

## Nathan Sean Makarewicz

- Masters Student in Epidemiology and Clinical Research, admitted Autumn 2023
- Masters of Medicine, admitted Autumn 2025

### Publications

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#### PUBLICATIONS

- **Red Breast Syndrome-Where Has It Gone?: A Systematic Review of Red Breast Syndrome Incidence Overtime.** *Annals of plastic surgery*  
Navarro, Y., Makarewicz, N., Hinson, C., Thawanyarat, K., Coleman-Belin, J., Loan, P., Modi, S., Nazerali, R. S.  
2025; 94 (2): 243-249
- **Effect of Tissue Expanders Filled With Saline Versus Air on Longitudinal Breast Reconstruction Outcomes.** *Eplasty*  
Shaheen, M., Goli, R., Yesantharao, P., Arquette, C., Makarewicz, N., Nazerali, R. S.  
2024; 24: e58
- **Decreased Use of Anti-Inflammatory Medications in Autoimmune Connective Tissue Disease Patients Following Breast Implant Removal: A National Analysis.** *Eplasty*  
Shah, J. K., Najafali, D., Fung, E., Rowley, M., Thawanyarat, K., Cevallos, P. C., Makarewicz, N., Raman, K. S., Nazerali, R.  
2024; 24: e44
- **Virtual Reality Facilitated Exercise Increases Sympathetic Activity and Reduces Pain Perception: A Randomized Crossover Study.** *American journal of physical medicine & rehabilitation*  
Rodriguez, S. T., Makarewicz, N., Wang, E. Y., Zuniga-Hernandez, M., Titzler, J., Jackson, C., Suen, M. Y., Rosales, O., Caruso, T. J.  
2024
- **Diagnosis and Management of Orbital Compartment Syndrome in Burn Patients - a Systematic Review.** *Journal of burn care & research : official publication of the American Burn Association*  
Makarewicz, N., Perrault, D., Cevallos, P., Sheckter, C.  
2024
- **The impact of exercise on gene regulation in association with complex trait genetics.** *Nature communications*  
Vetr, N. G., Gay, N. R., MoTrPAC Study Group, Montgomery, S. B., Adkins, J. N., Albertson, B. G., Amar, D., Amper, M. A., Armenteros, J. J., Ashley, E., Avila-Pacheco, J., Bae, D., Balci, A. T., et al  
2024; 15 (1): 3346
- **Commentary on En Face to the World.** *Academic medicine : journal of the Association of American Medical Colleges*  
Makarewicz, N.  
2024; 99 (5): 507
- **Temporal dynamics of the multi-omic response to endurance exercise training.** *Nature*  
2024; 629 (8010): 174-183
- **Assessing Popper Purity—Implications for the Regulation and Recreational Use of Alkyl Nitrites** *Psychoactives*  
Makarewicz, N. S.  
2024
- **Virtual reality facilitated exercise improves pain perception: A crossover study.** *Journal of clinical anesthesia*  
Rodriguez, S. T., Makarewicz, N., Wang, E. Y., Zuniga-Hernandez, M., Titzler, J., Jackson, C., Suen, M. Y., Rosales, O., Caruso, T. J.  
2023; 91: 111257
- **Artist's Statement: Zoom Medical School.** *Academic medicine : journal of the Association of American Medical Colleges*  
Makarewicz, N.

