

References

1. Gitlin N. The liver biology and pathobiology, 4th edition: Irwin M. Arias, James L. Boyer, Frances V. Chisari, Nelson Fausto, David Schachter, and David A. Schafritz. 1088 pp. \$249.00. Lippincott Williams and Wilkins, Philadelphia, Pennsylvania, 2001. ISBN 0-7817-2390-6. Web address for ordering: www.lww.com. *Gastroenterology* 2003;125:1909-10.
2. Kùthe F. Over de functie van de lever. *Ned Tijdschr Geneesk* 1860:583-603.
3. Oude Elferink RP, Kwekkeboom J. *Leverziekten*. Hoofdstuk 4: Functies van de lever. Springer 2009:25-34.
4. Elzas M. De ziekten der spijsverteringsorganen, voornamelijk met het oog op de behandeling. *Aanwinsten op diagnostisch en therapeutisch gebied* 1933:358-69.
5. Bataller R, Brenner DA. Liver fibrosis. *The Journal of clinical investigation* 2005;115:209-18.
6. Koehler EM, Schouten JN, Hansen BE, et al. Prevalence and risk factors of non-alcoholic fatty liver disease in the elderly: results from the Rotterdam study. *Journal of hepatology* 2012;57:1305-11.
7. Asrani SK, Devarbhavi H, Eaton J, Kamath PS. Burden of liver diseases in the world. *Journal of hepatology* 2019;70:151-71.
8. Mokdad AA, Lopez AD, Shahraz S, et al. Liver cirrhosis mortality in 187 countries between 1980 and 2010: a systematic analysis. *BMC Med* 2014;12:145.
9. Lozano R, Naghavi M, Foreman K, et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet* 2012;380:2095-128.
10. Clain DJ, Lefkowitz JH. Fatty liver disease in morbid obesity. *Gastroenterology clinics of North America* 1987;16:239-52.
11. Wong VW, Chu WC, Wong GL, et al. Prevalence of non-alcoholic fatty liver disease and advanced fibrosis in Hong Kong Chinese: a population study using proton-magnetic resonance spectroscopy and transient elastography. *Gut* 2012;61:409-15.
12. Agrawal S, Duseja AK. Non-alcoholic Fatty Liver Disease: East Versus West. *J Clin Exp Hepatol* 2012;2:122-34.
13. Rinella ME. Nonalcoholic fatty liver disease: a systematic review. *Jama* 2015;313:2263-73.
14. WHO. Global status report on alcohol and health 2018. 2018.
15. Raynard B, Balian A, Fallik D, et al. Risk factors of fibrosis in alcohol-induced liver disease. *Hepatology* 2002;35:635-8.
16. WHO. Global hepatitis report 2017. 2017.
17. Friedman SL, Neuschwander-Tetri BA, Rinella M, Sanyal AJ. Mechanisms of NAFLD development and therapeutic strategies. *Nat Med* 2018;24:908-22.
18. Nobili V, Mantovani A, Cianfarani S, et al. Prevalence of prediabetes and diabetes in children and adolescents with biopsy-proven non-alcoholic fatty liver disease. *Journal of hepatology* 2019;71:802-10.
19. Kleiner DE, Brunt EM. Nonalcoholic fatty liver disease: pathologic patterns and biopsy evaluation in clinical research. *Seminars in liver disease* 2012;32:3-13.
20. Singh S, Allen AM, Wang Z, Prokop LJ, Murad MH, Loomba R. Fibrosis Progression in Nonalcoholic Fatty Liver vs Nonalcoholic Steatohepatitis: A Systematic Review and Meta-analysis of Paired-Biopsy Studies. *Clinical Gastroenterology and Hepatology* 2015;13:643-54.e9.
21. Hagström H, Nasr P, Ekstedt M, et al. Fibrosis stage but not NASH predicts mortality and time to development of severe liver disease in biopsy-proven NAFLD. *Journal of hepatology* 2017;67:1265-73.
22. Pais R, Barritt AS, Calmus Y, et al. NAFLD and liver transplantation: Current burden and expected challenges. *Journal of hepatology* 2016;65:1245-57.

23. Wong RJ, Aguilar M, Cheung R, et al. Nonalcoholic steatohepatitis is the second leading etiology of liver disease among adults awaiting liver transplantation in the United States. *Gastroenterology* 2015;148:547-55.
24. McPherson S, Hardy T, Henderson E, Burt AD, Day CP, Anstee QM. Evidence of NAFLD progression from steatosis to fibrosing-steatohepatitis using paired biopsies: implications for prognosis and clinical management. *Journal of hepatology* 2015;62:1148-55.
25. Kim G-A, Lee HC, Choe J, et al. Association between non-alcoholic fatty liver disease and cancer incidence rate. *Journal of hepatology* 2018;68:140-6.
26. Mittal S, El-Serag HB, Sada YH, et al. Hepatocellular Carcinoma in the Absence of Cirrhosis in United States Veterans is Associated With Nonalcoholic Fatty Liver Disease. *Clin Gastroenterol Hepatol* 2016;14:124-31.e1.
27. Lazo M, Hernaez R, Eberhardt MS, et al. Prevalence of nonalcoholic fatty liver disease in the United States: the Third National Health and Nutrition Examination Survey, 1988-1994. *Am J Epidemiol* 2013;178:38-45.
28. Alberti KG, Eckel RH, Grundy SM, et al. Harmonizing the metabolic syndrome: a joint interim statement of the International Diabetes Federation Task Force on Epidemiology and Prevention; National Heart, Lung, and Blood Institute; American Heart Association; World Heart Federation; International Atherosclerosis Society; and International Association for the Study of Obesity. *Circulation* 2009;120:1640-5.
29. Sorrentino P, Terracciano L, D'Angelo S, Ferbo U, Bracigliano A, Vecchione R. Predicting fibrosis worsening in obese patients with NASH through parenchymal fibronectin, HOMA-IR, and hypertension. *Am J Gastroenterol* 2010;105:336-44.
30. Ma J, Hwang SJ, Pedley A, et al. Bi-directional analysis between fatty liver and cardiovascular disease risk factors. *Journal of hepatology* 2017;66:390-7.
31. Lambert JE, Ramos-Roman MA, Browning JD, Parks EJ. Increased de novo lipogenesis is a distinct characteristic of individuals with nonalcoholic fatty liver disease. *Gastroenterology* 2014;146:726-35.
32. BasuRay S, Smagris E, Cohen JC, Hobbs HH. The PNPLA3 variant associated with fatty liver disease (I148M) accumulates on lipid droplets by evading ubiquitylation. *Hepatology* 2017;66:1111-24.
33. Kozlitina J, Smagris E, Stender S, et al. Exome-wide association study identifies a TM6SF2 variant that confers susceptibility to nonalcoholic fatty liver disease. *Nat Genet* 2014;46:352-6.
34. Abul-Husn NS, Cheng X, Li AH, et al. A Protein-Truncating HSD17B13 Variant and Protection from Chronic Liver Disease. *N Engl J Med* 2018;378:1096-106.
35. Day CP, James OFW. Steatohepatitis: A tale of two “hits”? *Gastroenterology* 1998;114:842-5.
36. Lomonaco R, Ortiz-Lopez C, Orsak B, et al. Effect of adipose tissue insulin resistance on metabolic parameters and liver histology in obese patients with nonalcoholic fatty liver disease. *Hepatology* 2012;55:1389-97.
37. Pal M, Febbraio MA, Lancaster GI. The roles of c-Jun NH2-terminal kinases (JNKs) in obesity and insulin resistance. *J Physiol* 2016;594:267-79.
38. Vamecq J, Latruffe N. Medical significance of peroxisome proliferator-activated receptors. *Lancet* 1999;354:141-8.
39. Arab JP, Karpen SJ, Dawson PA, Arrese M, Trauner M. Bile acids and nonalcoholic fatty liver disease: Molecular insights and therapeutic perspectives. *Hepatology* 2017;65:350-62.
40. Bril F, Barb D, Portillo-Sanchez P, et al. Metabolic and histological implications of intrahepatic triglyceride content in nonalcoholic fatty liver disease. *Hepatology* 2017;65:1132-44.

41. Han J, Kaufman RJ. The role of ER stress in lipid metabolism and lipotoxicity. *J Lipid Res* 2016;57:1329-38.
42. Marra F, Bertolani C. Adipokines in liver diseases. *Hepatology* 2009;50:957-69.
43. Lanaspá MA, Sánchez-Lozada LG, Choi YJ, et al. Uric acid induces hepatic steatosis by generation of mitochondrial oxidative stress: potential role in fructose-dependent and -independent fatty liver. *J Biol Chem* 2012;287:40732-44.
44. Sookoian S, Pirola CJ. Obstructive sleep apnea is associated with fatty liver and abnormal liver enzymes: a meta-analysis. *Obes Surg* 2013;23:1815-25.
45. Henao-Mejia J, Elinav E, Jin C, et al. Inflammasome-mediated dysbiosis regulates progression of NAFLD and obesity. *Nature* 2012;482:179-85.
46. Colloredo G, Guido M, Sonzogni A, Leandro G. Impact of liver biopsy size on histological evaluation of chronic viral hepatitis: the smaller the sample, the milder the disease. *Journal of hepatology* 2003;39:239-44.
47. Huang JF, Hsieh MY, Dai CY, et al. The incidence and risks of liver biopsy in non-cirrhotic patients: An evaluation of 3806 biopsies. *Gut* 2007;56:736-7.
48. Brunt EM, Kleiner DE, Wilson LA, Belt P, Neuschwander-Tetri BA, Network NCR. Nonalcoholic fatty liver disease (NAFLD) activity score and the histopathologic diagnosis in NAFLD: distinct clinicopathologic meanings. *Hepatology* 2011;53:810-20.
49. European Association for Study of L, Asociacion Latinoamericana para el Estudio del H. EASL-ALEH Clinical Practice Guidelines: Non-invasive tests for evaluation of liver disease severity and prognosis. *Journal of hepatology* 2015;63:237-64.
50. Dasarathy S, Dasarathy J, Khyami A, Joseph R, Lopez R, McCullough AJ. Validity of real time ultrasound in the diagnosis of hepatic steatosis: a prospective study. *J Hepatol* 2009;51:1061-7.
51. de Lédinghen V, Vergniol J, Capdepon M, et al. Controlled attenuation parameter (CAP) for the diagnosis of steatosis: A prospective study of 5323 examinations. *Journal of hepatology* 2014;60:1026-31.
52. Karcaaltincaba M, Akhan O. Imaging of hepatic steatosis and fatty sparing. *Eur J Radiol* 2007;61:33-43.
53. Sandrin L, Fourquet B, Hasquenoph JM, et al. Transient elastography: a new noninvasive method for assessment of hepatic fibrosis. *Ultrasound Med Biol* 2003;29:1705-13.
54. Petta S, Maida M, Macaluso FS, et al. The severity of steatosis influences liver stiffness measurement in patients with nonalcoholic fatty liver disease. *Hepatology* 2015;62:1101-10.
55. European Association for the Study of the L, European Association for the Study of D, European Association for the Study of O. EASL-EASD-EASO Clinical Practice Guidelines for the management of non-alcoholic fatty liver disease. *J Hepatol* 2016;64:1388-402.
56. Maersk M, Belza A, Stodkilde-Jorgensen H, et al. Sucrose-sweetened beverages increase fat storage in the liver, muscle, and visceral fat depot: a 6-mo randomized intervention study. *Am J Clin Nutr* 2012;95:283-9.
57. Zelber-Sagi S, Nitzan-Kaluski D, Goldsmith R, et al. Long term nutritional intake and the risk for non-alcoholic fatty liver disease (NAFLD): a population based study. *Journal of hepatology* 2007;47:711-7.
58. Estruch R, Ros E, Salas-Salvado J, et al. Primary Prevention of Cardiovascular Disease with a Mediterranean Diet Supplemented with Extra-Virgin Olive Oil or Nuts. *N Engl J Med* 2018;378:e34.
59. Zelber-Sagi S, Salomone F, Mlynarsky L. The Mediterranean dietary pattern as the diet of choice for non-alcoholic fatty liver disease: Evidence and plausible mechanisms. *Liver Int* 2017.

