

DAFTAR PUSTAKA

- ADA. (2014). Standards of Medical Care in Diabetes - 2014. *Diabetes Care*, 37 Suppl 1, S14–S80.
- ADA. (2015). (2) Classification and diagnosis of diabetes. *Diabetes Care*, 38 Suppl, S8–S16.
- Ahmadi-Abhari, S., Kaptoge, S., Luben, R. N., Wareham, N. J., & Khaw, K.-T. (2015). Longitudinal association of C-reactive protein and Haemoglobin A1c over 13 years: the European Prospective Investigation into Cancer-Norfolk study. *Cardiovascular Diabetology*, 14, 61.
- Ansar, W., & Ghosh, S. (2016). *Biology of C Reactive Protein in Health and Disease*. New Dehli: Springer India, pp. 133-137.
- Antonio, J. P., Silva, F. M., Camey, S. A., de Azevedo, M. J., & de Almeida, J. C. (2015). Development of a Healthy Eating Index for patients with type 2 diabetes. *Rev. Nutr*, 28(5), 513–522.
- Azadbakht, L., & Esmailzadeh, A. (2010). Dietary diversity score is related to obesity and abdominal adiposity among Iranian female youth. *Public Health Nutrition*, 14(1), 62–69.
- Azadbakht, L., Mirmiran, P., & Azizi, F. (2005). Dietary diversity score is favorably associated with the metabolic syndrome in Tehranian adults. *International Journal of Obesity*, 29(11), 1361–1367.
- Azadbakht, L., Mirmiran, P., Esmailzadeh, A., & Azizi, F. (2006). Dietary diversity score and cardiovascular risk factors in Tehranian adults. *Public Health Nutrition*, 9(6), 728–736.
- Badawi, A., Klip, A., Haddad, P., Cole, D. E., Bailo, B. G., El-Sohemy, A., & Karmali, M. (2010). Type 2 diabetes mellitus and inflammation: Prospects for biomarkers of risk and nutritional intervention. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, 3, 173–186.
- Bahceci, M., Gokalp, D., Bahceci, S., Tuzcu, A., Atmaca, S., & Arikan, S. (2007). The correlation between adiposity and adiponectin, tumor necrosis factor α , interleukin-6 and high sensitivity C-reactive protein levels. Is adipocyte size associated with inflammation in adults? *Journal of Endocrinological Investigation*, 30(3), 210–214.
- Balitbang Kemenkes RI. (2013). *Riset Kesehatan Dasar*. Jakarta: Kementerian Kesehatan RI.

- Bawadi, H., Katkhouda, R., Al-Haifi, A., Tayyem, R., Elkhoury, C. F., & Jamal, Z. (2016). Energy balance and macronutrient distribution in relation to C-reactive protein and HbA1c levels among patients with type 2 diabetes. *Food & Nutrition Research*, 60, 29904.
- Bianchi, C. M., Egnell, M., Huneau, J.-F., & Mariotti, F. (2016). Plant Protein Intake and Dietary Diversity Are Independently Associated with Nutrient Adequacy in French Adults. *Journal of Nutrition*, 146(11), 2351–2360.
- Biasucci, L. M. (2004). CDC/AHA Workshop on Markers of Inflammation and Cardiovascular Disease: Application to Clinical and Public Health Practice: Clinical Use of Inflammatory Markers in Patients With Cardiovascular Diseases: A Background Paper. *Circulation*, 110(25), e560–e567.
- Borai, A., Livingstone, C., Abdelaal, F., Bawazeer, A., Ket, V., & Ferns, G. (2011). The relationship between glycosylated haemoglobin (HbA1c) and measures of insulin resistance across a range of glucose tolerance. *Scandinavian Journal of Clinical and Laboratory Investigation*, 71(2), 168–172.
- Brown, J. E., Isaacs, J. S., Krinke, U. B., Lechtenberg, E., Murtaugh, M. A., Sharbaugh, C., et al. (2011). *Nutrition Through the Life Cycle* (4th ed.). Belmont: Wadsworth, Cengage Learning, pp. 406-408.
- Buffarini, R., Restrepo-méndez, M. C., Silveira, V. M., Miranda, J. J., Gonçalves, H. D., Oliveira, I. O., et al. (2016). Distribution of Glycated Haemoglobin According to Early-Life and Contemporary Characteristics in Adolescents and Adults without Diabetes: The 1982 and 1993 Pelotas Birth Cohorts. *PLoS ONE*, 11(9), e0162614.
- Calder, P. C. (2014). Nutrition and Inflammatory Processes. In A. C. Ross, B. Caballero, R. J. Cousins, K. L. Tucker, & T. R. Ziegler (Eds.), *Modern Nutrition in Health and Disease* (11th ed.). Philadelphia: Lippincott Williams & Wilkins, pp. 837–847.
- Calder, P. C., Ahluwalia, N., Albers, R., Bosco, N., Bourdet-Sicard, R., Haller, D., et al. (2013). A consideration of biomarkers to be used for evaluation of inflammation in human nutritional studies. *British Journal of Nutrition*, 109 Suppl 1, S1-34.
- Calder, P. C., Albers, R., Antoine, J., Blum, S., Bourdet-Sicard, R., Ferns, G. A., et al. (2009). Inflammatory Disease Processes and Interactions with Nutrition. *British Journal of Nutrition*, 101 Suppl 1, S1-45.
- Cavagnoli, G., Pimentel, A. L., Freitas, P. A. C., Gross, J. L., & Camargo, J. L. (2017). Effect of ethnicity on HbA1c levels in individuals without diabetes: Systematic review and meta-analysis. *PLoS ONE*, 12(2), e0171315.

