

Feeding Duration	Expressed/Observed Phenotype	Teklad Diet Code	Citation	Link
8 weeks	Increased Expression of TREM2, CD9, and GPNMB	TD.120528	Mandy M. Chan, Sabine Daemen, Joseph W. Beals, Marina Terekhova, Bin Q. Yang, Christina F. Fu, Li He, Arick C. Park, Gordon I. Smith, Babak Razani, Kathleen Byrnes, Wandy L. Beatty, Shaina R. Eckhouse, J. Christopher Eagon, Daniel Ferguson, Brian N. Finck, Samuel Klein, Maxim N. Artyomov, Joel D. Schilling, Steatosis Drives Monocyte-derived Macrophage Accumulation in Human Metabolic Dysfunction-Associated Fatty Liver Disease, <i>JHEP Reports</i> , 2023, 100877, ISSN 2589-5559, https://doi.org/10.1016/j.jhepr.2023.100877 .	CLICK
12 weeks	Steatosis and inflammation	TD.120528	Chung KJ, Legaki AI, Papadopoulos G, Gercken B, Gebler J, Schwabe RF, Chavakis T, Chatzigeorgiou A. Analysis of the Role of Stellate Cell VCAM-1 in NASH Models in Mice. <i>Int J Mol Sci</i> . 2023 Mar 2;24(5):4813. doi: 10.3390/ijms24054813. PMID: 36902241; PMCID: PMC10002755.	CLICK
22 weeks	Hepatic Ballooning	TD.120528	Oates, J. R., Sawada, K., Giles, D. A., Alarcon, P. C., Damen, M. S., Szabo, S., ... & Divanovic, S. (2023). Thermoneutral housing shapes hepatic inflammation and damage in mouse models of non-alcoholic fatty liver disease. <i>Frontiers in Immunology</i> , 14, 539.	CLICK
24 weeks	Increased macrophage infiltration and fibrosis	TD.120528	Guo, S., FENG, Y., ZHU, X., Zhang, X., Gao, H., Wang, H., ... & Kong, X. (2022). Metabolic crosstalk between skeletal muscle and liver through IRF4-FSTL1 in NASH.	CLICK
4 & 9 weeks	Increased body weight, increased ALT and inflammation	TD.96121	Rulaiha Taylor, Laura Armstrong, Anisha Bhattacharya, Zakiyah Henry, Anita Brinker, Brian Buckley, Bo Kong, Grace Guo, Myclobutanil-mediated alteration of liver-gut FXR signaling in mice, <i>Toxicological Sciences</i> , Volume 191, Issue 2, February 2023, Pages 387–399, https://doi.org/10.1093/toxsci/kfac129	CLICK
12 weeks	Steatosis and inflammation	TD.96121	Liu, H., Hallauer Hastings, M., Kitchen, R., Xiao, C., Baldovino Guerra, J. R., Kuznetsov, A., & Rosenzweig, A. (2023). Beneficial effects of moderate hepatic activin A expression on metabolic pathways, inflammation, and atherosclerosis. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 43(2), 330–349.	CLICK
12 weeks	Accumulated lipid and foam cells, insulin resistance	TD.96121	Kennedy, D. J., Kuchibhotla, S. D., Guy, E., Park, Y. M., Nimako, G., Vanegas, D., ... & Febbraio, M. (2009). Dietary cholesterol plays a role in CD36-mediated atherogenesis in LDLR-knockout mice. <i>Arteriosclerosis, thrombosis, and vascular biology</i> , 29(10), 1481-1487.	CLICK
15 weeks	Hepatic fibrosis, increased ALP and ALT	TD.88137	Sun, H., Seok, S., Jung, H., Kemper, B., & Kemper, J. K. (2022). Obesity-induced miR-802 directly targets AMPK and promotes nonalcoholic steatohepatitis in mice. <i>Molecular Metabolism</i> , 66, 101603.	CLICK
20 weeks	Early fibrosis, increased infiltration of neutrophils and lymphocytes	TD.88137	Markus Koponen, Jaana Rysä, Anna-Kaisa Ruotsalainen, Olli Kärkkäinen, Risto O. Juvonen, "Western Diet Decreases Hepatic Drug Metabolism in Male LDLr ^{-/-} -ApoB100/100 Mice", <i>Journal of Nutrition and Metabolism</i> , vol. 2023, Article ID 5599789, 12 pages, 2023. https://doi.org/10.1155/2023/5599789	CLICK
31 weeks	Steatosis and ballooning	TD.88137	Head, K. Z., Bolatimi, O. E., Gripshover, T. C., Tan, M., Li, Y., Audam, T. N., ... & Wahlang, B. (2023). Investigating the effects of long-term Aroclor 1260 exposure on fatty liver disease in a diet-induced obesity mouse model. <i>Frontiers in Gastroenterology</i> , 2, 1180712.	CLICK
32 weeks	Pronounced hepatic steatosis, inflammation, fibrosis	TD.88137	Yuan, X., Li, L., Zhang, Y. <i>et al.</i> Heme oxygenase 1 alleviates nonalcoholic steatohepatitis by suppressing hepatic ferroptosis. <i>Lipids Health Dis</i> 22, 99 (2023). https://doi.org/10.1186/s12944-023-01855-7	CLICK