60. Katsagoni CN, Georgoulis M, Papatheodoridis GV, Panagiotakos DB, Kontogianni MD. Effects of lifestyle interventions on clinical characteristics of patients with non-alcoholic fatty liver disease: A meta-analysis. *Metabolism* 2017;68:119-32.
61. Hashida R, Kawaguchi T, Bekki M, et al. Aerobic vs. resistance exercise in non-alcoholic fatty liver disease: A systematic review. *Journal of hepatology* 2017;66:142-52.
62. Lee Y, Doumouras AG, Yu J, et al. Complete Resolution of Nonalcoholic Fatty Liver Disease After Bariatric Surgery: A Systematic Review and Meta-analysis. *Clin Gastroenterol Hepatol* 2019;17:1040-60 e11.
63. Sanyal AJ, Chalasani N, Kowdley KV, et al. Pioglitazone, Vitamin E, or Placebo for Nonalcoholic Steatohepatitis. *New England Journal of Medicine* 2010;362:1675-85.
64. Ratziu V, Harrison SA, Francque S, et al. Elafibranor, an Agonist of the Peroxisome Proliferator-Activated Receptor-alpha and -delta, Induces Resolution of Nonalcoholic Steatohepatitis Without Fibrosis Worsening. *Gastroenterology* 2016;150:1147-59 e5.
65. Neuschwander-Tetri BA, Loomba R, Sanyal AJ, et al. Farnesoid X nuclear receptor ligand obeticholic acid for non-cirrhotic, non-alcoholic steatohepatitis (FLINT): a multicentre, randomised, placebo-controlled trial. *The Lancet* 2015;385:956-65.
66. Armstrong MJ, Gaunt P, Aithal GP, et al. Liraglutide safety and efficacy in patients with non-alcoholic steatohepatitis (LEAN): a multicentre, double-blind, randomised, placebo-controlled phase 2 study. *Lancet* 2016;387:679-90.
67. Friedman S, Sanyal A, Goodman Z, et al. Efficacy and safety study of cenicriviroc for the treatment of non-alcoholic steatohepatitis in adult subjects with liver fibrosis: CENTAUR Phase 2b study design. *Contemporary Clinical Trials* 2016;47:356-65.
68. Loomba R, Lawitz E, Mantry PS, et al. The ASK1 inhibitor selonsertib in patients with nonalcoholic steatohepatitis: A randomized, phase 2 trial. *Hepatology* 2018;67:549-59.
69. Dyson J, Jaques B, Chattopadhyay D, et al. Hepatocellular cancer: the impact of obesity, type 2 diabetes and a multidisciplinary team. *Journal of hepatology* 2014;60:110-7.
70. Singal AK, Salameh H, Kuo YF, Wiesner RH. Evolving frequency and outcomes of simultaneous liver kidney transplants based on liver disease etiology. *Transplantation* 2014;98:216-21.
71. Adam R, Karam V, Delvart V, et al. Evolution of indications and results of liver transplantation in Europe. A report from the European Liver Transplant Registry (ELTR). *Journal of hepatology* 2012;57:675-88.
72. Singhal A, Wilson GC, Wima K, et al. Impact of recipient morbid obesity on outcomes after liver transplantation. *Transpl Int* 2015;28:148-55.
73. Leonard J, Heimbach JK, Malinchoc M, Watt K, Charlton M. The impact of obesity on long-term outcomes in liver transplant recipients-results of the NIDDK liver transplant database. *Am J Transplant* 2008;8:667-72.
74. Haldar D, Kern B, Hodson J, et al. Outcomes of liver transplantation for non-alcoholic steatohepatitis: A European Liver Transplant Registry study. *Journal of hepatology* 2019;71:313-22.
75. Yalamanchili K, Saadeh S, Klintmalm GB, Jennings LW, Davis GL. Nonalcoholic fatty liver disease after liver transplantation for cryptogenic cirrhosis or nonalcoholic fatty liver disease. *Liver Transpl* 2010;16:431-9.
76. Lozano R, Naghavi M, Foreman K, et al. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 2012;380:2095-128.
77. Murray CJ, Vos T, Lozano R, et al. Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 2012;380:2197-223.

78. Koehler EM, Plompen EP, Schouten JN, et al. Presence of diabetes mellitus and steatosis is associated with liver stiffness in a general population: The Rotterdam study. *Hepatology* 2016;63:138-47.
79. Roulot D, Costes JL, Buyck JF, et al. Transient elastography as a screening tool for liver fibrosis and cirrhosis in a community-based population aged over 45 years. *Gut* 2011;60:977-84.
80. Serfaty L. Clinical Implications of Concomitant Alcohol Use, Obesity, and Viral Hepatitis. *Gastroenterology*;150:1718-22.
81. Marventano S, Salomone F, Godos J, et al. Coffee and tea consumption in relation with non-alcoholic fatty liver and metabolic syndrome: A systematic review and meta-analysis of observational studies. *Clin Nutr* 2016.
82. Yesil A, Yilmaz Y. Review article: coffee consumption, the metabolic syndrome and non-alcoholic fatty liver disease. *Aliment Pharmacol Ther* 2013;38:1038-44.
83. Eskelinen MH, Ngandu T, Tuomilehto J, Soininen H, Kivipelto M. Midlife coffee and tea drinking and the risk of late-life dementia: a population-based CAIDE study. *J Alzheimers Dis* 2009;16:85-91.
84. Khan N, Mukhtar H. Tea and Health: Studies in Humans. *Curr Pharm Des* 2013;19:6141-7.
85. Arnesen E, Huseby N-E, Brenn T, Try K. The Tromsø Heart Study: Distribution of, and determinants for, gamma-glutamyltransferase in a free-living population. *Scandinavian Journal of Clinical and Laboratory Investigation* 1986;46:63-70.
86. Ruhl CE, Everhart JE. Coffee and caffeine consumption reduce the risk of elevated serum alanine aminotransferase activity in the United States. *Gastroenterology* 2005;128:24-32.
87. Klatsky AL, Armstrong MA. Alcohol, smoking, coffee, and cirrhosis. *AM J EPIDEMIOLOG* 1992;136:1248-57.
88. Modi AA, Feld JJ, Park Y, et al. Increased caffeine consumption is associated with reduced hepatic fibrosis. *Hepatology* 2010;51:201-9.
89. Anty R, Marjoux S, Iannelli A, et al. Regular coffee but not espresso drinking is protective against fibrosis in a cohort mainly composed of morbidly obese European women with NAFLD undergoing bariatric surgery. *Journal of hepatology* 2012;57:1090-6.
90. Bambha K, Wilson LA, Unalp A, et al. Coffee consumption in NAFLD patients with lower insulin resistance is associated with lower risk of severe fibrosis. *Liver Int* 2014;34:1250-8.
91. Zelber-Sagi S, Salomone F, Webb M, et al. Coffee consumption and nonalcoholic fatty liver onset: A prospective study in the general population. *Transl Res* 2015;165:428-36.
92. Klatsky AL, Morton C, Udaltsova N, Friedman GD. COffee, cirrhosis, and transaminase enzymes. *Archives of Internal Medicine* 2006;166:1190-5.
93. Tanaka K, Tokunaga S, Kono S, et al. Coffee consumption and decreased serum gamma-glutamyltransferase and aminotransferase activities among male alcohol drinkers. *Int J Epidemiol* 1998;27:438-43.
94. Kono S, Shinchi K, Imanishi K, Todoroki I, Hatsuse K. Coffee and serum gamma-glutamyltransferase: a study of self-defense officials in Japan. *Am J Epidemiol* 1994;139:723-7.
95. Imai K, Nakachi K. Cross sectional study of effects of drinking green tea on cardiovascular and liver diseases. *Bmj* 1995;310:693-6.
96. Sakata R, Nakamura T, Torimura T, Ueno T, Sata M. Green tea with high-density catechins improves liver function and fat infiltration in non-alcoholic fatty liver disease (NAFLD) patients: a double-blind placebo-controlled study. *Int J Mol Med* 2013;32:989-94.
97. Hofman A, Brusselle GG, Darwish Murad S, et al. The Rotterdam Study: 2016 objectives and design update. *Eur J Epidemiol* 2015;30:661-708.

98. Goldbohm RA, van den Brandt PA, Brants HA, et al. Validation of a dietary questionnaire used in a large-scale prospective cohort study on diet and cancer. *Eur J Clin Nutr* 1994;48:253-65.
99. Feunekes GI, Van Staveren WA, De Vries JH, Burema J, Hautvast JG. Relative and biomarker-based validity of a food-frequency questionnaire estimating intake of fats and cholesterol. *Am J Clin Nutr* 1993;58:489-96.
100. van Lee L, Geelen A, van Huysduynen EJ, de Vries JH, van't Veer P, Feskens EJ. The Dutch Healthy Diet index (DHD-index): an instrument to measure adherence to the Dutch Guidelines for a Healthy Diet. *Nutr J* 2012;11:49.
101. Boursier J, Zarski JP, de Ledinghen V, et al. Determination of reliability criteria for liver stiffness evaluation by transient elastography. *Hepatology* 2013;57:1182-91.
102. Wong VW, Vergniol J, Wong GL, et al. Diagnosis of fibrosis and cirrhosis using liver stiffness measurement in nonalcoholic fatty liver disease. *Hepatology* 2010;51:454-62.
103. Castera L, Forns X, Alberti A. Non-invasive evaluation of liver fibrosis using transient elastography. *Journal of hepatology* 2008;48:835-47.
104. Hamaguchi M, Kojima T, Itoh Y, et al. The severity of ultrasonographic findings in nonalcoholic fatty liver disease reflects the metabolic syndrome and visceral fat accumulation. *Am J Gastroenterol* 2007;102:2708-15.
105. Grundy SM, Cleeman JJ, Daniels SR, et al. Diagnosis and management of the metabolic syndrome: an American Heart Association/National Heart, Lung, and Blood Institute Scientific Statement. *Circulation* 2005;112:2735-52.
106. Matthews DR, Hosker JP, Rudenski AS, Naylor BA, Treacher DF, Turner RC. Homeostasis model assessment: insulin resistance and beta-cell function from fasting plasma glucose and insulin concentrations in man. *Diabetologia* 1985;28:412-9.
107. Willett WC, Reynolds RD, Cottrell-Hoehner S, Sampson L, Browne ML. Validation of a semi-quantitative food frequency questionnaire: comparison with a 1-year diet record. *J Am Diet Assoc* 1987;87:43-7.
108. Cassinotto C, Boursier J, de Ledinghen V, et al. Liver stiffness in nonalcoholic fatty liver disease: A comparison of supersonic shear imaging, FibroScan, and ARFI with liver biopsy. *Hepatology* 2016;63:1817-27.
109. Goldbohm RA, van 't Veer P, van den Brandt PA, et al. Reproducibility of a food frequency questionnaire and stability of dietary habits determined from five annually repeated measurements. *Eur J Clin Nutr* 1995;49:420-9.
110. Liu F, Wang X, Wu G, et al. Coffee Consumption Decreases Risks for Hepatic Fibrosis and Cirrhosis: A Meta-Analysis. *PLoS One* 2015;10:e0142457.
111. Triantos C MS, Smirnidis A. Is caffeine responsible for the hepatoprotective effect of coffee consumption in patients with chronic liver diseases? A multicentre study. *AASLD abstract* 2013;1.
112. Molloy JW, Calcagno CJ, Williams CD, Jones FJ, Torres DM, Harrison SA. Association of coffee and caffeine consumption with fatty liver disease, nonalcoholic steatohepatitis, and degree of hepatic fibrosis. *Hepatology* 2012;55:429-36.
113. Ruhl CE, Everhart JE. Coffee and tea consumption are associated with a lower incidence of chronic liver disease in the United States. *Gastroenterology* 2005;129:1928-36.
114. Honjo S, Kono S, Coleman MP, et al. Coffee consumption and serum aminotransferases in middle-aged Japanese men. *Journal of Clinical Epidemiology* 2001;54:823-9.
115. Carlsen MH, Halvorsen BL, Holte K, et al. The total antioxidant content of more than 3100 foods, beverages, spices, herbs and supplements used worldwide. *Nutr J* 2010;9:3.

116. Shim SG, Jun DW, Kim EK, et al. Caffeine attenuates liver fibrosis via defective adhesion of hepatic stellate cells in cirrhotic model. *J Gastroenterol Hepatol* 2013;28:1877-84.
117. Furtado KS, Prado MG, Aguiar ESMA, et al. Coffee and caffeine protect against liver injury induced by thioacetamide in male Wistar rats. *Basic Clin Pharmacol Toxicol* 2012;111:339-47.
118. Vitaglione P, Morisco F, Mazzone G, et al. Coffee Reduces Liver Damage in a Rat Model of Steatohepatitis: The Underlying Mechanisms and the Role of Polyphenols and Melanoidins. *Hepatology* 2010;52:1652-61.
119. Rodriguez de Sotillo DV, Hadley M, Sotillo JE. Insulin receptor exon 11+/- is expressed in Zucker (fa/fa) rats, and chlorogenic acid modifies their plasma insulin and liver protein and DNA. *J Nutr Biochem* 2006;17:63-71.
120. Xiao J, Ho CT, Liong EC, et al. Epigallocatechin gallate attenuates fibrosis, oxidative stress, and inflammation in non-alcoholic fatty liver disease rat model through TGF/SMAD, PI3 K/Akt/FoxO1, and NF-kappa B pathways. *Eur J Nutr* 2014;53:187-99.
121. Nakamuta M, Higashi N, Kohjima M, et al. Epigallocatechin-3-gallate, a polyphenol component of green tea, suppresses both collagen production and collagenase activity in hepatic stellate cells. *Int J Mol Med* 2005;16:677-81.
122. Friedrich-Rust M, Ong MF, Martens S, et al. Performance of transient elastography for the staging of liver fibrosis: a meta-analysis. *Gastroenterology* 2008;134:960-74.
123. Rustan AC, Halvorsen B, Ranheim T, Drevon CA. Cafestol (a coffee lipid) decreases uptake of low-density lipoprotein (LDL) in human skin fibroblasts and liver cells. *ANN NEW YORK ACAD SCI* 1997;158-62.
124. Treur JL, Taylor AE, Ware JJ, et al. Associations between smoking and caffeine consumption in two European cohorts. *Addiction* 2016;111:1059-68.
125. Poole R, Kennedy OJ, Roderick P, Fallowfield JA, Hayes PC, Parkes J. Coffee consumption and health: umbrella review of meta-analyses of multiple health outcomes. *Bmj* 2017;359:j5024.
126. Arnesen E, Huseby NE, Brenn T, Try K. The Tromso Heart Study: distribution of, and determinants for, gamma-glutamyltransferase in a free-living population. *Scand J Clin Lab Invest* 1986;46:63-70.
127. Nakanishi N, Nakamura K, Nakajima K, Suzuki K, Tatara K. Coffee consumption and decreased serum γ -glutamyltransferase: A study of middle-aged Japanese men. *Eur J Epidemiol* 2000;16:419-23.
128. Xiao Q, Sinha R, Graubard BI, Freedman ND. Inverse associations of total and decaffeinated coffee with liver enzyme levels in National Health and Nutrition Examination Survey 1999-2010. *Hepatology* 2014;60:2091-8.
129. Corrao G, Lepore AR, Torchio P, et al. The effect of drinking coffee and smoking cigarettes on the risk of cirrhosis associated with alcohol consumption. *EUR J EPIDEMIOLOG* 1994;10:657-64.
130. Alferink LJM, Fittipaldi J, Kieft-de Jong JC, et al. Coffee and herbal tea consumption is associated with lower liver stiffness in the general population: The Rotterdam study. *Journal of hepatology* 2017;67:339-48.
131. Liu F, Wang X, Wu G, et al. Coffee consumption decreases risks for hepatic Fibrosis and Cirrhosis: A Meta-Analysis. *PLoS ONE* 2015;10.
132. Kennedy OJ, Roderick P, Buchanan R, Fallowfield JA, Hayes PC, Parkes J. Systematic review with meta-analysis: Coffee consumption and the risk of cirrhosis. *Aliment Pharmacol Ther* 2016;43:562-74.
133. Freedman ND, Curto TM, Lindsay KL, Wright EC, Sinha R, Everhart JE. Coffee consumption is associated with response to peginterferon and ribavirin therapy in patients with chronic hepatitis C. *Gastroenterology* 2011;140:1961-9.