- Chan, J. C. N., Malik, V., Jia, W., Kadowaki, T., Yajnik, C. S., Yoon, K. H., & Hu, F. B. (2009). Diabetes in Asia: epidemiology, risk factors, and pathophysiology. *JAMA*, *301*(20), 2129–2140.
- Chandalia, H. B. (2014). Monitoring Glycemic Control: Long-Term Parameters. In H. B. Chandalia, G. R. Sridhar, A. K. Das, S. V. Madhu, V. Mohan, & P. V. Rao (Eds.), *RSSDI Textbook of Diabetes Mellitus* (3rd ed.). New Dehli: Jaypee Brothers Medical Publishers, p. 650.
- Chen, Y. Y., Lin, Y. J., Chong, E., Chen, P. C., Chao, T. F., Chen, S. A., & Chien, K. L. (2015). The impact of diabetes mellitus and corresponding HbA1c levels on the future risks of cardiovascular disease and mortality: A representative cohort study in Taiwan. *PLoS ONE*, *10*(4), e0123116.
- Choi, J., Joseph, L., & Pilote, L. (2013). Obesity and C-reactive protein in various populations: A systematic review and meta-analysis. *Obesity Reviews*, *14*(3), 232–244.
- Christy, A. L., Manjrekar, P. A., Babu, R. P., Hegde, A., & M.S., R. (2014). Influence of iron deficiency anemia on hemoglobin A1C levels in diabetic individuals with controlled plasma glucose levels. *Iranian Biomedical Journal*, *18*(2), 88–93.
- Clair, C., Bitton, A., Meigs, J. B., & Rigotti, N. A. (2011). Relationships of Cotinine and Self-Reported Cigarette Smoking With Hemoglobin A1c in the U.S.: Results from the National Health and Nutrition Examination Survey, 1999-2008. *Diabetes Care*, *34*(10), 2250–2255.
- Clausen, T., Charlton, K. E., Gobotswang, K. S. M., & Holmboe-ottesen, G. (2005). Predictors of food variety and dietary diversity among older persons in Botswana. *Nutrition*, *21*(1), 86–95.
- Clos, T. W. Du, & Mold, C. (2004). C-Reactive Protein : An Activator of Innate and a Modulator of Adaptive Immunity. *Immunologic Research*, *30*(3), 261–277.
- Cohen, R. M., Franco, R. S., Khera, P. K., Smith, E. P., Lindsell, C. J., Ciruolo, P. J., et al. (2008). Red cell life span heterogeneity in hematologically normal people is sufficient to alter HbA1c. *Blood*, *112*(10), 4284–4291.
- Conklin, A. I., Monsivais, P., Khaw, K.-T., Wareham, N. J., & Forouhi, N. G. (2016). Dietary Diversity, Diet Cost, and Incidence of Type 2 Diabetes in the United Kingdom: A Prospective Cohort Study. *PLOS Medicine*, *13*(7), e1002085.
- Cutrona, C. E., Abraham, W. T., Russell, D. W., Beach, S. R. H., Gibbons, F. X., Gerrard, M., et al. (2015). Financial strain, inflammatory factors, and haemoglobin A1c levels in African American women. *British Journal of Health Psychology*, *20*(3), 662–679.

- Danquah, I., Galbete, C., Meeks, K., Nicolaou, M., Klipstein-Grobusch, K., Addo, J., et al. (2017). Food variety, dietary diversity, and type 2 diabetes in a multi-center cross-sectional study among Ghanaian migrants in Europe and their compatriots in Ghana: the RODAM study. *European Journal of Nutrition*.
- Davidson, M. B., & Schriger, D. L. (2010). Effect of age and race/ethnicity on HbA1c levels in people without known diabetes mellitus: implications for the diagnosis of diabetes. *Diabetes Res Clin Pract*, 87(3), 415–412.
- De Ferranti, S., & Mozaffarian, D. (2008). The perfect storm: Obesity, adipocyte dysfunction, and metabolic consequences. *Clinical Chemistry*, 54(6), 945–955.
- de Oliveira, E. P., McLellan, K. C. P., Vaz de Arruda Silveira, L., & Burini, R. C. (2012). Dietary Factors Associated with Metabolic Syndrome in Brazilian Adults. *Nutrition Journal*, 11, 13.
- DeBruyne, L. K., Pinna, K., & Whitney, E. (2016). *Nutrition & Diet Therapy* (9th ed.). Boston: Cengage Learning, p. 506.
- Defronzo, R. A. (2009). From the triumvirate to the ominous octet: A new paradigm for the treatment of type 2 diabetes mellitus. *Diabetes*, 58(4), 773–795.
- Devaraj, S., Singh, U., & Jialal, I. (2009). The evolving role of C-reactive protein in atherothrombosis. *Clinical Chemistry*, 55(2), 229–238.
- Dijkstra, A., Lenters-Westra, E., De Kort, W., Bokhorst, A. G., Bilo, H. J. G., Slingerland, R. J., & Vos, M. J. (2017). Whole blood donation affects the interpretation of hemoglobin A1c. *PLoS ONE*, 12(1), e0170802.
- Dodd, J. L. (2017). Nutrition in the Adult Years. In L. K. Mahan & J. L. Raymond (Eds.), *Krause's Food & The Nutrition Care Process* (14th ed.). Missouri: Elsevier, p. 359.
- Dubowitz, N., Xue, W., Long, Q., Ownby, J. G., Olson, D. E., Barb, D., et al. (2014). Aging is associated with increased HbA 1c levels, independently of glucose levels and insulin resistance, and also with decreased HbA 1c diagnostic specificity. *Diabetic Medicine*, 31(8), 927–935.
- Ebron, K., Andersen, C. J., Aguilar, D., Blesso, C. N., Barona, J., Dugan, C. E., et al. (2015). A Larger Body Mass Index is Associated with Increased Atherogenic Dyslipidemia, Insulin Resistance, and Low-Grade Inflammation in Individuals with Metabolic Syndrome. *Metabolic Syndrome and Related Disorders*, 13(10), 458–464.
- Emeribe, A. U., Elochukwu, A. C., Nasir, I. A., Bassey, I. E., & Udoh, E. A. (2015). Clinical significance of glycated hemoglobin testing in obese

subjects attending a tertiary hospital at Calabar, Nigeria. *Sub-Saharan African Journal of Medicine*, 2(3), 134–141.

Esmailzadeh, A., Kimiagar, M., Mehrabi, Y., Azadbakht, L., Hu, F. B., & Willett, W. C. (2006). Fruit and vegetable intakes, C-reactive protein, and the metabolic syndrome. *American Journal of Clinical Nutrition*, 84(6), 1489–1497.