Feeding Duration	Expressed/Observed Phenotype	Teklad Diet Code	Citation	Link
14 weeks	Fibrosis and metabolic syndrome	TD.160785.PWD	Yu, A., Cable, C., Sharma, S., Shihan, M. H., Mattis, A. N., Mileva, I., ... & Chen, J. Y. (2022). Targeting acid ceramidase ameliorates fibrosis in mouse models of non-alcoholic steatohepatitis. <i>Frontiers in Medicine</i> , 9, 881848.	CLICK
16 weeks	Fibrosis	TD.160785.PWD	Kang J, Postigo-Fernandez J, Kim K, Zhu C, Yu J, Meroni M, Mayfield B, Bartolomé A, Dapito DH, Ferrante AW Jr, Dongiovanni P, Valenti L, Creusot RJ, Pajvani UB. Notch-mediated hepatocyte MCP-1 secretion causes liver fibrosis. <i>JCI Insight</i> . 2023 Feb 8;8(3):e165369. doi: 10.1172/jci.insight.165369. PMID: 36752206; PMCID: PMC9977430.	CLICK
16 weeks	Steatohepatitis and fibrosis	TD.160785.PWD	Gluchowski, N. L., Gabriel, K. R., Chitraju, C., Bronson, R. T., Mejhert, N., Boland, S., ... & Walther, T. C. (2019). Hepatocyte deletion of triglyceride-synthesis enzyme acyl CoA: diacylglycerol acyltransferase 2 reduces steatosis without increasing inflammation or fibrosis in mice. <i>Hepatology</i> , 70(6), 1972-1985.	CLICK
16 & 28 weeks	Fibrosis	TD.160785.PWD	Moore, M. P., Wang, X., Shi, H., Meroni, M., Cherubini, A., Ronzoni, L., ... & Tabas, I. (2023). Circulating indian hedgehog is a marker of the hepatocyte-TAZ pathway in experimental NASH and is elevated in humans with NASH. <i>JHEP Reports</i> , 5(5), 100716.	CLICK
16 weeks	Steatosis and fibrosis, increased macrophage infiltration	TD.190142	Cai, B., Dongiovanni, P., Corey, K. E., Wang, X., Shmarakov, I. O., Zheng, Z., ... & Tabas, I. (2020). Macrophage MerTK promotes liver fibrosis in nonalcoholic steatohepatitis. <i>Cell metabolism</i> , 31(2), 406-421.	CLICK
16 weeks	Increased Kupffer cell, TREM2, CD9, and CD63 expression	TD.190142	Daemen, S., Chan, M. M., & Schilling, J. D. (2021). Comprehensive analysis of liver macrophage composition by flow cytometry and immunofluorescence in murine NASH. <i>STAR protocols</i> , 2(2), 100511.	CLICK
16 weeks	Increased liver weight and higher hepatic LAL activity	TD.190142	Lopresti, M. W., Cui, W., Abernathy, B. E., Fredrickson, G., Barrow, F., Desai, A. S., ... & Mashek, D. G. (2021). Hepatic lysosomal acid lipase overexpression worsens hepatic inflammation in mice fed a Western diet. <i>Journal of lipid research</i> , 62.	CLICK