134. Carrieri MP, Protopopescu C, Marcellin F, et al. Protective effect of coffee consumption on all-cause mortality of French HIV-HCV co-infected patients. *Journal of hepatology* 2017;67:1157-67.
135. Cardin R, Piciocchi M, Martines D, Scribano L, Petracco M, Farinati F. Effects of coffee consumption in chronic hepatitis C: A randomized controlled trial. *Dig Liver Dis* 2013;45:499-504.
136. Shen H, Rodriguez AC, Shiani A, et al. Association between caffeine consumption and nonalcoholic fatty liver disease: A systemic review and meta-analysis. *Ther Adv Gastroenterol* 2016;9:113-20.
137. Wijarnpreecha K, Thongprayoon C, Ungprasert P. Coffee consumption and risk of nonalcoholic fatty liver disease: A systematic review and meta-analysis. *Eur J Gastroenterol Hepatol* 2017;29:e8-e12.
138. Veronese N, Notarnicola M, Cisternino AM, et al. Coffee Intake and Liver Steatosis: A Population Study in a Mediterranean Area. *Nutrients* 2018;10.
139. Bravi F, Tavani A, Bosetti C, Boffetta P, La Vecchia C. Coffee and the risk of hepatocellular carcinoma and chronic liver disease: A systematic review and meta-analysis of prospective studies. *Eur J Cancer Prev* 2017;26:368-77.
140. Kennedy OJ, Roderick P, Buchanan R, Fallowfield JA, Hayes PC, Parkes J. Coffee, including caffeinated and decaffeinated coffee, and the risk of hepatocellular carcinoma: A systematic review and dose-response meta-Analysis. *BMJ Open* 2017;7.
141. Butt MS, Sultan MT. Coffee and its consumption: benefits and risks. *Crit Rev Food Sci Nutr* 2011;51:363-73.
142. Sacchetti G, Di Mattia C, Pittia P, Mastrocola D. Effect of roasting degree, equivalent thermal effect and coffee type on the radical scavenging activity of coffee brews and their phenolic fraction. *Journal of Food Engineering* 2009;90:74-80.
143. Lang R, Yagar EF, Wahl A, et al. Quantitative studies on roast kinetics for bioactives in coffee. *J Agric Food Chem* 2013;61:12123-8.
144. Moroney KM, Lee WT, O'Brien SB, Suijver F, Marra J. Coffee extraction kinetics in a well mixed system. *J Math Ind* 2016;7:3.
145. Mojska H, Gielecinska I. Studies of acrylamide level in coffee and coffee substitutes: influence of raw material and manufacturing conditions. *Rocz Panstw Zakl Hig* 2013;64:173-81.
146. Duarte GS, Farah A. Effect of simultaneous consumption of milk and coffee on chlorogenic acids' bioavailability in humans. *J Agric Food Chem* 2011;59:7925-31.
147. Renouf M, Marmet C, Guy P, et al. Nondairy creamer, but not milk, delays the appearance of coffee phenolic acid equivalents in human plasma. *J Nutr* 2010;140:259-63.
148. Williamson G. The role of polyphenols in modern nutrition. *Nutr Bull* 2017;42:226-35.
149. Yagasaki K, Miura Y, Okauchi R, Furuse T. Inhibitory effects of chlorogenic acid and its related compounds on the invasion of hepatoma cells in culture. *Cytotechnology* 2000;33:229-35.
150. Gross G, Jaccaud E, Huggett AC. Analysis of the content of the diterpenes cafestol and kahweol in coffee brews. *Food Chem Toxicol* 1997;35:547-54.
151. Urgert R, Katan MB. The cholesterol-raising factor from coffee beans. *Journal of the Royal Society of Medicine* 1996;89:618-23.
152. Cavin C, Holzhaeuser D, Scharf G, Constable A, Huber WW, Schilter B. Cafestol and kahweol, two coffee specific diterpenes with anticarcinogenic activity. *Food Chem Toxicol* 2002;40:1155-63.
153. Moreira AS, Nunes FM, Domingues MR, Coimbra MA. Coffee melanoidins: structures, mechanisms of formation and potential health impacts. *Food Funct* 2012;3:903-15.
154. Cronstein BN. Caffeine, a drug for all seasons. *Journal of hepatology* 2010;53:207-8.

155. Dranoff JA. Coffee Consumption and Prevention of Cirrhosis: In Support of the Caffeine Hypothesis. *Gene Expr* 2018;18:1-3.
156. Yang A, Palmer AA, de Wit H. Genetics of caffeine consumption and responses to caffeine. *Psychopharmacology (Berl)* 2010;211:245-57.
157. Farag NH, Vincent AS, McKey BS, Whitsett TL, Lovallo WR. Hemodynamic mechanisms underlying the incomplete tolerance to caffeine's pressor effects. *Am J Cardiol* 2005;95:1389-92.
158. Cadden IS, Partovi N, Yoshida EM. Review article: possible beneficial effects of coffee on liver disease and function. *Aliment Pharmacol Ther* 2007;26:1-8.
159. Hemmerle H, Burger HJ, Below P, et al. Chlorogenic acid and synthetic chlorogenic acid derivatives: novel inhibitors of hepatic glucose-6-phosphate translocase. *J Med Chem* 1997;40:137-45.
160. Rodriguez de Sotillo DV, Hadley M. Chlorogenic acid modifies plasma and liver concentrations of: cholesterol, triacylglycerol, and minerals in (fa/fa) Zucker rats. *J Nutr Biochem* 2002;13:717-26.
161. Ong KW, Hsu A, Tan BKH. Anti-diabetic and anti-lipidemic effects of chlorogenic acid are mediated by ampk activation. *Biochemical Pharmacology* 2013;85:1341-51.
162. Ma YJ, Gao MM, Liu DX. Chlorogenic Acid Improves High Fat Diet-Induced Hepatic Steatosis and Insulin Resistance in Mice. *Pharmaceutical Research* 2015;32:1200-9.
163. Shokouh P, Jeppesen PB, Hermansen K, et al. A Combination of Coffee Compounds Shows Insulin-Sensitizing and Hepatoprotective Effects in a Rat Model of Diet-Induced Metabolic Syndrome. *Nutrients* 2017;10.
164. Murase T, Misawa K, Minegishi Y, et al. Coffee polyphenols suppress diet-induced body fat accumulation by downregulating SREBP-1c and related molecules in C57BL/6J mice. *American Journal of Physiology-Endocrinology and Metabolism* 2011;300:E122-E33.
165. Benzie IF, Strain JJ. The ferric reducing ability of plasma (FRAP) as a measure of "antioxidant power": the FRAP assay. *Anal Biochem* 1996;239:70-6.
166. Panchal SK, Poudyal H, Waanders J, Brown L. Coffee Extract Attenuates Changes in Cardiovascular and Hepatic Structure and Function without Decreasing Obesity in High-Carbohydrate, High-Fat Diet-Fed Male Rats. *Journal of Nutrition* 2012;142:690-7.
167. Salomone F, Li Volti G, Vitaglione P, et al. Coffee enhances the expression of chaperones and antioxidant proteins in rats with nonalcoholic fatty liver disease. *Transl Res* 2014;163:593-602.
168. Watanabe S, Takahashi T, Ogawa H, et al. Daily Coffee Intake Inhibits Pancreatic Beta Cell Damage and Nonalcoholic Steatohepatitis in a Mouse Model of Spontaneous Metabolic Syndrome, Tsumura-Suzuki Obese Diabetic Mice. *Metab syndr relat disord* 2017;15:170-7.
169. Takahashi S, Egashira K, Saito K, Jia H, Abe K, Kato H. Coffee intake down-regulates the hepatic gene expression of peroxisome proliferator-activated receptor gamma in C57BL/6J mice fed a high-fat diet. *Journal of Functional Foods* 2014;6:157-67.
170. Yun JW, Shin ES, Cho SY, et al. The effects of BADGE and caffeine on the time-course response of adiponectin and lipid oxidative enzymes in high fat diet-fed C57BL/6J mice: Correlation with reduced adiposity and steatosis. *Experimental Animals* 2008;57:461-9.
171. Sinha RA, Farah BL, Singh BK, et al. Caffeine stimulates hepatic lipid metabolism by the autophagy-lysosomal pathway in mice. *Hepatology* 2014;59:1366-80.
172. Helal MG, Ayoub SE, Elkashefand WF, Ibrahim TM. Caffeine affects HFD-induced hepatic steatosis by multifactorial intervention. *Hum Exp Toxicol* 2017;960327117747026.
173. Sugiura C, Nishimatsu S, Moriyama T, Ozasa S, Kawada T, Sayama K. Catechins and Caffeine Inhibit Fat Accumulation in Mice through the Improvement of Hepatic Lipid Metabolism. *J Obes* 2012;2012:520510.

174. Zheng X, Dai W, Chen X, et al. Caffeine reduces hepatic lipid accumulation through regulation of lipogenesis and ER stress in zebrafish larvae. *J Biomed Sci* 2015;22:105.
175. Reyes MT, Mourelle M, Hong E, Muriel P. Caffeic acid prevents liver damage and ameliorates liver fibrosis induced by CCl₄ in the rat. *Drug Development Research* 1995;36:125-8.
176. Janbaz KH, Saeed SA, Gilani AH. Studies on the protective effects of caffeic acid and quercetin on chemical-induced hepatotoxicity in rodents. *Phytomedicine* 2004;11:424-30.
177. Shi HT, Dong L, Jiang J, et al. Chlorogenic acid reduces liver inflammation and fibrosis through inhibition of toll-like receptor 4 signaling pathway. *Toxicology* 2013;303:107-14.
178. Pang C, Shi L, Sheng Y, et al. Caffeic acid attenuated acetaminophen-induced hepatotoxicity by inhibiting ERK1/2-mediated early growth response-1 transcriptional activation. *Chem -Biol Interact* 2016;260:186-95.
179. Pang C, Zheng Z, Shi L, et al. Caffeic acid prevents acetaminophen-induced liver injury by activating the Keap1-Nrf2 antioxidative defense system. *Free Radic Biol Med* 2016;91:236-46.
180. Ghahhari J, Vaezi G, Riazi G, Abbasi A, Modanloo M, Shokrzadeh M. The protective effect of chlorogenic acid on arsenic trioxide induced hepatotoxicity in mice. *Bioscience Biotechnology Research Communications* 2017;10:165-72.
181. Cavin C, Marin-Kuan M, Langouet S, et al. Induction of Nrf2-mediated cellular defenses and alteration of phase I activities as mechanisms of chemoprotective effects of coffee in the liver. *Food Chem Toxicol* 2008;46:1239-48.
182. Ali N, Rashid S, Nafees S, et al. Protective effect of Chlorogenic acid against methotrexate induced oxidative stress, inflammation and apoptosis in rat liver: An experimental approach. *Chemico-biological interactions* 2017;272:80-91.
183. Lee KJ, Choi JH, Jeong HG. Hepatoprotective and antioxidant effects of the coffee diterpenes kahweol and cafestol on carbon tetrachloride-induced liver damage in mice. *Food and Chemical Toxicology* 2007;45:2118-25.
184. Poyrazoglu OK, Bahcecioglu IH, Ataseven H, et al. Effect of unfiltered coffee on carbon tetrachloride-induced liver injury in rats. *Inflammation* 2008;31:408-13.
185. Seo HY, Jung YA, Lee SH, et al. Kahweol decreases hepatic fibrosis by inhibiting the expression of connective tissue growth factor via the transforming growth factor-beta signaling pathway. *Oncotarget* 2017;8:87086-94.
186. He P, Noda Y, Sugiyama K. Suppression of lipopolysaccharide-induced liver injury by various types of tea and coffee in D-Galactosamine-sensitized rats. *Bioscience Biotechnology and Biochemistry* 2001;65:670-3.
187. Ozercan IH, Dagli AF, Ustundag B, et al. Does instant coffee prevent acute liver injury induced by carbon tetrachloride (CCl₄)? *Hepato res* 2006;35:163-8.
188. Shi HY, Dong L, Zhang Y, Bai YH, Zhao JH, Zhang L. Protective effect of a coffee preparation (Nescafe pure (R)) against carbon tetrachloride-induced liver fibrosis in rats. *Clinical Nutrition* 2010;29:399-405.
189. Shin JW, Wang JH, Kang JK, Son CG. Experimental evidence for the protective effects of coffee against liver fibrosis in SD rats. *Journal of the Science of Food and Agriculture* 2010;90:450-5.
190. Abreu RV, Moraes-Santos T. The Protective Effect of Coffee against Paracetamol-Induced Hepatic Injury in Rats. *Journal of Food Biochemistry* 2011;35:1653-9.
191. Moreno MG, Chavez E, Aldaba-Muruato LR, et al. Coffee prevents CCl₄-induced liver cirrhosis in the rat. *Hepato Int* 2011;5:857-63.
192. Furtado KS, Prado MG, Silva M, et al. Coffee and Caffeine Protect against Liver Injury Induced by Thioacetamide in Male Wistar Rats. *Basic & Clinical Pharmacology & Toxicology* 2012;111:339-47.

