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Prevalence of Metabolic Syndrome for Employee of a Veterans General Hospital in 2007-2016

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Background: Night shift workers are in high-risk working environment. Healthy improving hospital takes employees' health as an incidence. This research explored the 10-year prevalence rate of metabolic syndrome for employees based on their genders, ages, occupation in different years. This is an important issue to promote the employees' health.

Method: The health examination data traced back to 10 years by the retrospective study method. The analysis data is from employees' health examination database of Veterans General Hospital. The target includes administrative staff, physician, medical technology and nurse staff. Results: Analyze 26,704 people; the average annual prevalence rate of metabolic syndrome is 5.7%. The metabolic syndrome prevalence rate in 2016 is 11.4%, which is rising from 3.3% of the prevalence rate in 2007. The average age of health examination of the first year is 33±10.7 years old. Female sample account for 72.4% and that of the nurses account for 38.4%. The average rate of metabolic syndrome prevalence is 6.2%, men 10.6% significantly greater than female 4.3%. The prevalence rate of metabolic syndrome of administrative staff is 12.0%, physician 6.8%, medical technology 4.4%, and nurse staff 3.2%. The prevalence rate to age are 51-65 years old for 13.1%, 41-50 years old 6.5%, 30-40 years old 3.7%, under 30 years old 1.2%. All the factors, such as gender, occupation, and age, had significantly correction with happening of metabolic syndrome.

Conclusions: The goal of the healthy improving hospital is to improve the health of the employees. The occupational safety chamber is responsible for the health of employees, which should arrange the health examination routine. The purpose is to discover the disease in the early stage to prevent it from getting worse. This study discovers the high risky group of metabolic syndrome to be the reference for the plan of health improving in the hospital. It suggests an intense prevention of metabolic syndrome for the new recruitments, administrative staff, and the group with age between 51 and 65. The prevention includes handling the life style mode for health improving to raise the health condition of employees, establishing the health databank of employees, and tracking the health management of employees in the long term.

Title:

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Keywords:

metabolic syndrome, prevalence rate and the health promotion hospital

References:

Brand, S. L., Thompson Coon, J., Fleming, L. E., Carroll, L., Bethel, A., & Wyatt, K. (2017). Whole-system approaches to improving the health and wellbeing of healthcare workers: A systematic review. *PLoS One*, 12(12), e0188418. doi: 10.1371/journal.pone.0188418