FAO. (2011). *Guidelines for measuring household and individual dietary diversity*. Rome: Food and Agriculture Organization.

Farmer, A. (2017). Monitoring Diabetes. In R. I. G. Holt, C. S. Cockram, A. Flyvbjerg, & B. J. Goldstein (Eds.), *Textbook of Diabetes* (5th ed.). Oxford: Wiley Blackwell, pp. 375–376.

Fernandez, C., Kasper, N. M., Miller, A. L., Lumeng, J. C., & Peterson, K. E. (2016). Association of Dietary Variety and Diversity With Body Mass Index in US Preschool Children. *Pediatrics*, 137(3), e20152307.

Fiorentino, T. V., Hribal, M. L., Perticone, M., Andreozzi, F., Sciacqua, A., Perticone, F., & Sesti, G. (2014). Unfavorable inflammatory profile in adults at risk of type 2 diabetes identified by hemoglobin A1c levels according to the American Diabetes Association criteria. *Acta Diabetologica*, 52(2), 349–356.

Firouzi, S., Barakatun-Nisak, M. Y., & Azmi, K. N. (2015). Nutritional status, glycemic control and its associated risk factors among a sample of type 2 diabetic individuals, a pilot study. *Journal of Research in Medical Sciences*, 20(1), 40–46.

Fizelova, M., Stančáková, A., Lorenzo, C., Haffner, S. M., Cederberg, H., Kuusisto, J., & Laakso, M. (2015). Glycated hemoglobin levels are mostly dependent on nonglycemic parameters in 9398 Finnish men without diabetes. *Journal of Clinical Endocrinology and Metabolism*, 100(5), 1989–1996.

Franz, M. J., & Evert, A. B. (2017). Medical Nutrition Therapy for Diabetes Mellitus and Hypoglycemia of Nondiabetic Origin. In L. K. Mahan & J. L. Raymond (Eds.), *Krause's Food & The Nutrition Care Process* (14th ed.). Missouri: Elsevier, p. 591.

Frühbeck, G. (2013). Over-nutrition. In M. Elia, O. Ljungqvist, R. J. Stratton, & S. A. Lanham-New (Eds.), *Clinical Nutrition* (2nd ed.). Oxford: Wiley-Blackwell, pp. 47–50.

Fukuhara, M., Matsumura, K., Wakisaka, M., Takata, Y., Sonoki, K., Fujisawa, K., et al. (2007). Hyperglycemia promotes microinflammation as evaluated by C-reactive protein in the very elderly. *Internal Medicine*, 46(5), 207–212.

Garg, N., Moorthy, N., Kapoor, A., Tewari, S., Kumar, S., Sinha, A., et al. (2014).

Hemoglobin A1c in nondiabetic patients: An independent predictor of coronary artery disease and its severity. *Mayo Clinic Proceedings*, 89(7), 908–916.

Gerber, S. M., Stickle, D. F., Ahmed, I., & Jabbour, S. A. (2015). Glycated hemoglobin, serum proteins, and other markers as tools for monitoring. In R. A. DeFronzo, E. Ferrannini, P. Zimmet, & K. George M. M. Alberti (Eds.), *International Textbook of Diabetes Mellitus* (4th ed.). Oxford: Wiley Blackwell, pp. 853–855.

Goto, A., Noda, M., Sawada, N., Kato, M., Hidaka, A., Mizoue, T., et al. (2016). High hemoglobin A1c levels within the non-diabetic range are associated with the risk of all cancers. *International Journal of Cancer*, 138(7), 1741–1753.

Gregor, M. F., & Hotamisligil, G. S. (2011). Inflammatory Mechanisms in Obesity. *Annual Review of Immunology*, 29, 415–445.

Guariguata, L., Whiting, D. R., Hambleton, I., Beagley, J., Linnenkamp, U., & Shaw, J. E. (2013). Global estimates of diabetes prevalence for 2013 and projections for 2035. *Diabetes Research and Clinical Practice*, 103(2), 137–149.

Guarner, V., & Rubio-Ruiz, M. E. (2014). Low-grade systemic inflammation connects aging, metabolic syndrome and cardiovascular disease. *Interdiscip Top Gerontol*, 40, 99–106.

Guerrero-Romero, F., Simental-Mendía, L. E., & Rodríguez-Morán, M. (2014). Association of C-reactive protein Levels with Fasting and Postload Glucose Levels According to Glucose Tolerance Status. *Archives of Medical Research*, 45(1), 70–75.

Guh, D. P., Zhang, W., Bansback, N., Amarsi, Z., Birmingham, C. L., & Anis, A. H. (2009). The incidence of co-morbidities related to obesity and overweight: A systematic review and meta-analysis. *BMC Public Health*, 9, 88.

Gummeson, A., Nyman, E., Knutsson, M., & Karpefors, M. (2017). Effect of weight reduction on glycated haemoglobin in weight loss trials in patients with type 2 diabetes. *Diabetes Obes Metab*, 19(9), 1295–1305.

Gustafson, B., Hammarstedt, A., Andersson, C. X., & Smith, U. (2007). Inflamed adipose tissue: A culprit underlying the metabolic syndrome and atherosclerosis. *Arteriosclerosis, Thrombosis, and Vascular Biology*, 27(11), 2276–2283.

Herman, W. H., Ma, Y., Uwaifo, G., Haffner, S., Kahn, S. E., Horton, E. S., ... Barrett-Connor, E. (2007). Differences in A1C by race and ethnicity among patients with impaired glucose tolerance in the Diabetes Prevention Program. *Diabetes Care*, 30(10), 2453–2457.