193. Arauz J, Galicia-Moreno M, Cortes-Reynosa P, Salazar EP, Muriel P. Coffee attenuates fibrosis by decreasing the expression of TGF-beta and CTGF in a murine model of liver damage. *Journal of Applied Toxicology* 2013;33:970-9.
194. Arauz J, Zarco N, Hernandez-Aquino E, et al. Coffee consumption prevents fibrosis in a rat model that mimics secondary biliary cirrhosis in humans. *Nutr Res* 2017;40:65-74.
195. Sugiyama K, Noda Y, He P. Suppressive effect of caffeine on hepatitis and apoptosis induced by tumor necrosis factor-alpha, but not by the anti-Fas antibody, in mice. *Bioscience, biotechnology, and biochemistry* 2001;65:674-7.
196. Chan ESL, Montesinos MC, Fernandez P, et al. Adenosine A2A receptors play a role in the pathogenesis of hepatic cirrhosis. *Br J Pharmacol* 2006;148:1144-55.
197. Hsu SJ, Lee FY, Wang SS, et al. Caffeine Ameliorates Hemodynamic Derangements and Porto-systemic Collaterals in Cirrhotic Rats. *Hepatology* 2015;61:1672-84.
198. Klemmer I, Yagi S, Gressner OA. Oral application of 1,7-dimethylxanthine (paraxanthine) attenuates the formation of experimental cholestatic liver fibrosis. *Hepatology* 2011;41:1094-109.
199. Gordillo-Bastidas D, Ocegüera-Contreras E, Salazar-Montes A, Gonzalez-Cuevas J, Hernandez-Ortega LD, Armendariz-Borunda J. Nrf2 and Snail-1 in the prevention of experimental liver fibrosis by caffeine. *World Journal of Gastroenterology* 2013;19:9020-33.
200. Arauz J, Zarco N, Segovia J, Shibayama M, Tsutsumi V, Muriel P. Caffeine prevents experimental liver fibrosis by blocking the expression of TGF-beta. *European Journal of Gastroenterology & Hepatology* 2014;26:164-73.
201. Wang Q, Dai XF, Yang WZ, et al. Caffeine protects against alcohol-induced liver fibrosis by dampening the cAMP/PKA/CREB pathway in rat hepatic stellate cells. *International Immunopharmacology* 2015;25:340-52.
202. Amer MG, Mazen NF, Mohamed AM. Caffeine intake decreases oxidative stress and inflammatory biomarkers in experimental liver diseases induced by thioacetamide: Biochemical and histological study. *International Journal of Immunopathology and Pharmacology* 2017;30:13-24.
203. Cachón AU, Quintal-Novelo C, Medina-Escobedo G, Castro-Aguilar G, Moo-Puc RE. Hepatoprotective Effect of Low Doses of Caffeine on CCl4-Induced Liver Damage in Rats. *Journal of dietary supplements* 2017;14:158-72.
204. Mohamed MK, Khalaf MM, Abo-Youssef AM, Abo-Saif AA. Caffeine as a promising antifibrotic agent against CCl4-Induced liver fibrosis. *International Journal of Pharmacy and Pharmaceutical Sciences* 2017;9:42-7.
205. Eraky SM, El-Mesery M, El-Karef A, Eissa LA, El-Gayar AM. Silymarin and caffeine combination ameliorates experimentally-induced hepatic fibrosis through down-regulation of LPAR1 expression. *Biomedicine and Pharmacotherapy* 2018;101:49-57.
206. Gressner OA, Lahme B, Siluscheck M, Gressner AM. Identification of paraxanthine as the most potent caffeine-derived inhibitor of connective tissue growth factor expression in liver parenchymal cells. *Liver International* 2009;29:886-97.
207. Stich HF, Rosin MP, Bryson L. Inhibition of mutagenicity of a model nitrosation reaction by naturally occurring phenolics, coffee and tea. *Mutation Research/Fundamental and Molecular Mechanisms of Mutagenesis* 1982;95:119-28.
208. Mori H, Tanaka T, Shima H, Kuniyasu T, Takahashi M. Inhibitory effect of chlorogenic acid on methylazoxymethanol acetate-induced carcinogenesis in large intestine and liver of hamsters. *Cancer letters* 1986;30:49-54.
209. Yan Y, Liu N, Hou N, Dong L, Li J. Chlorogenic acid inhibits hepatocellular carcinoma in vitro and in vivo. *J Nutr Biochem* 2017;46:68-73.

210. Schilter B, Perrin I, Cavin C, Huggett AC. Placental glutathione S-transferase (GST-P) induction as a potential mechanism for the anti-carcinogenic effect of the coffee-specific components cafestol and kahweol. *Carcinogenesis* 1996;17:2377-84.
211. Cavin C, Holzhauser D, Constable A, Huggett AC, Schilter B. The coffee-specific diterpenes cafestol and kahweol protect against aflatoxin B1-induced genotoxicity through a dual mechanism. *Carcinogenesis* 1998;19:1369-75.
212. Huber WW, Prustomersky S, Delbanco E, et al. Enhancement of the chemoprotective enzymes glucuronosyl transferase and glutathione transferase in specific organs of the rat by the coffee components kahweol and cafestol. *Archives of Toxicology* 2002;76:209-17.
213. Huber WW, Teitel CH, Coles BF, et al. Potential chemoprotective effects of the coffee components kahweol and cafestol palmitates via modification of hepatic N-acetyltransferase and glutathione S-transferase activities. *Environmental and Molecular Mutagenesis* 2004;44:265-76.
214. Huber WW, Rossmannith W, Grusch M, et al. Effects of coffee and its chemopreventive components kahweol and cafestol on cytochrome P450 and sulfotransferase in rat liver. *Food and Chemical Toxicology* 2008;46:1230-8.
215. Sparnins VL, Venegas PL, Wattenberg LW. Glutathione S-transferase activity: enhancement by compounds inhibiting chemical carcinogenesis and by dietary constituents. *J Natl Cancer Inst* 1982;68:493-6.
216. Higgins LG, Cavin C, Itoh K, Yamamoto M, Hayes JD. Induction of cancer chemopreventive enzymes by coffee is mediated by transcription factor Nrf2. Evidence that the coffee-specific diterpenes cafestol and kahweol confer protection against acrolein. *Toxicology and applied pharmacology* 2008;226:328-37.
217. Morii H, Kuboyama A, Nakashima T, et al. Effects of Instant Coffee Consumption on Oxidative DNA Damage, DNA Repair, and Redox System in Mouse Liver. *Journal of Food Science* 2009;74:H155-H61.
218. Kalthoff S, Ehmer U, Freiberg N, Manns MP, Strassburg CP. Coffee induces expression of glucuronosyl transferases by the aryl hydrocarbon receptor and Nrf2 in liver and stomach. *Gastroenterology* 2010;139:1699-710.e2.
219. Pietrocola F, Malik SA, Marino G, et al. Coffee induces autophagy in vivo. *Cell cycle (Georgetown, Tex)* 2014;13:1987-94.
220. Hasegawa R, Ogiso T, Imaida K, Shirai T, Ito N. Analysis of the potential carcinogenicity of coffee and its related compounds in a medium-term liver bioassay of rats. *Food and Chemical Toxicology* 1995;33:15-20.
221. Miura Y, Ono K, Okauchi R, Yagasaki K. Inhibitory effect of coffee on hepatoma proliferation and invasion in culture and on tumor growth, metastasis and abnormal lipoprotein profiles in hepatoma-bearing rats. *Journal of nutritional science and vitaminology* 2004;50:38-44.
222. Silva-Oliveira EM, Fernandes PA, Moraes-Santos T. Effect of coffee on chemical hepatocarcinogenesis in rats. *Nutrition and Cancer* 2010;62:336-42.
223. Ferik F, Huber WW, Grasl-Kraupp B, et al. Protective effects of coffee against induction of DNA damage and pre-neoplastic foci by aflatoxin B-1. *Molecular Nutrition & Food Research* 2014;58:229-38.
224. Furtado KS, Polletini J, Dias MC, Rodrigues MAM, Barbisan LF. Prevention of rat liver fibrosis and carcinogenesis by coffee and caffeine. *Food and Chemical Toxicology* 2014;64:20-6.
225. Katayama M, Donai K, Sakakibara H, et al. Coffee consumption delays the hepatitis and suppresses the inflammation related gene expression in the Long-Evans Cinnamon rat. *Clinical Nutrition* 2014;33:302-10.

226. Fujise Y, Okano JI, Nagahara T, Abe R, Imamoto RYU, Murawaki Y. Preventive effect of caffeine and curcumin on hepatocarcinogenesis in diethylnitrosamine-induced rats. *International Journal of Oncology* 2012;40:1779-88.
227. Hosaka S, Kawa S, Aoki Y, et al. Hepatocarcinogenesis inhibition by caffeine in ACI rats treated with 2-acetylaminofluorene. *Food and Chemical Toxicology* 2001;39:557-61.
228. Boekschoten MV, Hofman MK, Buytenhek R, Schouten EG, Princen HMG, Katan MB. Coffee oil consumption increases plasma levels of 7 α -hydroxy-4-cholesten-3-one in humans. *J Nutr* 2005;135:785-9.
229. Boekschoten MV, Schouten EG, Katan MB. Coffee bean extracts rich and poor in kahweol both give rise to elevation of liver enzymes in healthy volunteers. *Nutr J* 2004;3.
230. Bichler J, Cavin C, Simic T, et al. Coffee consumption protects human lymphocytes against oxidative and 3-amino-1-methyl-5H-pyrido [4,3-b]indole acetate (Trp-P-2) induced DNA-damage: Results of an experimental study with human volunteers. *Food and Chemical Toxicology* 2007;45:1428-36.
231. Shaposhnikov S, Hatzold T, Yamani NE, et al. Coffee and oxidative stress: a human intervention study. *Eur J Nutr* 2016;1-12.
232. Shahmohammadi HA, Hosseini SA, Hajjani E, Malehi AS, Alipour M. Effects of green coffee bean extract supplementation on patients with non-alcoholic fatty liver disease: A randomized clinical trial. *Hepat Mon* 2017;17.
233. Jaquet M, Rochat I, Moulin J, Cavin C, Bibiloni R. Impact of coffee consumption on the gut microbiota: a human volunteer study. *Int J Food Microbiol* 2009;130:117-21.
234. Nakayama T, Oishi K. Influence of coffee (*Coffea arabica*) and galacto-oligosaccharide consumption on intestinal microbiota and the host responses. *FEMS Microbiol Lett* 2013;343:161-8.
235. Cowan TE, Palmnas MS, Yang J, et al. Chronic coffee consumption in the diet-induced obese rat: impact on gut microbiota and serum metabolomics. *J Nutr Biochem* 2014;25:489-95.
236. Santhekadur PK, Kumar DP, Sanyal AJ. Preclinical models of non-alcoholic fatty liver disease. *Journal of hepatology* 2018;68:230-7.
237. Ludwig J, Viggiano TR, McGill DB, Oh BJ. Nonalcoholic steatohepatitis: Mayo Clinic experiences with a hitherto unnamed disease. *Mayo Clin Proc* 1980;55:434-8.
238. Kwok R, Choi KC, Wong GL, et al. Screening diabetic patients for non-alcoholic fatty liver disease with controlled attenuation parameter and liver stiffness measurements: a prospective cohort study. *Gut* 2016;65:1359-68.
239. Targher G, Day CP, Bonora E. Risk of cardiovascular disease in patients with nonalcoholic fatty liver disease. *N Engl J Med* 2010;363:1341-50.
240. Vilar-Gomez E, Martinez-Perez Y, Calzadilla-Bertot L, et al. Weight Loss Through Lifestyle Modification Significantly Reduces Features of Nonalcoholic Steatohepatitis. *Gastroenterology* 2015;149:367-78 e5; quiz e14-5.
241. Promrat K, Kleiner DE, Niemeier HM, et al. Randomized controlled trial testing the effects of weight loss on nonalcoholic steatohepatitis. *Hepatology* 2010;51:121-9.
242. Younossi ZM, Stepanova M, Negro F, et al. Nonalcoholic fatty liver disease in lean individuals in the United States. *Medicine (Baltimore)* 2012;91:319-27.
243. Fonseca J, Nunes G, Fonseca C, Canhoto M, Barata AT, Santos CA. Comment to: "EASL-EASD-EASO Clinical Practice Guidelines for the management of non-alcoholic fatty liver disease". *Journal of hepatology* 2017;66:465-6.
244. Ha V, Cozma AI, Choo VLW, Mejia SB, de Souza RJ, Sievenpiper JL. Do Fructose-Containing Sugars Lead to Adverse Health Consequences? Results of Recent Systematic Reviews and Meta-analyses. *Advances in Nutrition: An International Review Journal* 2015;6:504S-11S.