- Chang, S.-J., Liao, W.-C., & Wang, W.-S. (2017). The Prevalence of Dyslipidemia in Nursing Personnel and Related Risk Factors. *The Changhua Journal of Medicine*, 15(2), 75-83. doi: 10.6501/cjm.1502.003
- Chang, S. H., Chen, M. C., Chien, N. H., & Wu, L. Y. (2016). CE: Original Research: Examining the Links Between Lifestyle Factors and Metabolic Syndrome. *Am J Nurs*, 116(12), 26-36. doi: 10.1097/01.NAJ.0000508662.88220.7a
- del Pilar Cruz-Dominguez, M., Gonzalez-Marquez, F., Ayala-Lopez, E. A., Vera-Lastra, O. L., Vargas-Rendon, G. H., Zarate-Amador, A., & Jara-Quezada, L. J. (2015). [Overweight, obesity, metabolic syndrome and waist/height index in health staff]. *Rev Med Inst Mex Seguro Soc*, 53 Suppl 1, S36-41.
- Hansen, A. B., Stayner, L., Hansen, J., & Andersen, Z. J. (2016). Night shift work and incidence of diabetes in the Danish Nurse Cohort. *Occup Environ Med*, 73(4), 262-268. doi: 10.1136/oemed-2015-103342
- Havakuk, O., Perl, M. L., Praisler, O., Barkagan, M., Sadeh, B., Margolis, G., . . . Arbel, Y. (2017). The awareness to metabolic syndrome among hospital health providers. *Diabetes Metab Syndr*, 11(3), 193-197. doi: 10.1016/j.dsx.2016.09.005
- Ho, H. H., Tsai, T. Y., Lin, C. L., Wu, S. Y., & Li, C. Y. (2011). Prevalence and associated factors for metabolic syndrome in Taiwanese hospital employees. *Asia Pac J Public Health*, 23(3), 307-314. doi: 10.1177/1010539509340911
- Hwang, W. J., & Lee, C. Y. (2014). Effect of psychosocial factors on metabolic syndrome in male and female blue-collar workers. *Jpn J Nurs Sci*, 11(1), 23-34. doi: 10.1111/j.1742-7924.2012.00226.x
- Ju, S. Y., Lee, J. Y., & Kim, D. H. (2017). Association of metabolic syndrome and its components with all-cause and cardiovascular mortality in the elderly: A meta-analysis of prospective cohort studies. *Medicine (Baltimore)*, 96(45), e8491. doi: 10.1097/md.00000000000008491
- Lee, J. S., Cho, S.-I., & Park, H. S. (2010). Metabolic syndrome and cancer-related mortality among Korean men and women. *Annals of Oncology*, 21, 640–645. doi: 10.1093/annonc/mdp344
- Lee, J. S., Cho, S. I., & Park, H. S. (2010). Metabolic syndrome and cancer-related mortality among Korean men and women. *Ann Oncol*, 21(3), 640-645. doi: 10.1093/annonc/mdp344
- Leong, L., & Chia, S. E. (2012). Prevalence of cardiovascular risk factors among healthcare staff in a large healthcare institution in Singapore. *Singapore Med J*, 53(8), 517-521.
- Lin, K.-M., Chiou, J.-Y., Ko, S.-H., Tan, J.-Y., Huang, C.-N., & Wen-Chun Liao, R., PhD. (2015). Modifiable Lifestyle Behaviors Are Associated With Metabolic Syndrome in a Taiwanese Population. *Journal of Nursing Scholarship*, 47:6, 487–495. doi: 10.1111/jnu.12163
- Mathiew-Quiros, A., Salinas-Martinez, A. M., Hernandez-Herrera, R. J., & Gallardo-Vela, J. A. (2014). [Metabolic syndrome in workers of a second level hospital]. *Rev Med Inst Mex Seguro Soc*, 52(5), 580-587.
- Mittal, T. K., Cleghorn, C. L., Cade, J. E., Barr, S., Grove, T., Bassett, P., . . . Kotseva, K. (2018). A cross-sectional survey of cardiovascular health and lifestyle habits of hospital staff in the UK: Do we look after ourselves? *Eur J Prev Cardiol*, 25(5), 543-550. doi: 10.1177/2047487317746320
- Park, S., Kim, S. J., Lee, M., Kang, K. A., & Hendrix, E. (2015). Prevalence and associated factors of metabolic syndrome among South Korean adults. *J Community Health Nurs*, 32(1), 24-38. doi: 10.1080/07370016.2015.992266
- Ranasinghe, P., Mathangasinghe, Y., Jayawardena, R., Hills, A. P., & Misra, A. (2017). Prevalence and trends of metabolic syndrome among adults in the asia-pacific region: a systematic review. *BMC Public Health*, 17(1), 101. doi: 10.1186/s12889-017-4041-1

Suliga, E., Koziel, D., & Gluszek, S. (2016). Prevalence of metabolic syndrome in normal weight individuals. *Ann Agric Environ Med*, 23(4), 631-635. doi: 10.5604/12321966.1226858

Uzunlulu, M., Telci Caklili, O., & Oguz, A. (2016). Association between Metabolic Syndrome and Cancer. *Ann Nutr Metab*, 68(3), 173-179. doi: 10.1159/000443743

Abstract Summary:

This study understands the 10-year prevalence rate of metabolic syndrome for employees based on their genders, ages, occupation and in different years in a Veterans General Hospital

Content Outline:

Prevalence of metabolic syndrome for employee of a Veterans General Hospital in 2007~2016

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