- Herningtyas, E. H., Hu, P., Edenfield, M., Strauss, J., Crimmins, E., Witoelar, F., et al. (2018). *IFLS Wave 5 Dried Blood Spot Data User Guide*. WR-1143/6-NIA/NICHD.
- Hong, J. W., Ku, C. R., Noh, J. H., Ko, K. S., Rhee, B. D., & Kim, D. J. (2015). Association between self-reported smoking and hemoglobin A1c in a Korean population without diabetes: The 2011-2012 Korean national health and nutrition examination survey. *PLoS ONE*, *10*(5), e0126746.
- Hong, J. W., Noh, J. H., & Kim, D.-J. (2016). Association between Alcohol Intake and Hemoglobin A1c in the Korean Adults: The 2011-2013 Korea National Health and Nutrition Examination Survey. *PLoS ONE*, *11*(11), e0167210.
- Hotamisligil, G. S. (2017). Foundations of Immunometabolism and Implications for Metabolic Health and Disease. *Immunity*, *47*(3), 406–420.
- Hozawa, A., Ohmori, K., Kuriyama, S., Shimazu, T., Niu, K., Watando, A., et al. (2004). C-reactive protein and peripheral artery disease among Japanese elderly: the Tsurugaya Project. *Hypertension Research : Official Journal of the Japanese Society of Hypertension*, *27*(12), 955–961.
- Hu, P., Edenfield, M., Potter, A., Kale, V., Risbud, A., Williams, S., et al. (2015). Validation and Modification of Dried Blood Spot-Based Glycosylated Hemoglobin Assay for the Longitudinal Aging Study in India. *Am J Hum Biol*, *27*(4), 579–581.
- Hu, P., Herningtyas, E. H., Kale, V., Crimmins, E. M., Risbud, A. R., McCreath, H., et al. (2015). External quality control for dried blood spot-based c-reactive protein assay: Experience from the indonesia family life survey and the longitudinal aging study in India. *Biodemography and Social Biology*, *61*(1), 111–120.
- Hu, P., Herningtyas, E. H., Strauss, J., Crimmins, E., Kim, J. K., & Sikoki, B. (2013). *IFLS C-Reactive Protein Data User Guide*. WR-675/7.
- Ikeda, F., Doi, Y., Ninomiya, T., Hirakawa, Y., Mukai, N., Hata, J., et al. (2013). Haemoglobin A1c even within non-diabetic level is a predictor of cardiovascular disease in a general Japanese population : the Hisayama Study. *Cardiovascular Diabetology*, *12*, 164.
- Indulekha, K., Surendar, J., & Mohan, V. (2011). High sensitivity C-reactive protein, tumor necrosis factor- α , interleukin-6, and vascular cell adhesion molecule-1 levels in Asian Indians with metabolic syndrome and insulin resistance (CURES-105). *J Diabetes Sci Technol*, *5*(4), 982–988.
- Janciauskiene, S., Wrenger, S., & Welte, T. (2013). Immunoregulatory Properties of Acute Phase Proteins — Specific Focus on α 1-Antitrypsin. In S. Janciauskiene (Ed.), *Acute Phase Proteins*. Rijeka: InTech, p. 15.

- Jansen, H., Stolk, R. P., Nolte, I. M., Kema, I. P., Wolffenbuttel, B. H. R., & Snieder, H. (2013). Determinants of HbA1c in nondiabetic Dutch adults: Genetic loci and clinical and lifestyle parameters, and their interactions in the lifelines cohort study. *Journal of Internal Medicine*, 273(3), 283–293.
- Jayawardena, R., Byrne, N. M., Soares, M. J., Katulanda, P., Yadav, B., & Hills, A. P. (2013). High dietary diversity is associated with obesity in Sri Lankan adults : an evaluation of three dietary scores. *BMC Public Health*, 13, 314.
- Kahn, S. E., Hull, R. L., & Utzschneider, K. M. (2006). Mechanisms linking obesity to insulin resistance and type 2 diabetes. *Nature*, 444(7121), 840–846.
- Kale, K., & Rawat, D. K. (2006). Effect of Obesity and Insulin Resistance on Diabetic Control. *Indian Journal of Clinical Biochemistry*, 21(1), 83–88.
- Kaptoge, S., Seshasai, S. R. K., Gao, P., Freitag, D. F., Butterworth, A. S., Borglykke, A., et al. (2014). Inflammatory cytokines and risk of coronary heart disease: New prospective study and updated meta-analysis. *European Heart Journal*, 35(9), 578–589.
- Kashinakunti, S. V., Rangappa, M., & Kallaganada, G. S. (2016). Serum High Sensitive - C Reactive Protein Levels in Type 2 Diabetes Mellitus -A Case Control Study. *International Journal of Biochemistry Reserach & Review*, 11(4), 1–8.
- Kemenkes RI. (2014). *Pedoman Gizi Seimbang*. Jakarta: Kementerian Kesehatan Indonesia.
- Kim, C. H., Kim, H. K., Kim, E. H., Bae, S. J., Choe, J., & Park, J. Y. (2016). Risk of progression to diabetes from prediabetes defined by HbA1c or fasting plasma glucose criteria in Koreans. *Diabetes Research and Clinical Practice*, 118, 105–111.
- Kizilarlanoglu, M. C., Civelek, R., Kilic, M. K., Sumer, F., & Ulger, Z. (2016). Extraordinarily low level of HbA1c due to hemolytic anemia. *Gazi Medical Journal*, 27(2), 76–77. <https://doi.org/10.12996/gmj.2016.23>
- Kopelman, P. (2018). Definition, prevalence and historical perspectives of obesity in adults. In C. Hankey (Ed.), *Advanced Nutrition and Dietetics in Obesity*. Oxford: Wiley Blackwell, p. 4.
- Kuczmarski, M. F., Mason, M. A., Allegro, D., Zonderman, A. B., & Evans, M. K. (2013). Diet quality inversely associated with C-reactive protein levels in urban, low-income African American and White adults. *J Acad Nutr Diet*, 113(12), 1620–1631.
- Lee, R. D. (2011). Energy Balance and Body Weight. In M. N. Nelms, K. Sucher, K. Lacey, & S. L. Roth (Eds.), *Nutrition Terapy and Pathophysiology* (2nd ed.). Belmont: Wadsworth, Cengage Learning, p. 246; 255-256.