245. Cortez-Pinto H, Jesus L, Barros H, Lopes C, Moura MC, Camilo ME. How different is the dietary pattern in non-alcoholic steatohepatitis patients? *Clin Nutr* 2006;25:816-23.
246. Yasutake K, Nakamuta M, Shima Y, et al. Nutritional investigation of non-obese patients with non-alcoholic fatty liver disease: the significance of dietary cholesterol. *Scand J Gastroenterol* 2009;44:471-7.
247. Rietman A, Sluik D, Feskens EJM, Kok FJ, Mensink M. Associations between dietary factors and markers of NAFLD in a general Dutch adult population. *Eur J Clin Nutr* 2018;72:117-23.
248. Ikram MA, Brusselle GGO, Murad SD, et al. The Rotterdam Study: 2018 update on objectives, design and main results. *Eur J Epidemiol* 2017;32:807-50.
249. Feunekes IJ, Van Staveren WA, Graveland F, De Vos J, Burema J. Reproducibility of a semi-quantitative food frequency questionnaire to assess the intake of fats and cholesterol in The Netherlands. *Int J Food Sci Nutr* 1995;46:117-23.
250. Donders-Engelen MR, Heijden Lvd, Hulshof KFAM, Vakgroep Humane Voeding LW, Zeist TNOV. *Maten, gewichten en codenummers 1997*. Wageningen: Vakgroep Humane Voeding; 1997.
251. Freedman LS, Schatzkin A, Midthune D, Kipnis V. Dealing with dietary measurement error in nutritional cohort studies. *J Natl Cancer Inst* 2011;103:1086-92.
252. Fallaize R, Livingstone KM, Celis-Morales C, et al. Association between Diet-Quality Scores, Adiposity, Total Cholesterol and Markers of Nutritional Status in European Adults: Findings from the Food4Me Study. *Nutrients* 2018;10.
253. Sterne JAC, White IR, Carlin JB, et al. Multiple imputation for missing data in epidemiological and clinical research: potential and pitfalls. *Bmj* 2009;338.
254. Rubin DB. *Multiple imputation for nonresponse in surveys*. Wiley London 1987.
255. Hu FB, Stampfer MJ, Rimm E, et al. Dietary fat and coronary heart disease: a comparison of approaches for adjusting for total energy intake and modeling repeated dietary measurements. *Am J Epidemiol* 1999;149:531-40.
256. Šidák Z. Rectangular Confidence Regions for the Means of Multivariate Normal Distributions. *Journal of the American Statistical Association* 1967;62:626-33.
257. Galwey NW. A new measure of the effective number of tests, a practical tool for comparing families of non-independent significance tests. *Genet Epidemiol* 2009;33:559-68.
258. Romero-Gomez M, Zelber-Sagi S, Trenell M. Treatment of NAFLD with diet, physical activity and exercise. *Journal of hepatology* 2017.
259. Chan R, Wong VW, Chu WC, et al. Higher estimated net endogenous Acid production may be associated with increased prevalence of nonalcoholic Fatty liver disease in chinese adults in Hong Kong. *PLoS One* 2015;10:e0122406.
260. Etemadi A, Sinha R, Ward MH, et al. Mortality from different causes associated with meat, heme iron, nitrates, and nitrites in the NIH-AARP Diet and Health Study: population based cohort study. *Bmj* 2017;357:j1957.
261. Zelber-Sagi S, Ivancovsky-Wajcman D, Fliss Isakov N, et al. High red and processed meat consumption is associated with non-alcoholic fatty liver disease and insulin resistance. *Journal of hepatology* 2018.
262. Markova M, Pivovarova O, Hornemann S, et al. Isocaloric Diets High in Animal or Plant Protein Reduce Liver Fat and Inflammation in Individuals With Type 2 Diabetes. *Gastroenterology* 2017;152:571-85 e8.
263. Haghghatdoost F, Salehi-Abargouei A, Surkan PJ, Azadbakht L. The effects of low carbohydrate diets on liver function tests in nonalcoholic fatty liver disease: A systematic review and meta-analysis of clinical trials. *J Res Med Sci* 2016;21:53.

264. Kirk E, Reeds DN, Finck BN, Mayurranjan SM, Patterson BW, Klein S. Dietary fat and carbohydrates differentially alter insulin sensitivity during caloric restriction. *Gastroenterology* 2009;136:1552-60.
265. Johnston RD, Stephenson MC, Crossland H, et al. No difference between high-fructose and high-glucose diets on liver triacylglycerol or biochemistry in healthy overweight men. *Gastroenterology* 2013;145:1016-25 e2.
266. Zelber-Sagi S, Godos J, Salomone F. Lifestyle changes for the treatment of nonalcoholic fatty liver disease: a review of observational studies and intervention trials. *Therap Adv Gastroenterol* 2016;9:392-407.
267. Mosca A, Nobili V, De Vito R, et al. Serum uric acid concentrations and fructose consumption are independently associated with NASH in children and adolescents. *Journal of hepatology* 2017;66:1031-6.
268. Bozzetto L, Prinster A, Annuzzi G, et al. Liver fat is reduced by an isoenergetic MUFA diet in a controlled randomized study in type 2 diabetic patients. *Diabetes Care* 2012;35:1429-35.
269. Chowdhury R, Warnakula S, Kunutsor S, et al. Association of dietary, circulating, and supplement fatty acids with coronary risk: a systematic review and meta-analysis. *Ann Intern Med* 2014;160:398-406.
270. de Souza RJ, Mente A, Maroleanu A, et al. Intake of saturated and trans unsaturated fatty acids and risk of all cause mortality, cardiovascular disease, and type 2 diabetes: systematic review and meta-analysis of observational studies. *Bmj* 2015;351:h3978.
271. Romeu M, Aranda N, Giralto M, Ribot B, Nogues MR, Arija V. Diet, iron biomarkers and oxidative stress in a representative sample of Mediterranean population. *Nutr J* 2013;12:102.
272. Pereira EC, Ferderbar S, Bertolami MC, et al. Biomarkers of oxidative stress and endothelial dysfunction in glucose intolerance and diabetes mellitus. *Clin Biochem* 2008;41:1454-60.
273. Freedman ND, Cross AJ, McGlynn KA, et al. Association of meat and fat intake with liver disease and hepatocellular carcinoma in the NIH-AARP cohort. *J Natl Cancer Inst* 2010;102:1354-65.
274. Adeva MM, Souto G. Diet-induced metabolic acidosis. *Clin Nutr* 2011;30:416-21.
275. Krupp D, Johner SA, Kalhoff H, Buyken AE, Remer T. Long-term dietary potential renal acid load during adolescence is prospectively associated with indices of nonalcoholic fatty liver disease in young women. *J Nutr* 2012;142:313-9.
276. Rebolledo OR, Hernandez RE, Zanetta AC, Gagliardino JJ. Insulin secretion during acid-base alterations. *Am J Physiol* 1978;234:E426-9.
277. Schoufour JD, de Jonge EAL, Kieft-de Jong JC, et al. Socio-economic indicators and diet quality in an older population. *Maturitas*;107:71-7.
278. Gemming L, Jiang Y, Swinburn B, Utter J, Mhurchu CN. Under-reporting remains a key limitation of self-reported dietary intake: an analysis of the 2008/09 New Zealand Adult Nutrition Survey. *Eur J Clin Nutr* 2014;68:259-64.
279. Rothman KJG, Sander; Lash Timothy. *Modern Epidemiology*. Philadelphia: Wolters Kluwer health/ Lippincott Williams & Wilkins, c2008 1951;3rd ed.
280. Pimpin L, Cortez-Pinto H, Negro F, et al. Burden of liver disease in Europe: Epidemiology and analysis of risk factors to identify prevention policies. *J Hepatol* 2018;69:718-35.
281. Friedman SL, Neuschwander-Tetri BA, Rinella M, Sanyal AJ. Mechanisms of NAFLD development and therapeutic strategies. *Nature Medicine* 2018;24:908-22.
282. Hagstrom H, Nasr P, Ekstedt M, et al. Fibrosis stage but not NASH predicts mortality and time to development of severe liver disease in biopsy-proven NAFLD. *J Hepatol* 2017;67:1265-73.

283. Blond E, Disse E, Cuerq C, et al. EASL-EASD-EASO clinical practice guidelines for the management of non-alcoholic fatty liver disease in severely obese people: do they lead to over-referral? *Diabetologia* 2017;60:1218-22.
284. Ferolla SM, Silva LC, Ferrari Mde L, et al. Dietary approach in the treatment of nonalcoholic fatty liver disease. *World J Hepatol* 2015;7:2522-34.
285. Zelber-Sagi S, Salomone F, Mlynarsky L. The Mediterranean dietary pattern as the diet of choice for non-alcoholic fatty liver disease: Evidence and plausible mechanisms. *Liver Int* 2017;37:936-49.
286. Oddy WH, Herbison CE, Jacoby P, et al. The Western dietary pattern is prospectively associated with nonalcoholic fatty liver disease in adolescence. *Am J Gastroenterol* 2013;108:778-85.
287. Alferink LJM, Kieft-de Jong JC, Erler NS, et al. Association of dietary macronutrient composition and non-alcoholic fatty liver disease in an ageing population: the Rotterdam Study. *Gut* 2018.
288. Kieft-de Jong JC, Li Y, Chen M, et al. Diet-dependent acid load and type 2 diabetes: pooled results from three prospective cohort studies. *Diabetologia* 2017;60:270-9.
289. Han E, Kim G, Hong N, et al. Association between dietary acid load and the risk of cardiovascular disease: nationwide surveys (KNHANES 2008-2011). *Cardiovasc Diabetol* 2016;15:122.
290. Remer T. Influence of diet on acid-base balance. *Semin Dial* 2000;13:221-6.
291. Frassetto LA, Todd KM, Morris RC, Jr., Sebastian A. Estimation of net endogenous noncarbonic acid production in humans from diet potassium and protein contents. *Am J Clin Nutr* 1998;68:576-83.
292. Okamura T, Hashimoto Y, Hamaguchi M, Obora A, Kojima T, Fukui M. Low urine pH is a risk for non-alcoholic fatty liver disease: A population-based longitudinal study. *Clin Res Hepatol Gastroenterol* 2018.
293. Miyake T, Yoshida S, Yamamoto S, et al. Low Urine pH is Associated with Non-alcoholic Fatty Liver Disease: A Community-based Cross-sectional Study. *Intern Med* 2018.
294. Alferink LJM, Kieft-de Jong JC, Erler NS, et al. Diet-dependent acid load - the missing link between an animal protein-rich diet and non-alcoholic fatty liver disease? Deposited 13 March 2019. <https://repub.eur.nl/pub/115477>.
295. Remer T, Manz F. Potential renal acid load of foods and its influence on urine pH. *J Am Diet Assoc* 1995;95:791-7.
296. Zwart SR, Hargens AR, Smith SM. The ratio of animal protein intake to potassium intake is a predictor of bone resorption in space flight analogues and in ambulatory subjects. *Am J Clin Nutr* 2004;80:1058-65.
297. Breslau NA, Brinkley L, Hill KD, Pak CY. Relationship of animal protein-rich diet to kidney stone formation and calcium metabolism. *J Clin Endocrinol Metab* 1988;66:140-6.
298. (Gezondheidsraad) DHC. Dutch dietary guidelines 2015 (richtlijnen goede voeding 2015). The Hague 2015;2015/24.
299. Stel VS, Smit JH, Pluijm SM, Visser M, Deeg DJ, Lips P. Comparison of the LASA Physical Activity Questionnaire with a 7-day diary and pedometer. *J Clin Epidemiol* 2004;57:252-8.
300. Inker LA, Schmid CH, Tighiouart H, et al. Estimating glomerular filtration rate from serum creatinine and cystatin C. *N Engl J Med* 2012;367:20-9.
301. Sterne JA, White IR, Carlin JB, et al. Multiple imputation for missing data in epidemiological and clinical research: potential and pitfalls. *Bmj* 2009;338:b2393.
302. Willett WC, Howe GR, Kushi LH. Adjustment for total energy intake in epidemiologic studies. *Am J Clin Nutr* 1997;65:1220S-8S; discussion 9S-31S.

