886.pdf?sequence=1#page=21>

Kall J, Robertson K, Sukel AP, Just A. International Academy of Oral Medicine and Toxicology (IAOMT) Position Statement against Dental Mercury Amalgam Fillings for Medical and Dental Practitioners, Dental Students, and Patients. ChampionsGate, FL: IAOMT; 2019. Available from: <https://iaomt.org/wp-content/uploads/IAOMT-Position-Paper-Dental-Mercury-Amalgam-Full.pdf>

Richardson GM, Clemow SR, Peters RE, James KJ, Siciliano SD. Assessment of exposures and potential risks to the US adult population from wear (attrition and abrasion) of gold and ceramic dental restorations. *Journal of Exposure Science and Environmental Epidemiology*. 2016 Jan 1;26(1):70-7. Abstract available from: <https://www.nature.com/articles/jes201517>

Testing and Diagnosing Reactivity for Dental Materials

Stejskal VD, Cederbrant K, Lindvall A, Forsbeck M. MELISA—an in vitro tool for the study of metal allergy. *Toxicology in vitro*. 1994 Oct 1;8(5):991-1000. Available from <http://www.melisa.org/pdf/MELISA-1994.pdf>

MELISA Diagnostics Website is <https://www.melisa.org>.

ELISA/ACT Biotechnologies Website is <https://www.elisaact.com/>.

Koral S. A practical guide to compatibility testing for dental materials. IAOMT. Available from: <http://iaomt.org/practical-guide-compatibility-testing-dental-materials/>

Biocomp Laboratories Website is <https://biocomplabs.com/>.

Clifford Consulting and Research Website is <http://www.ccrlab.com/>.

Oral Galvanism

Photo of [Man with Battery in Mouth from 123rf](#).

Zohdi H, Emami M, Shahverdi HR. Chapter 7: Galvanic Corrosion Behavior of Dental Alloys. *Environmental and Industrial Corrosion – Practice and Theoretical Aspects*. 2012.

Photo of [Corroded Car Battery from 123rf](#).

Video of [Woman with Face Pain from Pixabay](#) by user [mellewol](#) Wolfgang Sauerwald.

Kall J, Just A. Electric Teeth: Chemical Reactions in the Mouth and the Phenomenon of Oral Galvanism. ChampionsGate, FL: IAOMT. 2014. Available from:

<https://iaomt.org/wp-content/uploads/Electric-Teeth-Oral-Galvanism.pdf>

Pleva J. Corrosion and mercury release from dental amalgam. *J. Orthomol. Med.* 1989; 4(3): 141-158. Available from:

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.456.8237&rep=rep1&type=pdf>

Scott Schroeder, DPM, FACFAS, FDA Testimony: Systemic Effects of Metal Implants [video]. Footage from FDA's Immunology Devices Panel Meeting on November 13, 2019. IAOMT YouTube Channel. Posted July XX, 2020. Available from:
<https://youtu.be/yEM1QG5bC-s>

Koral S. The Dental Potato Clock. IAOMT YouTube Channel. Posted October 2, 2014.
Available from: <https://youtu.be/c9kj-XfVang>

Conclusion

Photo of [Boy with Mouth Open from Pixabay](#) by user [harshvardhanart](#) Harsh Vardhan Art.

Photo of [Man Smiling and Driving from Pixabay](#) by user [2704056](#).

Photo of [Woman Smiling and Chin from Pixabay](#) by user [34680](#).

Photo of [Smiling Monk from Pixabay](#) by user [terimakasih0](#) Dean Moriarty.

Photo of [Woman Smiling and Nose from Pixabay](#) by user [34680](#).

Photo of [Woman in Hat Smiling from Pixabay](#) by user [terimakasih0](#) Dean Moriarty.

Photo of [Close-up of Man's Teeth and Smile from Pixabay](#) by user [Johnoaz](#) John Oliver.

Photo of [Woman Smiling in Garden from Pixabay](#) by user [DtheDelinquent](#) Joey Velasquez.

In addition to the references above, the resources listed below are also being provided as relevant supporting materials:

Script for Dental Biocompatibility and Oral Galvanism Online Learning Video

Selected Scientific Literature Related to Dental Biocompatibility and Oral Galvanism