- León-Pedroza, J. I., González-Tapia, L. A., del Olmo-Gil, E., Castellanos-Rodríguez, D., Escobedo, G., & González-Chávez, A. (2015). Low-grade systemic inflammation and the development of metabolic diseases: From the molecular evidence to the clinical practice. *Cirugía Y Cirujanos (English Edition)*, 83(6), 543–551.
- Libby, P., Ridker, P. M., & Hansson, G. K. (2009). Inflammation in Atherosclerosis From Pathophysiology to Practice. *Journal of the American College of Cardiology*, 54(23), 2129–2138.
- Likhari, T., & Gama, R. (2009). Glycaemia-independent ethnic differences in HbA1c in subjects with impaired glucose tolerance. *Diabetic Medicine*, 26(10), 1068–1069.
- Litchford, M. D. (2017). Clinical: Biochemical, Physical, and Functional Assessment. In L. K. Mahan & J. L. Raymond (Eds.), *Krause's Food & The Nutrition Care Process* (14th ed.). Missouri: Elsevier, p. 103.
- Lum, G. (2010). Artefactually Low Hemoglobin A 1C in a Patient with Hemolytic Anemia. *Laboratory Medicine*, 41(5), 267–270.
- Mahajan, A., Tabassum, R., Chavali, S., Dwivedi, O. P., Bharadwaj, M., Tandon, N., & Bharadwaj, D. (2009). High-sensitivity C-reactive protein levels and type 2 diabetes in urban North Indians. *Journal of Clinical Endocrinology and Metabolism*, 94(6), 2123–2127.
- Margioris, A. N., Dermitzaki, E., Venihaki, M., & Tsatsanis, C. (2013). Chronic low-grade inflammation. In P. C. Calder & P. Yaqoob (Eds.), *Diet, Immunity and Inflammation*. Cambridge: Woodhead Publishing, pp. 116–117.
- Martins, R. A., Jones, J. G., Cumming, S. P., Coelho e Silva, M. J., Teixeira, A. M., & Veríssimo, M. T. (2012). Glycated hemoglobin and associated risk factors in older adults. *Cardiovascular Diabetology*, 11, 13.
- Mayega, R. W., Guwatudde, D., Makumbi, F., Nakwagala, F. N., Peterson, S., Tomson, G., & Ostenson, C. G. (2013). Diabetes and Pre-Diabetes among Persons Aged 35 to 60 Years in Eastern Uganda: Prevalence and Associated Factors. *PLoS ONE*, 8(8), e72554.
- Minihane, A. M., Vinoy, S., Russell, W. R., Baka, A., Roche, H. M., Tuohy, K. M., et al. (2015). Low-grade inflammation, diet composition and health: Current research evidence and its translation. *British Journal of Nutrition*, 114(7), 999–1012.
- Mirmiran, P., Azadbakht, L., & Azizi, F. (2006). Dietary Diversity within Food Groups: An Indicator of Specific Nutrient Adequacy in Tehranian Women. *Journal of the American College of Nutrition*, 25(4), 354–361.
- Mirmiran, P., Azadbakht, L., Esmailzadeh, A., & Azizi, F. (2004). Dietary

diversity score in adolescents - a good indicator of the nutritional adequacy of diets : Tehran lipid and glucose study. *Asia Pacific J Clin Nutr*, 13(1), 56–60.

Møller, G., Sluik, D., Ritz, C., Mikkilä, V., Raitakari, O. T., Hutri-kähönen, N., et al. (2017). A Protein Diet Score, Including Plant and Animal Protein, and Investigating the Association with HbA1c and eGFR — The PREVIEW Project. *Nutrients*, 9(7), 763.

Murphy, S. P., Foote, J. A., Wilkens, L. R., Basiotis, P. P., Carlson, A., White, K. K. L., & Yonemori, K. M. (2006). Simple Measures of Dietary Variety Are Associated with Improved Dietary Quality. *Journal Of American Dietetic Association*, 106(3), 425–429.

Mut-Vitcu, G., Hudrea, I.-C., Moşteoru, S., Gaiță, L., & Gaiță, D. (2017). Body Mass Index and Glycaemic Control in Patients with Diabetes Mellitus: A Case-Control Study. *Romanian Journal of Diabetes Nutrition and Metabolic Diseases*, 24(2), 119–125.

Nachvak, S. M., Abdollahzad, H., Mostafai, R., Moradi, S., Pasdar, Y., Rezaei, M., & Eksndari, S. (2017). Dietary Diversity Score and Its Related Factors among Employees of Kermanshah University of Medical Sciences. *Clin Nutr Res*, 6(4), 247–255.

Nair, M. K., Augustine, L. F., & Konapur, A. (2016). Food-Based Interventions to Modify Diet Quality and Diversity to Address Multiple Micronutrient Deficiency. *Frontiers in Public Health*, 3, 277.

Nansel, T. R., Lipsky, L. M., & Liu, A. (2016). Greater diet quality is associated with more optimal glycemic control in a longitudinal study of youth with type 1 diabetes. *Am J Clin Nutr*, 104(1), 81–87.

Narmaki, E., Koohdani, F., Qorbani, M., Shiraseb, F., Ataie-Jafari, A., & Sotoudeh, G. (2015). Dietary diversity as a proxy measure of blood antioxidant status in women. *Nutrition*, 31(5), 722–726.

Nathan, D. M., Kuenen, J., Borg, R., Zheng, H., Schoenfeld, D., & Heine, R. J. (2008). Translating the A1C assay into estimated average glucose values. *Diabetes Care*, 31(8), 1473–1478. <https://doi.org/10.2337/dc08-0545>

Ng, M., Fleming, T., Robinson, M., Thomson, B., Graetz, N., Margono, C., et al. (2014). Global, regional, and national prevalence of overweight and obesity in children and adults during 1980-2013: A systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*, 384(9945), 766–781.

Nix, S. (2013). *Williams' Basic Nutrition and Diet Therapy* (14th ed.). Missouri: Elsevier, p. 221.