303. Carnauba RA, Baptistella AB, Paschoal V, Hubscher GH. Diet-Induced Low-Grade Metabolic Acidosis and Clinical Outcomes: A Review. *Nutrients* 2017;9.
304. Akter S, Kurotani K, Kashino I, et al. High Dietary Acid Load Score Is Associated with Increased Risk of Type 2 Diabetes in Japanese Men: The Japan Public Health Center-based Prospective Study. *J Nutr* 2016;146:1076-83.
305. Kumar R, Mohan S. Non-alcoholic Fatty Liver Disease in Lean Subjects: Characteristics and Implications. *J Clin Transl Hepatol* 2017;5:216-23.
306. McCarty MF. Acid-base balance may influence risk for insulin resistance syndrome by modulating cortisol output. *Med Hypotheses* 2005;64:380-4.
307. Younossi ZM, Loomba R, Rinella ME, et al. Current and future therapeutic regimens for nonalcoholic fatty liver disease and nonalcoholic steatohepatitis. *Hepatology* 2018;68:361-71.
308. Xu H, Akesson A, Orsini N, Hakansson N, Wolk A, Carrero JJ. Modest U-Shaped Association between Dietary Acid Load and Risk of All-Cause and Cardiovascular Mortality in Adults. *J Nutr* 2016;146:1580-5.
309. Engberink MF, Bakker SJ, Brink EJ, et al. Dietary acid load and risk of hypertension: the Rotterdam Study. *Am J Clin Nutr* 2012;95:1438-44.
310. Xu H, Jia T, Huang X, et al. Dietary acid load, insulin sensitivity and risk of type 2 diabetes in community-dwelling older men. *Diabetologia* 2014;57:1561-8.
311. Scialla JJ. The balance of the evidence on acid-base homeostasis and progression of chronic kidney disease. *Kidney Int* 2015;88:9-11.
312. Wesson DE, Simoni J, Broglio K, Sheather S. Acid retention accompanies reduced GFR in humans and increases plasma levels of endothelin and aldosterone. *Am J Physiol Renal Physiol* 2011;300:F830-7.
313. Patience JF. A review of the role of acid-base balance in amino acid nutrition. *J Anim Sci* 1990;68:398-408.
314. Pizzorno J, Frassetto LA, Katzinger J. Diet-induced acidosis: is it real and clinically relevant? *Br J Nutr* 2010;103:1185-94.
315. Esche J, Shi L, Sanchez-Guijo A, Hartmann MF, Wudy SA, Remer T. Higher diet-dependent renal acid load associates with higher glucocorticoid secretion and potentially bioactive free glucocorticoids in healthy children. *Kidney Int* 2016;90:325-33.
316. Ordóñez FA, Santos F, Martínez V, et al. Resistance to growth hormone and insulin-like growth factor-I in acidotic rats. *Pediatr Nephrol* 2000;14:720-5.
317. Fan Y, Menon RK, Cohen P, et al. Liver-specific deletion of the growth hormone receptor reveals essential role of growth hormone signaling in hepatic lipid metabolism. *J Biol Chem* 2009;284:19937-44.
318. Wang PY, Fang JC, Gao ZH, Zhang C, Xie SY. Higher intake of fruits, vegetables or their fiber reduces the risk of type 2 diabetes: A meta-analysis. *J Diabetes Investig* 2016;7:56-69.
319. Jung Y-S. Metabolism of Sulfur-Containing Amino Acids in the Liver: A Link between Hepatic Injury and Recovery. *Biological and Pharmaceutical Bulletin* 2015;38:971-4.
320. Diaz-Rua R, Keijer J, Palou A, van Schothorst EM, Oliver P. Long-term intake of a high-protein diet increases liver triacylglycerol deposition pathways and hepatic signs of injury in rats. *J Nutr Biochem* 2017;46:39-48.
321. Schoufour JD, de Jonge EAL, Kieffe-de Jong JC, et al. Socio-economic indicators and diet quality in an older population. *Maturitas* 2018;107:71-7.
322. Raphael KL, Carroll DJ, Murray J, Greene T, Beddhu S. Urine Ammonium Predicts Clinical Outcomes in Hypertensive Kidney Disease. *J Am Soc Nephrol* 2017;28:2483-90.

323. Buuren van S, Groothuis-Oudhoorn K. mice: Multivariate Imputation by Chained Equations in R. *Journal of Statistical Software, Articles* 2011;45:1-67.
324. Pimpin L, Cortez-Pinto H, Negro F, et al. Burden of liver disease in Europe: Epidemiology and analysis of risk factors to identify prevention policies. *Journal of hepatology* 2018;69:718-35.
325. Kim D, Li AA, Gadiparthi C, et al. Changing Trends in Etiology-Based Annual Mortality From Chronic Liver Disease, From 2007 Through 2016. *Gastroenterology* 2018;155:1154-63.e3.
326. Estes C, Anstee QM, Arias-Loste MT, et al. Modeling NAFLD disease burden in China, France, Germany, Italy, Japan, Spain, United Kingdom, and United States for the period 2016-2030. *Journal of hepatology* 2018;69:896-904.
327. Marchesini G, Brizi M, Bianchi G, et al. Nonalcoholic fatty liver disease: a feature of the metabolic syndrome. *Diabetes* 2001;50:1844-50.
328. Allen AM, Therneau TM, Larson JJ, Coward A, Somers VK, Kamath PS. Nonalcoholic fatty liver disease incidence and impact on metabolic burden and death: A 20 year-community study. *Hepatology* 2018;67:1726-36.
329. Wong VW, Wong GL, Chan RS, et al. Beneficial effects of lifestyle intervention in non-obese patients with non-alcoholic fatty liver disease. *J Hepatol* 2018;69:1349-56.
330. Ryan MC, Itsiopoulos C, Thodis T, et al. The Mediterranean diet improves hepatic steatosis and insulin sensitivity in individuals with non-alcoholic fatty liver disease. *J Hepatol* 2013;59:138-43.
331. Properzi C, O'Sullivan TA, Sherriff JL, et al. Ad Libitum Mediterranean and Low-Fat Diets Both Significantly Reduce Hepatic Steatosis: A Randomized Controlled Trial. *Hepatology* 2018;68:1741-54.
332. Khalatbari-Soltani S, Imamura F, Brage S, et al. The association between adherence to the Mediterranean diet and hepatic steatosis: cross-sectional analysis of two independent studies, the UK Fenland Study and the Swiss CoLaus Study. *BMC Medicine* 2019;17:19.
333. Hu FB. Dietary pattern analysis: a new direction in nutritional epidemiology. *Curr Opin Lipidol* 2002;13:3-9.
334. Cespedes EM, Hu FB. Dietary patterns: from nutritional epidemiologic analysis to national guidelines. *The American Journal of Clinical Nutrition* 2015;101:899-900.
335. Ma J, Hennein R, Liu C, et al. Improved Diet Quality Associates With Reduction in Liver Fat, Particularly in Individuals With High Genetic Risk Scores for Nonalcoholic Fatty Liver Disease. *Gastroenterology* 2018;155:107-17.
336. Koch M, Borggreffe J, Barbaresko J, et al. Dietary patterns associated with magnetic resonance imaging-determined liver fat content in a general population study. *Am J Clin Nutr* 2014;99:369-77.
337. Kalafati I-P, Borsa D, Dimitriou M, Revenas K, Kokkinos A, Dedoussis GV. Dietary patterns and non-alcoholic fatty liver disease in a Greek case-control study. *Nutrition* 2019;61:105-10.
338. Boursier J, Zarski J-P, de Ledinghen V, et al. Determination of reliability criteria for liver stiffness evaluation by transient elastography. *Hepatology* 2013;57:1182-91.
339. Kröger J, Ferrari P, Jenab M, et al. Specific food group combinations explaining the variation in intakes of nutrients and other important food components in the European Prospective Investigation into Cancer and Nutrition: an application of the reduced rank regression method. *European Journal Of Clinical Nutrition* 2009;63:S263.
340. Trichopoulou A, Lagiou P. Healthy traditional Mediterranean diet: an expression of culture, history, and lifestyle. *Nutr Rev* 1997;55:383-9.
341. Hart CL, Morrison DS, Batty GD, Mitchell RJ, Davey Smith G. Effect of body mass index and alcohol consumption on liver disease: analysis of data from two prospective cohort studies. *Bmj* 2010;340:c1240.

342. WHO. <https://www.who.int/news-room/fact-sheets/detail/healthy-diet>. 2018.
343. Revelle W. *Psych: Procedures for Psychological, Psychometric, and Personality Research*. 2018.
344. Alferink LJ, Kieft-de Jong JC, Erler NS, et al. Association of dietary macronutrient composition and non-alcoholic fatty liver disease in an ageing population: the Rotterdam Study. *Gut* 2018.
345. Northstone K, Ness AR, Emmett PM, Rogers IS. Adjusting for energy intake in dietary pattern investigations using principal components analysis. *Eur J Clin Nutr* 2008;62:931-8.
346. Erler NS, Rizopoulos D, Lesaffre EMEH. JointAI: Joint Analysis and Imputation of Incomplete Data in R2019.
347. Erler NS, Rizopoulos D, Jaddoe VW, Franco OH, Lesaffre EM. Bayesian imputation of time-varying covariates in linear mixed models. *Stat Methods Med Res* 2019;28:555-68.
348. Erler NS, Rizopoulos D, Rosmalen J, Jaddoe VW, Franco OH, Lesaffre EM. Dealing with missing covariates in epidemiologic studies: a comparison between multiple imputation and a full Bayesian approach. *Stat Med* 2016;35:2955-74.
349. Reynolds A, Mann J, Cummings J, Winter N, Mete E, Te Morenga L. Carbohydrate quality and human health: a series of systematic reviews and meta-analyses. *Lancet* 2019;393:434-45.
350. De Filippis F, Pellegrini N, Vannini L, et al. High-level adherence to a Mediterranean diet beneficially impacts the gut microbiota and associated metabolome. *Gut* 2016;65:1812-21.
351. Carvalhana S, Machado MV, Cortez-Pinto H. Improving dietary patterns in patients with non-alcoholic fatty liver disease. *Curr Opin Clin Nutr Metab Care* 2012;15:468-73.
352. Zelber-Sagi S, Ivancovsky-Wajcman D, Fliss Isakov N, et al. High red and processed meat consumption is associated with non-alcoholic fatty liver disease and insulin resistance. *J Hepatol* 2018;68:1239-46.
353. Alferink LJM, Kieft-de Jong JC, Erler NS, et al. Diet-dependent acid load - the missing link between an animal protein-rich diet and non-alcoholic fatty liver disease? *J Clin Endocrinol Metab* 2019.
354. Martinez R, Lopez-Jurado M, Wanden-Berghe C, Sanz-Valero J, Porres JM, Kapravelou G. Beneficial effects of legumes on parameters of the metabolic syndrome: a systematic review of trials in animal models. *Br J Nutr* 2016;116:402-24.
355. Romeu M, Aranda N, Giralta M, Ribot B, Nagues MR, Arija V. Diet, iron biomarkers and oxidative stress in a representative sample of Mediterranean population. *Nutrition Journal* 2013;12:102.
356. Schürks M, Glynn RJ, Rist PM, Tzourio C, Kurth T. Effects of vitamin E on stroke subtypes: meta-analysis of randomised controlled trials. *BMJ* 2010;341:c5702.
357. Bjelakovic G, Nikolova D, Gluud LL, Simonetti RG, Gluud C. Mortality in randomized trials of antioxidant supplements for primary and secondary prevention: systematic review and meta-analysis. *Jama* 2007;297:842-57.
358. Singh S, Allen AM, Wang Z, Prokop LJ, Murad MH, Loomba R. Fibrosis progression in non-alcoholic fatty liver vs nonalcoholic steatohepatitis: a systematic review and meta-analysis of paired-biopsy studies. *Clin Gastroenterol Hepatol* 2015;13:643-54 e1-9; quiz e39-40.
359. Li Q, Dhyani M, Grajo JR, Sirlin C, Samir AE. Current status of imaging in nonalcoholic fatty liver disease. *World J Hepatol* 2018;10:530-42.
360. Wu SD, Liu LL, Cheng JL, et al. Longitudinal monitoring of liver fibrosis status by transient elastography in chronic hepatitis B patients during long-term entecavir treatment. *Clin Exp Med* 2018;18:433-43.
361. Hu FB, Rimm E, Smith-Warner SA, et al. Reproducibility and validity of dietary patterns assessed with a food-frequency questionnaire. *Am J Clin Nutr* 1999;69:243-9.

