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Current Position

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Selected Publications RELATED TO DIABETES:

- 1:** Schroeder HT, De Lemos Muller CH, Heck TG, Krause M, Homem de Bittencourt PI Jr. The dance of proteostasis and metabolism: Unveiling the caloristatic controlling switch. *Cell Stress Chaperones*. 2024 Feb;29(1):175-200.
- 2:** Schroeder HT, De Lemos Muller CH, Heck TG, Krause M, Homem de Bittencourt PI Jr. Resolution of inflammation in chronic disease via restoration of the heat shock response (HSR). *Cell Stress Chaperones*. 2024 Feb;29(1):66-87.
- 3:** Schroeder HT, De Lemos Muller CH, Heck TG, Krause M, Homem de Bittencourt PI. Heat shock response during the resolution of inflammation and its progressive suppression in chronic-degenerative inflammatory diseases. *Cell Stress Chaperones*. 2024 Feb;29(1):116-142.
- 4:** Krause M, De Vito G. Type 1 and Type 2 Diabetes Mellitus: Commonalities, Differences and the Importance of Exercise and Nutrition. *Nutrients*. 2023 Oct 7;15(19):4279.
- 5:** de Lemos Muller CH, Schroeder HT, Rodrigues-Krause J, Krause M. Extra and intra cellular HSP70 levels in adults with and without metabolic disorders: a systematic review and meta-analysis. *Cell Stress Chaperones*. 2023 Nov;28(6):761-771.
- 6:** Borges Russo MK, Kowalewski LS, da Natividade GR, de Lemos Muller CH, Schroeder HT, Bock PM, Ayres LR, Cardoso BU, Zanotto C, Schein JT, Rech TH, Crispim D, Canani LH, Friedman R, Leitão CB, Gerchman F, Krause M. Elevated Extracellular HSP72 and Blunted Heat Shock Response in Severe COVID-19 Patients. *Biomolecules*. 2022 Sep 26;12(10):1374
- 7:** Minnock D, Annibalini G, Valli G, Saltarelli R, Krause M, Barbieri E, De Vito G. Altered muscle mitochondrial, inflammatory and trophic markers, and reduced exercise training adaptations in type 1 diabetes. *J Physiol*. 2022 Mar;600(6):1405-1418.
- 8:** Minnock D, Annibalini G, Le Roux CW, Contarelli S, Krause M, Saltarelli R, Valli G, Stocchi V, Barbieri E, De Vito G. Effects of acute aerobic, resistance and combined exercises on 24-h glucose variability and skeletal muscle signalling responses in type 1 diabetics. *Eur J Appl Physiol*. 2020 Dec;120(12):2677-2691
- 9:** Krause M, Gerchman F, Friedman R. Coronavirus infection (SARS-CoV-2) in obesity and diabetes comorbidities: is heat shock response determinant for the disease complications? *Diabetol Metab Syndr*. 2020 Jul 16;12:63.
- 10:** Rodrigues-Krause J, Krause M, Rocha IMGD, Umpierre D, Fayh APT. Association of L-Arginine Supplementation with Markers of Endothelial Function in Patients with Cardiovascular or Metabolic Disorders: A Systematic Review and Meta- Analysis. *Nutrients*. 2018 Dec 20;11(1):15.

- 11:** Farinha JB, Ramis TR, Vieira AF, Macedo RCO, Rodrigues-Krause J, Boeno FP, Schroeder HT, Müller CH, Boff W, Krause M, De Bittencourt PIH Jr, Reischak-Oliveira A. Glycemic, inflammatory and oxidative stress responses to different high-intensity training protocols in type 1 diabetes: A randomized clinical trial. *J Diabetes Complications*. 2018 Dec;32(12):1124-1132
- 12:** de Lemos Muller CH, Rech A, Botton CE, Schroeder HT, Bock PM, Farinha JB, Lopez P, Schöler CM, Grigolo GB, Coelho J, Kowalewski LS, Rodrigues MIL, de Azevedo MA, Quincozes-Santos A, Rodrigues-Krause J, Reischak-Oliveira A, Pinto RS, De Vito G, de Bittencourt Júnior PIH, Krause M. Heat-induced extracellular HSP72 release is blunted in elderly diabetic people compared with healthy middle-aged and older adults, but it is partially restored by resistance training. *Exp Gerontol*. 2018 Oct 1;111:180-187.
- 13:** Fayh APT, Borges K, Cunha GS, Krause M, Rocha R, de Bittencourt PIH Jr, Moreira JCF, Friedman R, da Silva Rossato J, Fernandes JR, Reischak-Oliveira A. Effects of n-3 fatty acids and exercise on oxidative stress parameters in type 2 diabetic: a randomized clinical trial. *J Int Soc Sports Nutr*. 2018 Apr 23;15:18.
- 14:** Farinha JB, Krause M, Rodrigues-Krause J, Reischak-Oliveira A. Exercise for type 1 diabetes mellitus management: General considerations and new directions. *Med Hypotheses*. 2017 Jul;104:147-153.
- 15:** Curi R, Newsholme P, Marzuca-Nassr GN, Takahashi HK, Hirabara SM, Cruzat V, Krause M, de Bittencourt PI Jr. Regulatory principles in metabolism-then and now. *Biochem J*. 2016 Jul 1;473(13):1845-57.
- 16:** Krause M, Ludwig MS, Heck TG, Takahashi HK. Heat shock proteins and heat therapy for type 2 diabetes: pros and cons. *Curr Opin Clin Nutr Metab Care*. 2015 Jul;18(4):374-80.
- 17:** Krause M, Bock PM, Takahashi HK, Homem De Bittencourt PI Jr, Newsholme P. The regulatory roles of NADPH oxidase, intra- and extra-cellular HSP70 in pancreatic islet function, dysfunction and diabetes. *Clin Sci (Lond)*. 2015 Jun;128(11):789-803.
- 18:** Krause M, Heck TG, Bittencourt A, Scomazzon SP, Newsholme P, Curi R, Homem de Bittencourt PI Jr. The chaperone balance hypothesis: the importance of the extracellular to intracellular HSP70 ratio to inflammation-driven type 2 diabetes, the effect of exercise, and the implications for clinical management. *Mediators Inflamm*. 2015;2015:249205.
- 19:** Krause M, Keane K, Rodrigues-Krause J, Crognale D, Egan B, De Vito G, Murphy C, Newsholme P. Elevated levels of extracellular heat-shock protein 72 (eHSP72) are positively correlated with insulin resistance in vivo and cause pancreatic β -cell dysfunction and death in vitro. *Clin Sci (Lond)*. 2014 May;126(10):739-52.
- 20:** Krause M, Rodrigues-Krause J, O'Hagan C, Medlow P, Davison G, Susta D, Boreham C, Newsholme P, O'Donnell M, Murphy C, De Vito G. The effects of aerobic exercise training at two different intensities in obesity and type 2 diabetes: implications for oxidative stress, low-grade inflammation and nitric oxide production. *Eur J Appl Physiol*. 2014 Feb;114(2):251-60.
- 21:** Gaudel C, Nongonierma AB, Maher S, Flynn S, Krause M, Murray BA, Kelly PM, Baird AW, FitzGerald RJ, Newsholme P. A whey protein hydrolysate promotes insulinotropic activity in a clonal pancreatic β -cell line and enhances glycemic function in ob/ob mice. *J Nutr*. 2013 Jul;143(7):1109-14.