O'Connor, C., O'Shea, P. M., Owens, L. A., Carmody, L., Avalos, G., Nestor, L.,

- et al. (2012). Trimester-specific reference intervals for haemoglobin A1c (HbA1c) in pregnancy. *Clinical Chemistry and Laboratory Medicine*, 50(5), 905–909. <https://doi.org/10.1515/cclm.2011.397>
- Oda, E. (2013). High-sensitivity C-reactive protein and white blood cell count equally predict development of the metabolic syndrome in a Japanese health screening population. *Acta Diabetologica*, 50(4), 633–638.
- Oda, E. (2015). High-sensitivity C-reactive protein, but not white blood cell count, independently predicted incident diabetes in a Japanese health screening population. *Acta Diabetologica*, 52(5), 983–990.
- Odegaard, A. O., Jacobs, D. R., Sanchez, O. A., Goff, D. C., Reiner, A. P., & Gross, M. D. (2016). Oxidative stress, inflammation, endothelial dysfunction and incidence of type 2 diabetes. *Cardiovascular Diabetology*, 15, 51.
- Oldewage-Theron, W. H., & Egal, A. A. (2014). A cross-sectional baseline survey investigating the relationship between dietary diversity and cardiovascular risk factors in women from the Vaal Region, South Africa. *Journal of Nursing Education and Practice*, 4(1), 50–61.
- Pani, L. L. N., Korenda, L., Meigs, J. B., Driver, C., Chamany, S., Fox, C. S., et al. (2008). Effect of Aging on A1C Levels in Individuals without Diabetes: Evidence from the Framingham Offspring Study and NHANES 2001-2004. *Diabetes Care*, 31(10), 1991–1996.
- Pearson, T. A., Mensah, G. A., Alexander, R. W., Anderson, J. L., Cannon, R. O., Criqui, M., et al. (2003). Markers of inflammation and cardiovascular disease: Application to clinical and public health practice: A statement for healthcare professionals from the centers for disease control and prevention and the American Heart Association. *Circulation*, 107(3), 499–511.
- Pepys, M. B., & Hirschfield, G. M. (2003). C-reactive protein: a critical update. *J. Clin. Invest.*, 111(12), 1805–1812.
- Peraturan Menteri Kesehatan Republik Indonesia Nomor 41 Tahun 2014 tentang Pedoman Gizi Seimbang.
- Permatasari, S. M., Sudargo, T., & Purnomo, L. B. (2015). Estimasi asupan indeks glikemik dan beban glikemik dengan kontrol gula darah pasien diabetes melitus tipe 2. *Jurnal Gizi Klinik Indonesia*, 12(2), 45–53. Retrieved from <https://jurnal.ugm.ac.id/jgki/article/view/23116>
- Plączkowska, S., Pawlik-Sobecka, L., Kokot, I., Sowiński, D., Wrzosek, M., & Piwowar, A. (2014). Associations between basic indicators of inflammation and metabolic disturbances. *Postepy Hig Med Dosw (Online)*, 68, 1374–1382.
- Polsky, S., Catenacci, V. A., Wyatt, H. R., & Hill, J. O. (2014). Obesity: Epidemiology, Etiology, and Prevention. In A. C. Ross, B. Caballero, R. J.

- Cousins, K. L. Tucker, & T. R. Ziegler (Eds.), *Modern Nutrition in Health and Disease* (11th ed.). Philadelphia: Lippincott Williams & Wilkins, p. 776.
- Power, C., & Thomas, C. (2011). Changes in BMI, duration of overweight and obesity, and glucose metabolism: 45 Years of follow-up of a birth cohort. *Diabetes Care*, 34(9), 1986–1991.
- Pradhan, A. D., Rifai, N., Buring, J. E., & Ridker, P. M. (2007). Hemoglobin A1c Predicts Diabetes but Not Cardiovascular Disease in Nondiabetic Women. *American Journal of Medicine*, 120(8), 720–727.
- Radin, M. S. (2014). Pitfalls in hemoglobin A1c measurement: When results may be misleading. *Journal of General Internal Medicine*, 29(2), 388–394.
- Ranasinghe, C., Gamage, P., Katulanda, P., Andraweera, N., Thilakarathne, S., & Tharanga, P. (2013). Relationship between Body mass index (BMI) and body fat percentage, estimated by bioelectrical impedance, in a group of Sri Lankan adults : a cross sectional study. *BMC Public Health*, 13, 797. Retrieved from BMC Public Health
- Rathnayake, K. M., Madushani, P. A. ., & Silva, K. D. R. . (2012). Use of dietary diversity score as a proxy indicator of nutrient adequacy of rural elderly people in Sri Lanka. *BMC Research Notes*, 5, 469.
- Reeves, G. (2007). Abnormal laboratory results: C-reactive protein. *Australian Prescriber*, 30(3), 74–76.
- Rhee, E.-J. (2015). Diabetes in Asians. *Endocrinol Metab*, 30(3), 263–269.
- Ridker, P. M. (2016). A test in context: High-sensitivity C-reactive protein. *Journal of the American College of Cardiology*, 67(6), 712–723.
- Ridker, P. M., Buring, J. E., Cook, N. R., & Rifai, N. (2003). C-Reactive Protein, the Metabolic Syndrome, and Risk of Incident Cardiovascular Events: An 8-Year Follow-Up of 14 719 Initially Healthy American Women. *Circulation*, 107(3), 391–397.
- Roberts, W. L. (2004). CDC/AHA Workshop on Markers of Inflammation and Cardiovascular Disease: Application to Clinical and Public Health Practice: Laboratory Tests Available to Assess Inflammation--Performance and Standardization: A Background Paper. *Circulation*, 110(25), e572–e576.
- Rolfes, S. R., Pinna, K., & Whitney, E. (2009). *Understanding Normal and Clinical Nutrition* (8th ed.). Belmont: Wadsworth, Cengage Learning, pp. 37-39; 561-563.
- Rubio-Martín, E., Soriguer, F., Gutiérrez-Repiso, C., Garrido-Sánchez, L., de Adana, M. S. R., García-Fuentes, E., et al. (2013). C-reactive protein and incidence of type 2 diabetes in the Pizarra study. *European Journal of*

Clinical Investigation, 43(2), 159–167.