362. Trajanoska K, Schoufour JD, Darweesh SK, et al. Sarcopenia and Its Clinical Correlates in the General Population: The Rotterdam Study. *Journal of Bone and Mineral Research* 2018;33:1209-18.
363. Nobili V, Alisi A, Valenti L, Miele L, Feldstein AE, Alkhoufi N. NAFLD in children: new genes, new diagnostic modalities and new drugs. *Nat Rev Gastroenterol Hepatol* 2019;16:517-30.
364. Lüdtke O, A. R, West SG. Analysis of Interactions and Nonlinear Effects with Missing Data: A Factored Regression Modeling Approach Using Maximum Likelihood Estimation. *Multivariate Behavioral Research* 2019:1-21.
365. Bartlett JW, Seaman SR, White IR, Carpenter JR, Alzheimer's Disease Neuroimaging I. Multiple imputation of covariates by fully conditional specification: Accommodating the substantive model. *Stat Methods Med Res* 2015;24:462-87.
366. Prentice AM, Jebb SA. Beyond body mass index. *Obes Rev* 2001;2:141-7.
367. Pang Q, Zhang JY, Song SD, et al. Central obesity and nonalcoholic fatty liver disease risk after adjusting for body mass index. *World J Gastroenterol* 2015;21:1650-62.
368. Ko YH, Wong TC, Hsu YY, Kuo KL, Yang SH. The Correlation Between Body Fat, Visceral Fat, and Nonalcoholic Fatty Liver Disease. *Metab Syndr Relat Disord* 2017;15:304-11.
369. Wijarnpreecha K, Panjawatanan P, Thongprayoon C, Jaruvongvanich V, Ungprasert P. Sarcopenia and risk of nonalcoholic fatty liver disease: A meta-analysis. *Saudi J Gastroenterol* 2018;24:12-7.
370. Koo BK, Kim D, Joo SK, et al. Sarcopenia is an independent risk factor for non-alcoholic steatohepatitis and significant fibrosis. *Journal of hepatology* 2017;66:123-31.
371. Petta S, Ciminnisi S, Di Marco V, et al. Sarcopenia is associated with severe liver fibrosis in patients with non-alcoholic fatty liver disease. *Aliment Pharmacol Ther* 2017;45:510-8.
372. Bugianesi E, Gastaldelli A, Vanni E, et al. Insulin resistance in non-diabetic patients with non-alcoholic fatty liver disease: sites and mechanisms. *Diabetologia* 2005;48:634-42.
373. Lee DH, Keum N, Hu FB, et al. Predicted lean body mass, fat mass, and all cause and cause specific mortality in men: prospective US cohort study. *Bmj* 2018;362.
374. Cruz-Jentoft AJ, Baeyens JP, Bauer JM, et al. Sarcopenia: European consensus on definition and diagnosis: Report of the European Working Group on Sarcopenia in Older People. *Age Ageing* 2010;39:412-23.
375. Verlinden VJ, van der Geest JN, Hoogendam YY, Hofman A, Breteler MM, Ikram MA. Gait patterns in a community-dwelling population aged 50 years and older. *Gait Posture* 2013;37:500-5.
376. Trajanoska K, Schoufour JD, Darweesh SK, et al. Sarcopenia and Its Clinical Correlates in the General Population: The Rotterdam Study. *J Bone Miner Res* 2018.
377. Lafortuna CL, Maffioletti NA, Agosti F, Sartorio A. Gender variations of body composition, muscle strength and power output in morbid obesity. *Int J Obes (Lond)* 2005;29:833-41.
378. Sakamoto Y, Ishiguro M, Kitagawa G. Akaike information criterion statistics. Tokyo; Dordrecht; Boston; Hingham, MA: KTK Scientific Publishers; D. Reidel; Sold and distributed in the U.S.A. and Canada by Kluwer Academic Publishers; 1986.
379. Willett W. *Nutritional epidemiology*. Oxford; New York: Oxford University Press; 2013.
380. Hong HC, Hwang SY, Choi HY, et al. Relationship between sarcopenia and nonalcoholic fatty liver disease: the Korean Sarcopenic Obesity Study. *Hepatology* 2014;59:1772-8.
381. Lee YH, Jung KS, Kim SU, et al. Sarcopaenia is associated with NAFLD independently of obesity and insulin resistance: Nationwide surveys (KNHANES 2008-2011). *Journal of hepatology* 2015;63:486-93.

382. Kim HY, Kim CW, Park CH, et al. Low skeletal muscle mass is associated with non-alcoholic fatty liver disease in Korean adults: the Fifth Korea National Health and Nutrition Examination Survey. *Hepatobiliary Pancreat Dis Int* 2016;15:39-47.
383. Moon JS, Yoon JS, Won KC, Lee HW. The role of skeletal muscle in development of nonalcoholic Fatty liver disease. *Diabetes Metab J* 2013;37:278-85.
384. Kim G, Lee S-E, Lee Y-B, et al. Relationship Between Relative Skeletal Muscle Mass and Nonalcoholic Fatty Liver Disease: A 7-Year Longitudinal Study. *Hepatology* 2018;68:1755-68.
385. Issa D, Alkhoury N, Tsien C, et al. Presence of sarcopenia (muscle wasting) in patients with nonalcoholic steatohepatitis. *Hepatology* 2014;60:428-9.
386. Zhai Y, Xiao Q, Miao J. The Relationship between NAFLD and Sarcopenia in Elderly Patients. *Can J Gastroenterol Hepatol* 2018;2018:5016091.
387. Meng G, Wu H, Fang L, et al. Relationship between grip strength and newly diagnosed nonalcoholic fatty liver disease in a large-scale adult population. *Sci Rep* 2016;6:33255.
388. Sakuma K, Yamaguchi A. Sarcopenia and Age-Related Endocrine Function. *International Journal of Endocrinology* 2012;2012:10.
389. Maggio M, Lauretani F, Ceda GP. Sex hormones and sarcopenia in older persons. *Current Opinion in Clinical Nutrition & Metabolic Care* 2013;16:3-13.
390. Walsh K. Adipokines, myokines and cardiovascular disease. *Circ J* 2009;73:13-8.
391. Schaffler A, Scholmerich J, Buchler C. Mechanisms of disease: adipocytokines and visceral adipose tissue--emerging role in nonalcoholic fatty liver disease. *Nat Clin Pract Gastroenterol Hepatol* 2005;2:273-80.
392. Visser M, Kritchevsky SB, Goodpaster BH, et al. Leg muscle mass and composition in relation to lower extremity performance in men and women aged 70 to 79: the health, aging and body composition study. *J Am Geriatr Soc* 2002;50:897-904.
393. Hallsworth K, Fattakhova G, Hollingsworth KG, et al. Resistance exercise reduces liver fat and its mediators in non-alcoholic fatty liver disease independent of weight loss. *Gut* 2011;60:1278-83.
394. White IR, Royston P, Wood AM. Multiple imputation using chained equations: Issues and guidance for practice. *Stat Med* 2011;30:377-99.
395. Okorodudu DO, Jumean MF, Montori VM, et al. Diagnostic performance of body mass index to identify obesity as defined by body adiposity: a systematic review and meta-analysis. *Int J Obes (Lond)* 2010;34:791-9.
396. Andreasson A, Carlsson AC, Onnerhag K, Hagstrom H. Waist/Hip Ratio Better Predicts Development of Severe Liver Disease Within 20 Years Than Body Mass Index: A Population-based Cohort Study. *Clin Gastroenterol Hepatol* 2017;15:1294-301 e2.
397. Bedogni G, Bellentani S, Miglioli L, et al. The Fatty Liver Index: a simple and accurate predictor of hepatic steatosis in the general population. *BMC Gastroenterol* 2006;6:33.
398. Koehler EM, Schouten JN, Hansen BE, Hofman A, Stricker BH, Janssen HL. External validation of the fatty liver index for identifying nonalcoholic fatty liver disease in a population-based study. *Clin Gastroenterol Hepatol* 2013;11:1201-4.
399. Pais R, Barritt AS, Calmus Y, et al. NAFLD and liver transplantation: Current burden and expected challenges. *Journal of Hepatology* 2016;65:1245-57.
400. Hart CL, Morrison DS, Batty GD, Mitchell RJ, Davey Smith G. Effect of body mass index and alcohol consumption on liver disease: analysis of data from two prospective cohort studies. *Bmj* 2010;340.

401. Sharpton SR, Ajmera V, Loomba R. Emerging Role of the Gut Microbiome in Nonalcoholic Fatty Liver Disease: From Composition to Function. *Clinical Gastroenterology and Hepatology* 2019;17:296-306.
402. Cani PD. Human gut microbiome: hopes, threats and promises. *Gut* 2018.
403. Lynch SV, Pedersen O. The Human Intestinal Microbiome in Health and Disease. *New England Journal of Medicine* 2016;375:2369-79.
404. Patterson E, Ryan PM, Cryan JF, et al. Gut microbiota, obesity and diabetes. *Postgraduate Medical Journal* 2016;92:286-300.
405. Le Roy T, Llopis M, Lepage P, et al. Intestinal microbiota determines development of non-alcoholic fatty liver disease in mice. *Gut* 2013;62:1787-94.
406. Spencer MD, Hamp TJ, Reid RW, Fischer LM, Zeisel SH, Fodor AA. Association between composition of the human gastrointestinal microbiome and development of fatty liver with choline deficiency. *Gastroenterology* 2011;140:976-86.
407. Raman M, Ahmed I, Gillevet PM, et al. Fecal microbiome and volatile organic compound metabolome in obese humans with nonalcoholic fatty liver disease. *Clin Gastroenterol Hepatol* 2013;11:868-75 e1-3.
408. Mouzaki M, Comelli EM, Arendt BM, et al. Intestinal microbiota in patients with nonalcoholic fatty liver disease. *Hepatology* 2013;58:120-7.
409. Zhu L, Baker SS, Gill C, et al. Characterization of gut microbiomes in nonalcoholic steatohepatitis (NASH) patients: a connection between endogenous alcohol and NASH. *Hepatology* 2013;57:601-9.
410. Jiang W, Wu N, Wang X, et al. Dysbiosis gut microbiota associated with inflammation and impaired mucosal immune function in intestine of humans with non-alcoholic fatty liver disease. *Sci Rep* 2015;5:8096.
411. Michail S, Lin M, Frey MR, et al. Altered gut microbial energy and metabolism in children with non-alcoholic fatty liver disease. *FEMS Microbiol Ecol* 2015;91:1-9.
412. Boursier J, Mueller O, Barret M, et al. The severity of nonalcoholic fatty liver disease is associated with gut dysbiosis and shift in the metabolic function of the gut microbiota. *Hepatology* 2016;63:764-75.
413. Shen F, Zheng R-D, Sun X-Q, Ding W-J, Wang X-Y, Fan J-G. Gut microbiota dysbiosis in patients with non-alcoholic fatty liver disease. *Hepatobiliary & Pancreatic Diseases International* 2017;16:375-81.
414. Del Chierico F, Nobili V, Vernocchi P, et al. Gut microbiota profiling of pediatric nonalcoholic fatty liver disease and obese patients unveiled by an integrated meta-omics-based approach. *Hepatology* 2017;65:451-64.
415. Da Silva HE, Teterina A, Comelli EM, et al. Nonalcoholic fatty liver disease is associated with dysbiosis independent of body mass index and insulin resistance. *Sci Rep* 2018;8:1466.
416. Duarte SMB, Stefano JT, Miele L, et al. Gut microbiome composition in lean patients with NASH is associated with liver damage independent of caloric intake: A prospective pilot study. *Nutr Metab Cardiovasc Dis* 2018;28:369-84.
417. Hoyles L, Fernandez-Real JM, Federici M, et al. Molecular phenomics and metagenomics of hepatic steatosis in non-diabetic obese women. *Nat Med* 2018;24:1070-80.
418. Zhernakova A, Kurilshikov A, Bonder MJ, et al. Population-based metagenomics analysis reveals markers for gut microbiome composition and diversity. *Science* 2016;352:565-9.
419. Dasarathy S, Dasarathy J, Khiyami A, Joseph R, Lopez R, McCullough AJ. Validity of real time ultrasound in the diagnosis of hepatic steatosis: A prospective study. *Journal of Hepatology* 2009;51:1061-7.