2023; 98 (6): 679

- **Comparing the Outcomes and Complication Rates of Biologic vs Synthetic Meshes in Implant-Based Breast Reconstruction: A Systematic Review.** *Annals of plastic surgery*  
Makarewicz, N., Perrault, D., Sharma, A., Shaheen, M., Kim, J., Calderon, C., Sweeney, B., Nazerali, R.  
2023; 90 (5): 516-527
- **Use of Local Antibiotic Delivery Systems in Tissue Expander and Implant-Based Breast Reconstruction: A Systematic Review of the Literature.** *Eplasty*  
Makarewicz, N., Lipman, K., Johnstone, T., Shaheen, M., Shah, J. K., Nazerali, R.  
2023; 23: e24
- **En Face to the World Commentary on En Face to the World.** *Academic medicine : journal of the Association of American Medical Colleges*  
Makarewicz, N.  
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- **Foot Burns and Diabetes: A Systematic Review of Current Clinical Studies and Proposal of a New Treatment Algorithm.** *Journal of burn care & research : official publication of the American Burn Association*  
Sharma, A., Perrault, D., Makarewicz, N. S., Pham, T., Shekter, C., Gurtner, G.  
2023
- **Use of Antibiotic-impregnated Polymethylmethacrylate (PMMA) Plates for Prevention of Periprosthetic Infection in Breast Reconstruction** *PLASTIC AND RECONSTRUCTIVE SURGERY-GLOBAL OPEN*  
Johnstone, T., Lipman, K., Makarewicz, N., Shah, J., Turner, E., Posternak, V., Chang, D., Thornton, B., Nazerali, R.  
2023; 11 (1)
- **Use of Antibiotic-impregnated Polymethylmethacrylate (PMMA) Plates for Prevention of Periprosthetic Infection in Breast Reconstruction.** *Plastic and reconstructive surgery. Global open*  
Johnstone, T., Lipman, K., Makarewicz, N., Shah, J., Turner, E., Posternak, V., Chang, D., Thornton, B., Nazerali, R.  
2023; 11 (1): e4764
- **The Impact of Oncoplastic Reduction on Initiation of Adjuvant Radiation and Need for Reexcision: A Database Evaluation.** *Annals of plastic surgery*  
Shah, J. K., Lipman, K., Pedreira, R., Makarewicz, N., Nazerali, R.  
2022; 89 (6): e11-e17
- **Maternal Exercise-Induced SOD3 Reverses the Deleterious Effects of Maternal High-Fat Diet on Offspring Metabolism Through Stabilization of H3K4me3 and Protection Against WDR82 Carbonylation** *DIABETES*  
Kusuyama, J., Makarewicz, N. S., Albertson, B. G., Alves-Wagner, A., Conlin, R. H., Prince, N. B., Alves, C. R. R., Ramachandran, K., Kozuka, C., Xiudong, Y., Xia, Y., Hirshman, M. F., Hatta, et al  
2022; 71 (6): 1170-1181
- **Grandmaternal exercise improves metabolic health of second-generation offspring** *MOLECULAR METABOLISM*  
Alves-Wagner, A. B., Kusuyama, J., Nigro, P., Ramachandran, K., Makarewicz, N., Hirshman, M. F., Goodyear, L. J.  
2022; 60: 101490
- **Reinforced Biologic Mesh Reduces Postoperative Complications Compared to Biologic Mesh after Ventral Hernia Repair.** *Plastic and reconstructive surgery. Global open*  
Sivaraj, D., Henn, D., Fischer, K. S., Kim, T. S., Black, C. K., Lin, J. Q., Barrera, J. A., Leeolou, M. C., Makarewicz, N. S., Chen, K., Perrault, D. P., Gurtner, G. C., Lee, et al  
2022; 10 (2): e4083
- **Exercise Training Promotes Sex-Specific Adaptations in Mouse Inguinal White Adipose Tissue** *DIABETES*  
Nigro, P., Middelbeek, R. J. W., Alves, C. R. R., Rovira-Llopis, S., Ramachandran, K., Rowland, L. A., Moller, A. B., Takahashi, H., Alves-Wagner, A. B., Vamvini, M., Makarewicz, N. S., Albertson, B. G., Hirshman, et al  
2021; 70 (6): 1250-1264
- **Placental superoxide dismutase 3 mediates benefits of maternal exercise on offspring health** *CELL METABOLISM*  
Kusuyama, J., Alves-Wagner, A., Conlin, R. H., Makarewicz, N. S., Albertson, B. G., Prince, N. B., Kobayashi, S., Kozuka, C., Moller, M., Bjerre, M., Fuglsang, J., Miele, E., Middelbeek, et al  
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- **Effects of maternal and paternal exercise on offspring metabolism.** *Nature metabolism*  
Kusuyama, J., Alves-Wagner, A. B., Makarewicz, N. S., Goodyear, L. J.  
2020; 2 (9): 858-872
- **Grand-Maternal Exercise Improves Glucose Tolerance in Second Generation Offspring**  
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AMER DIABETES ASSOC.2020
- **Mechanism for the Beneficial Effects of Maternal Exercise to Improve Offspring Metabolic Health**  
Kusuyama, J., Wagner, A. B., Conlin, R. H., Makarewicz, N. S., Moller, M., Miele, E. M., Middelbeek, R., Jessen, N., Ovesen, P. G., Hirshman, M. F., Adamo, K. B., Grayck, E. N., Goodyear, et al  
AMER DIABETES ASSOC.2020
- **Low intensity pulsed ultrasound (LIPUS) maintains osteogenic potency by the increased expression and stability of Nanog through spleen tyrosine kinase (Syk) activation.** *Cellular signalling*  
Kusuyama, J., Seong, C., Makarewicz, N. S., Ohnishi, T., Shima, K., Semba, I., Bandow, K., Matsuguchi, T.  
2019; 62: 109345