- Saaristo, T. E., Barengo, N. C., Korpi-Hyövälti, E., Oksa, H., Puolijoki, H., Saltevo, J. T., et al. (2008). High prevalence of obesity, central obesity and abnormal glucose tolerance in the middle-aged Finnish population. *BMC Public Health*, 8, 423.
- Sabanayagam, C., Shankar, A., Lim, S. C., Lee, J., Tai, E. S., & Wong, T. Y. (2011). Serum C-reactive protein level and prediabetes in two Asian populations. *Diabetologia*, 54(4), 767–775.
- Sacks, D. B., Arnold, M., Bakris, G. L., Bruns, D. E., Horvath, A. R., Kirkman, M. S., et al. (2011). Guidelines and recommendations for laboratory analysis in the diagnosis and management of diabetes mellitus. *Diabetes Care*, 34(6), e61–e99.
- Sakane, N., Sato, J., Tsushita, K., Tsujii, S., Kotani, K., Tominaga, M., et al. (2017). Determinants of Glycated Hemoglobin in Subjects With Impaired Glucose Tolerance : Subanalysis of the Japan Diabetes Prevention Program. *J Clin Med Res*, 9(4), 360–365.
- Saslow, L. R., Kim, S., Daubenmier, J. J., Moskowitz, J. T., Phinney, S. D., Goldman, V., et al. (2014). A randomized pilot trial of a moderate carbohydrate diet compared to a very low carbohydrate diet in overweight or obese individuals with type 2 diabetes mellitus or prediabetes. *PLoS ONE*, 9(4), e91027.
- Savy, M., Martin-Prevel, Y., Sawadogo, P., Kameli, Y., & Delpeuch, F. (2005). Use of variety / diversity scores for diet quality measurement : relation with nutritional status of women in a rural area in Burkina Faso. *European Journal of Clinical Nutrition*, 59(5), 703–716.
- Schulz, R., & Heusch, G. (2011). C-Reactive Protein: Just a Biomarker of Inflammation or a Pathophysiological Player in Myocardial Function and Morphology? *Hypertension*, 57(2), 151–153.
- Seo, J. Y., Hwang, S., Kim, J. H., Lee, Y. A., Lee, S. Y., Shin, C. H., & Yang, S. W. (2018). Distribution of glycated haemoglobin and its determinants in Korean youth and young adults: a nationwide population-based study. *Scientific Reports*, 8, 1962.
- Shaw, J. E., Sicree, R. A., & Zimmet, P. Z. (2010). Diabetes Atlas : Global estimates of the prevalence of diabetes for 2010 and 2030. *Diabetes Research and Clinical Practice*, 87(1), 4–14.
- Sheth, J., Shah, A., Sheth, F., Trivedi, S., Nabar, N., Shah, N., et al. (2015). The association of dyslipidemia and obesity with glycated hemoglobin. *Clinical Diabetes and Endocrinology*, 1(1), 6.

- Shi, C. H., Wang, C., Bai, R., Zhang, X.-Y., Men, L.-L., & Du, J.-L. (2015). Associations among glycemic excursions , glycated hemoglobin and high-sensitivity C-reactive protein in patients with poorly controlled type 2 diabetes mellitus. *Experimental and Therapeutic Medicine*, 10(5), 1937–1942.
- Siu, A. L. (2015). Screening for abnormal blood glucose and type 2 diabetes mellitus: U.S. preventive services task force recommendation statement. *Annals of Internal Medicine*, 163(11), 861–868.
- Soewondo, P., Ferrario, A., & Tahapary, D. L. (2013). Challenges in diabetes management in Indonesia: a literature review. *Globalization and Health*, 9, 63.
- Steyn, N. P., Nel, J. H., Nantel, G., Kennedy, G., & Labadarios, D. (2006). Food variety and dietary diversity scores in children : are they good indicators of dietary adequacy ? *Public Health Nutrition*, 9(5), 644–650.
- Sthaneshwar, P., Vethakkan, S. R., & Wong, C. W. (2014). Causes of Low HbA1c in Malaysian University Hospital. *Med J Malaysia*, 69(4), 175–177.
- Strauss, J., Witoelar, F., & Sikoki, B. (2016). *The Fifth Wave of the Indonesia Family Life Survey: Overview and Field Report* (Vol. 1). WR-1143/1-NIA/NICHD. Retrieved from WR-1143/1-NIA/NICHD
- Strauss, J., Witoelar, F., & Sikoki, B. (2016). *User's Guide for the Indonesia Family Life Survey, Wave 5* (Vol. 2). WR-1143/2-NIA/NICHD.
- Suzuki, T., Katz, R., Jenny, N. S., Zakai, N. A., LeWinter, M. M., Barzilay, J. I., & Cushman, M. (2008). Metabolic Syndrome, Inflammation, and the Incident Heart Failure in the Elderly : the Cardiovascular Health Study. *Circ Heart Fail*, 1(4), 242–248.
- Suzuki, T., Voeks, J., Zakai, N. A., Jenny, N. S., Brown, T. M., Safford, M. M., et al. (2014). Metabolic syndrome, C-reactive protein, and mortality in U.S. blacks and whites: The reasons for geographic and racial differences in Stroke (REGARDS) study. *Diabetes Care*, 37(8), 2284–2290.
- Tangvarasittichai, S., Pongthaisong, S., & Tangvarasittichai, O. (2016). Tumor Necrosis Factor- α , Interleukin-6, C-Reactive Protein Levels and Insulin Resistance Associated with Type 2 Diabetes in Abdominal Obesity Women. *Indian Journal of Clinical Biochemistry*, 31(1), 68–74.
- Tanigaki, K., Vongpatanasin, W., Barrera, J. A., Atochin, D. N., Huang, P. L., Bonvini, E., et al. (2013). C-Reactive Protein Causes Insulin Resistance in Mice Through Fc γ Receptor IIB – Mediated Inhibition of Skeletal Muscle Glucose Delivery. *Diabetes*, 62(3), 721–731.
- Tay, T. L., Foo, J. P., Tan, E., Chen, R., Khoo, J., Soh, S. B., et al. (2011). HbA1c

may not be a sensitive determinant of diabetic status in the elderly. *Diabetes Research and Clinical Practice*, 92(2), e31–e33.

Tomita, M., Kabeya, Y., Okada, K., Shirai, M., Asai, S., Katsuki, T., et al. (2010). Normal glucose tolerance with high HbA1c levels observed in two cases of Hb variants. *Diabetology International*, 1(2), 104–107. <https://doi.org/10.1007/s13340-010-0016-5>

Tornheim, K., & Ruderman, N. B. (2011). Intermediary Metabolism of Carbohydrate, Protein, and Fat. In R. S. Ahima (Ed.), *Metabolic Basis of Obesity*. Philadelphia: Springer, pp. 25–27.