420. Radjabzadeh D, Boer CG, Beth SA, et al. Diversity, compositional and functional differences between gut microbiota of children and adults. *Scientific Reports* 2020;10:1040.
421. Wang Q, Garrity GM, Tiedje JM, Cole JR. Naive Bayesian classifier for rapid assignment of rRNA sequences into the new bacterial taxonomy. *Appl Environ Microbiol* 2007;73:5261-7.
422. Quast C, Pruesse E, Yilmaz P, et al. The SILVA ribosomal RNA gene database project: improved data processing and web-based tools. *Nucleic Acids Res* 2013;41:D590-6.
423. Bokulich NA, Subramanian S, Faith JJ, et al. Quality-filtering vastly improves diversity estimates from Illumina amplicon sequencing. *Nat Methods* 2013;10:57-9.
424. Langille MG, Zaneveld J, Caporaso JG, et al. Predictive functional profiling of microbial communities using 16S rRNA marker gene sequences. *Nat Biotechnol* 2013;31:814-21.
425. Soininen P, Kangas AJ, Wurtz P, et al. High-throughput serum NMR metabolomics for cost-effective holistic studies on systemic metabolism. *Analyst* 2009;134:1781-5.
426. Oksanen J, Blanchet FG, Friendly M, et al. *vegan: Community Ecology Package*. R package version 2.5-6. 2019.
427. Tibshirani R. Regression Shrinkage and Selection Via the Lasso. *J R Stat Soc Ser B* 1994;267-88.
428. Lin W, Shi P, Feng R, Li H. Variable selection in regression with compositional covariates. *Biometrika* 2014;101:785-97.
429. Altenbuchinger M, Rehberg T, Zacharias HU, et al. Reference point insensitive molecular data analysis. *Bioinformatics* 2016;33:219-26.
430. Benjamini Y, Hochberg Y. Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing. *Journal of the Royal Statistical Society Series B (Methodological)* 1995;57:289-300.
431. Turnbaugh PJ, Ley RE, Mahowald MA, Magrini V, Mardis ER, Gordon JI. An obesity-associated gut microbiome with increased capacity for energy harvest. *Nature* 2006;444:1027-31.
432. Murphy EF, Cotter PD, Healy S, et al. Composition and energy harvesting capacity of the gut microbiota: relationship to diet, obesity and time in mouse models. *Gut* 2010;59:1635-42.
433. Wang B, Jiang X, Cao M, et al. Altered Fecal Microbiota Correlates with Liver Biochemistry in Nonobese Patients with Non-alcoholic Fatty Liver Disease. *Sci Rep* 2016;6:32002.
434. Loomba R, Seguritan V, Li W, et al. Gut Microbiome-Based Metagenomic Signature for Non-invasive Detection of Advanced Fibrosis in Human Nonalcoholic Fatty Liver Disease. *Cell Metab* 2017;25:1054-62 e5.
435. Shaw KA, Bertha M, Hofmekler T, et al. Dysbiosis, inflammation, and response to treatment: a longitudinal study of pediatric subjects with newly diagnosed inflammatory bowel disease. *Genome medicine* 2016;8:75.
436. Le Chatelier E, Nielsen T, Qin J, et al. Richness of human gut microbiome correlates with metabolic markers. *Nature* 2013;500:541-6.
437. Domingo MC, Huletsky A, Boissinot M, Bernard KA, Picard FJ, Bergeron MG. *Ruminococcus gnavreii* sp. nov., a glycopeptide-resistant species isolated from a human faecal specimen. *International journal of systematic and evolutionary microbiology* 2008;58:1393-7.
438. Jie Z, Xia H, Zhong S-L, et al. The gut microbiome in atherosclerotic cardiovascular disease. *Nature Communications* 2017;8:845.
439. Joossens M, Huys G, Cnockaert M, et al. Dysbiosis of the faecal microbiota in patients with Crohn's disease and their unaffected relatives. *Gut* 2011;60:631-7.
440. David LA, Maurice CF, Carmody RN, et al. Diet rapidly and reproducibly alters the human gut microbiome. *Nature* 2014;505:559-63.

441. Kim CW, Addy C, Kusunoki J, et al. Acetyl CoA Carboxylase Inhibition Reduces Hepatic Steatosis but Elevates Plasma Triglycerides in Mice and Humans: A Bedside to Bench Investigation. *Cell Metab* 2017;26:394-406.e6.
442. Jiao N, Baker SS, Chapa-Rodriguez A, et al. Suppressed hepatic bile acid signalling despite elevated production of primary and secondary bile acids in NAFLD. *Gut* 2018;67:1881-91.
443. Kaikkonen JE, Wurtz P, Suomela E, et al. Metabolic profiling of fatty liver in young and middle-aged adults: Cross-sectional and prospective analyses of the Young Finns Study. *Hepatology* 2017;65:491-500.
444. Krumsiek J, Mittelstrass K, Do KT, et al. Gender-specific pathway differences in the human serum metabolome. *Metabolomics* 2015;11:1815-33.
445. Wurtz P, Havulinna AS, Soininen P, et al. Metabolite profiling and cardiovascular event risk: a prospective study of 3 population-based cohorts. *Circulation* 2015;131:774-85.
446. Gruppen EG, Connelly MA, Sluiter WJ, Bakker SJL, Dullaart RPF. Higher plasma GlycA, a novel pro-inflammatory glycoprotein biomarker, is associated with reduced life expectancy: The PRE-VEND study. *Clinica Chimica Acta* 2019;488:7-12.
447. Hall AB, Tolonen AC, Xavier RJ. Human genetic variation and the gut microbiome in disease. *Nature Reviews Genetics* 2017;18:690-9.
448. Oksanen J, Blanchet FG, Friendly M, et al. *Vegan: Community Ecology Package*. 2018.
449. Altenbuchinger M, Rehberg T, Zacharias HU, et al. Reference point insensitive molecular data analysis. *Bioinformatics* 2017;33:219-26.
450. Segata N, Izard J, Waldron L, et al. Metagenomic biomarker discovery and explanation. *Genome Biology* 2011;12:R60.
451. Philips CA AP. Herbal tea consumption and the liver - all is not what it seems! *Journal of hepatology* 2017.
452. Stickel F, Patsenker E, Schuppan D. Herbal hepatotoxicity. *Journal of hepatology* 2005;43:901-10.
453. Lam P, Cheung F, Tan HY, Wang N, Yuen MF, Feng Y. Hepatoprotective Effects of Chinese Medicinal Herbs: A Focus on Anti-Inflammatory and Anti-Oxidative Activities. *Int J Mol Sci* 2016;17:465.
454. Navarro VJ, Bonkovsky HL, Hwang SI, Vega M, Barnhart H, Serrano J. Catechins in dietary supplements and hepatotoxicity. *Dig Dis Sci* 2013;58:2682-90.
455. Boehm K, Borrelli F, Ernst E, et al. Green tea (*Camellia sinensis*) for the prevention of cancer. *Cochrane Database Syst Rev* 2009:CD005004.
456. Huang H, Y. H. Association between beverage consumption and liver fibrosis. *Journal of hepatology*.
457. Willet WC. *Nutritional epidemiology*. New York: Oxford University Press 2012.
458. Tang GY, Mann JP. Animal protein intake and hepatic steatosis in the elderly. *Gut* 2018.
459. Chiu S, Sievenpiper JL, de Souza RJ, et al. Effect of fructose on markers of non-alcoholic fatty liver disease (NAFLD): a systematic review and meta-analysis of controlled feeding trials. *Eur J Clin Nutr* 2014;68:416-23.
460. Klatsky AL, Morton C, Udaltsova N, Friedman GD. Coffee, cirrhosis, and transaminase enzymes. *Arch Intern Med* 2006;166:1190-5.
461. Zelber-Sagi S, Salomone F, Webb M, et al. Coffee consumption and nonalcoholic fatty liver onset: a prospective study in the general population. *Transl Res* 2015;165:428-36.
462. Carrieri MP, Protopopescu C, Marcellin F, et al. The impact of coffee consumption on fibrosis and steatosis in HIV-HCV co-infected patients. *Journal of hepatology* 2018;68:845-7.
463. Abby Philips C, Augustine P. Herbal tea consumption and the liver - All is not what it seems! *Journal of hepatology* 2018;68:612-3.

464. Huang H, Huang Y. Association between beverage consumption and liver fibrosis. *Journal of hepatology* 2018;68:1095-6.
465. NIH. LiverTox. Consulted on the 20th of December 2019.
466. Promrat K, Longato L, Wands JR, de la Monte SM. Weight loss amelioration of non-alcoholic steatohepatitis linked to shifts in hepatic ceramide expression and serum ceramide levels. *Hepatology Research* 2011;41:754-62.
467. Fonseca J, Nunes G, Fonseca C, Canhoto M, Barata AT, Santos CA. Comment to: "EASL-EASD-EASO Clinical Practice Guidelines for the management of non-alcoholic fatty liver disease". *Journal of hepatology* 2017;66:465-6.
468. Ha V, Cozma AI, Choo VLW, Mejia SB, de Souza RJ, Sievenpiper JL. Do Fructose-Containing Sugars Lead to Adverse Health Consequences? Results of Recent Systematic Reviews and Meta-analyses. *Adv Nutr* 2015;6:504S-11S.
469. Tang GY, Mann JP. Animal protein intake and hepatic steatosis in the elderly. *Gut* 2019;68:2256-7.
470. Raphael KL, Carroll DJ, Murray J, Greene T, Beddhu S. Urine Ammonium Predicts Clinical Outcomes in Hypertensive Kidney Disease. *Journal of the American Society of Nephrology* 2017;28:2483-90.
471. Sharpton SR, Ajmera V, Loomba R. Emerging Role of the Gut Microbiome in Nonalcoholic Fatty Liver Disease: From Composition to Function. *Clin Gastroenterol Hepatol* 2019;17:296-306.
472. Response Rates NHANES. Consulted on 20th of December 2019.
473. Nohr EA, Frydenberg M, Henriksen TB, Olsen J. Does low participation in cohort studies induce bias? *Epidemiology* 2006;17:413-8.
474. Pizzi C, De Stavola B, Merletti F, et al. Sample selection and validity of exposure-disease association estimates in cohort studies. *J Epidemiol Community Health* 2011;65:407-11.
475. Grimes DA, Schulz KF. Bias and causal associations in observational research. *Lancet* 2002;359:248-52.
476. Hill AB. The Environment and Disease: Association or Causation? *Proc R Soc Med* 1965;58:295-300.
477. VanderWeele TJ. Principles of confounder selection. *European Journal of Epidemiology* 2019;34:211-9.
478. Johnson AJ, Vangay P, Al-Ghalith GA, et al. Daily Sampling Reveals Personalized Diet-Microbiome Associations in Humans. *Cell Host Microbe* 2019;25:789-802 e5.
479. Vuik FER, Dicksved J, Lam SY, et al. Composition of the mucosa-associated microbiota along the entire gastrointestinal tract of human individuals. *United European Gastroenterology Journal* 2019;7:897-907.
480. Gorzelak MA, Gill SK, Tasnim N, Ahmadi-Vand Z, Jay M, Gibson DL. Methods for Improving Human Gut Microbiome Data by Reducing Variability through Sample Processing and Storage of Stool. *PLoS One* 2015;10:e0134802.
481. Lauber CL, Zhou N, Gordon JL, Knight R, Fierer N. Effect of storage conditions on the assessment of bacterial community structure in soil and human-associated samples. *FEMS microbiology letters* 2010;307:80-6.
482. Gibbons SM, Duvallet C, Alm EJ. Correcting for batch effects in case-control microbiome studies. *PLoS Comput Biol* 2018;14:e1006102.
483. Ginès P, Graupera I, Lammert F, et al. Screening for liver fibrosis in the general population: a call for action. *The Lancet Gastroenterology & Hepatology* 2016;1:256-60.
484. Hastings MH, Maywood ES, Brancaccio M. Generation of circadian rhythms in the suprachiasmatic nucleus. *Nature Reviews Neuroscience* 2018;19:453-69.

485. Levi F. Circadian chronotherapy for human cancers. *Lancet Oncol* 2001;2:307-15.
486. Sutton EF, Beyl R, Early KS, Cefalu WT, Ravussin E, Peterson CM. Early Time-Restricted Feeding Improves Insulin Sensitivity, Blood Pressure, and Oxidative Stress Even without Weight Loss in Men with Prediabetes. *Cell Metab* 2018;27:1212-21 e3.
487. Waldman HS, Renteria LI, McAllister MJ. Time-restricted feeding for the prevention of cardio-metabolic diseases in high-stress occupations: a mechanistic review. *Nutr Rev* 2019.
488. Esteban JPG, Rein LE, Szabo Aniko, Gawrieh S, Saeian K. Not Just What, but also When You Eat: Analyzing the Impact of Meal Timing Patterns on Non-Alcoholic Fatty Liver Disease. *Hepatology* 2016;64:S17A.
489. Antonopoulos AS, Tousoulis D. The molecular mechanisms of obesity paradox. *Cardiovasc Res* 2017;113:1074-86.
490. Magkos F. Metabolically healthy obesity: what's in a name? *The American Journal of Clinical Nutrition* 2019;110:533-9.
491. Cammarota G, Ianiro G, Tilg H, et al. European consensus conference on faecal microbiota transplantation in clinical practice. *Gut* 2017;66:569-80.
492. Bajaj JS, Kassam Z, Fagan A, et al. Fecal microbiota transplant from a rational stool donor improves hepatic encephalopathy: A randomized clinical trial. *Hepatology* 2017;66:1727-38.
493. Caussy C, Ajmera VH, Puri P, et al. Serum metabolites detect the presence of advanced fibrosis in derivation and validation cohorts of patients with non-alcoholic fatty liver disease. *Gut* 2019;68:1884-92.
494. Caussy C, Tripathi A, Humphrey G, et al. A gut microbiome signature for cirrhosis due to nonalcoholic fatty liver disease. *Nature Communications* 2019;10:1406.
495. Wester V. Glucocorticoids and Obesity. 2018.
496. Eslam M, Alvani R, Shiha G. Obeticholic acid: towards first approval for NASH. *The Lancet* 2019;394:2131-3.
497. Younossi ZM, Ratziu V, Loomba R, et al. Obeticholic acid for the treatment of non-alcoholic steatohepatitis: interim analysis from a multicentre, randomised, placebo-controlled phase 3 trial. *Lancet* 2019;394:2184-96.
498. Siddiqui MS, Van Natta ML, Connelly MA, et al. Impact of obeticholic acid on the lipoprotein profile in patients with non-alcoholic steatohepatitis. *Journal of hepatology* 2020;72:25-33.
499. Security. Cff. Taxes, Inequality and Obesity. University of Reading Consulted on 18th of December 2019.