Uemura, H., Katsuura-Kamano, S., Yamaguchi, M., Bahari, T., Ishizu, M., Fujioka, M., & Arisawa, K. (2017). Relationships of serum high-sensitivity C-reactive protein and body size with insulin resistance in a Japanese cohort. *PLoS ONE*, 12(6), e0178672.

Undang-Undang Republik Indonesia Nomor 13 Tahun 1998 Tentang Kesejahteraan Lanjut Usia.

Vadiveloo, M., Parkeh, N., & Mattei, J. (2015). Greater Healthful Food Variety as Measured by the US Healthy Food Diversity Index Is Associated with Lower Odds of Metabolic Syndrome and its Components in US Adults. *The Journal of Nutrition*, 145(3), 564–571.

van Greevenbroek, M. M. J., Schalkwijk, C. G., & Stehouwer, C. D. A. (2013). Obesity-associated low-grade inflammation in type 2 diabetes mellitus: causes and consequences. *The Netherlands Journal of Medicine*, 71(4), 174–187.

Vijayakumar, P., Nelson, R. G., Hanson, R. L., Knowler, W. C., & Sinha, M. (2017). HbA1c and the prediction of type 2 diabetes in children and adults. *Diabetes Care*, 40(1), 16–21.

Weber, K. S., Nowotny, B., Strassburger, K., Pacini, G., Mussig, K., Szendroedi, J., et al. (2015). The role of Markers of low-grade inflammation for the early time course of glycemic control, glucose disappearance rate, and B-Cell function in recently diagnosed type 1 and type 2 diabetes. *Diabetes Care*, 38(9), 1758–1767.

WHO. (2009). *Global Health Risks: Mortality and burden of disease attributable to selected major risks. Bulletin of the World Health Organization* (Vol. 87). Geneva.

WHO. (2011). *Use of glycated haemoglobin (HbA1c) in the diagnosis of diabetes mellitus : Abbreviated Report of a WHO Consultation* (WHO/NMH/CH). Jenewa: World Health Organization.

Wild, S., Roglic, G., Green, A., Sicree, R., & King, H. (2004). Global Prevalence

of Diabetes : Estimates for the year 2000 and projections for 2030. *Diabetes Care*, 27(5), 1047–1053.

- Woo, M.-H., Park, S., Woo, J.-T., & Choue, R. (2010). A Comparative Study of Diet in Good and Poor Glycemic Control Groups in Elderly Patients with Type 2 Diabetes Mellitus. *Korean Diabetes Journal*, 34(5), 303–311. <https://doi.org/10.4093/kdj.2010.34.5.303>
- Wu, J., Liang, Z., Zhou, J., Zhong, C., Jiang, W., Zhang, Y., & Zhang, S. (2016). Association of Biomarkers of Inflammation and Endothelial Dysfunction with Fasting and Postload Glucose Metabolism: A Population-Based Prospective Cohort Study Among Inner Mongolians in China. *Canadian Journal of Diabetes*, 40(6), 509–514.
- Wu, T., Dorn, J. P., Donahue, R. P., Sempos, C. T., & Trevisan, M. (2002). Associations of serum C-reactive protein with fasting insulin, glucose, and glycosylated hemoglobin. *Am J Epidemiol*, 155(1), 65–71.
- Xi, L., Xiao, C., Bandsma, R. H. J., Naples, M., Adeli, K., & Lewis, G. F. (2011). C-reactive protein impairs hepatic insulin sensitivity and insulin signaling in rats: Role of mitogen-activated protein kinases. *Hepatology*, 53(1), 127–135.
- Yadrick, M. M. (2017). Food and Nutrient Delivery: Diet Guidelines, Nutrient Standards, and Cultural Competence. In L. K. Mahan & J. L. Raymond (Eds.), *Krause's Food & The Nutrition Care Process* (14th ed.). Missouri: Elsevier, p. 173.
- Yang, R. Y., Fischer, S., Hanson, P. M., & Keatinge, J. D. H. (2013). Increasing micronutrient availability from food in sub-saharan africa with indigenous vegetables. In H. R. Juliani, J. E. Simon, & C.-T. Ho (Eds.), *African Natural Plant Products Volume II: Discoveries and Challenges in Chemistry, Health, and Nutrition*. Washington: ACS Symposium Series; American Chemical Society, pp. 231–237.
- Yang, T., Chu, C.-H., Hsieh, P.-C., Hsu, C.-H., Chou, Y.-C., Yang, S.-H., et al. (2013). C-reactive protein concentration as a significant correlate for metabolic syndrome: a Chinese population-based study. *Endocrine*, 43(2), 351–359.
- Ye, J. (2013). Mechanisms of insulin resistance in obesity. *Frontiers of Medicine*, 7(1), 14–24.
- Yeboah, J., McClelland, R. L., Polonsky, T. S., Burke, G. L., Sibley, C. T., O'Leary, D., et al. (2012). Comparison of Novel Risk Markers for Improvement in Cardiovascular Risk Assessment in Intermediate-Risk Individuals. *JAMA*, 308(8), 788–795.
- Zainal Badari, S. A., Arcot, J., Haron, S. A., Paim, L., Sulaiman, N., & Masud, J. (2012). Food Variety and Dietary Diversity Scores to Understand the Food-

Intake Pattern among Selected Malaysian Households. *Ecology of Food and Nutrition*, 51(4), 265–299.

Zhang, Q., Chen, X., Liu, Z., Varma, D. S., Wan, R., & Zhao, S. (2017). Diet diversity and nutritional status among adults in southwest China. *PLOS ONE*, 12(2), e0172406.

Zhang, X., Gregg, E. W., Williamson, D. F., Barker, L. E., Thomas, W., Bullard, K. M. K., et al. (2010). A1C level and future risk of diabetes: A systematic review. *Diabetes Care*, 33(7), 1665–1673.

Zhao, W., Yu, K., Tan, S., Zheng, Y., Zhao, A., Wang, P., & Zhang, Y. (2017). Dietary diversity scores : an indicator of micronutrient inadequacy instead of obesity for Chinese children. *BMC Public Health*, 17(1), 440.