MASH/NASH DIET MCD Diets

Feeding Duration	Expressed/Observed Phenotype	Teklad Diet Code	Citation	Link
1-18 weeks	Steatosis, hepatic ballooning, milk inflammation (2 weeks) Septal fibrosis (6 weeks)	TD.90262	Piraquive Agudelo, J., Kim, Y., Agarwal, S., Sriram, R., Bok, R., Kurhanewicz, J., ... & Ohliger, M. A. (2024). Hyperpolarized [1-13C] pyruvate MRSI to detect metabolic changes in liver in a methionine and choline-deficient diet rat model of fatty liver disease. <i>Magnetic Resonance in Medicine</i> , 91(4), 1625-1636.	CLICK
2, 4, & 8 weeks	Increase in hepatic conventional dendritic cells (cDCs)	TD.90262	Deczkowska, A., David, E., Ramadori, P., Pfister, D., Safran, M., Li, B., ... & Amit, I. (2021). XCR1+ type 1 conventional dendritic cells drive liver pathology in non-alcoholic steatohepatitis. <i>Nature medicine</i> , 27(6), 1043-1054.	CLICK
5 weeks	Steatohepatitis and fibrosis	TD.90262	Li, B., Yang, Z., Mao, F., Gong, W., Su, Q., Yang, J., ... & Lu, Y. (2023). Downregulation of microRNA-145a-5p promotes steatosis-to-NASH progression through upregulation of Nr4a2. <i>Journal of Hepatology</i> .	CLICK
4 weeks	Fibrosis	similar to TD.240263	Ma, Y., Cai, H., Smith, J., Chu, C. H., Mercer, S. E., Boehm, S., ... & Cheng, D. (2024). Evaluation of antisense oligonucleotide therapy targeting Hsd17b13 in a fibrosis mice model. <i>Journal of Lipid Research</i> , 65(3).	CLICK
8 weeks	Elevated ALT, AST, and TG levels	similar to TD.240263	Sato, T., & Oishi, K. (2024). Time-restricted feeding has a limited effect on hepatic lipid accumulation, inflammation and fibrosis in a choline-deficient high-fat diet-induced murine NASH model. <i>Plos one</i> , 19(1), e0296950.	CLICK
8 weeks	Inflammation and steatosis	similar to TD.240263	Coyne, E. S., Nie, Y., Abdurrachim, D., Ong, C. Z. L., Zhou, Y., Ali, A. A. B., ... & Talukdar, S. (2024). Leukotriene B4 receptor 1 does not mediate disease progression in a mouse model of liver fibrosis. <i>Biochemical Journal</i> , 481(3), 177-190.	CLICK

MASH/NASH DIET AMLN/GAN Diets

Feeding Duration	Expressed/Observed Phenotype	Teklad Diet Code	Citation	Link
12 weeks	Steatosis and hepatic ballooning degradation	similar to TD.200591	Aldiss, Peter, <i>et al.</i> "FGF21 deletion mildly exacerbates hepatic dysfunction in MASH diet and alcohol fed rats." <i>bioRxiv</i> (2024): 2024-03.	CLICK
12 weeks	Maintained steatosis, systemic insulin resistance, and obesity	similar to TD.180939	Zhu, An-Qi, <i>et al.</i> "Transcriptomic insights into the lipotoxicity of high-fat high-fructose diet in rat and mouse." <i>The Journal of Nutritional Biochemistry</i> 128 (2024): 109626.	CLICK
21 weeks	Hepatic fibrosis	similar to TD.200591	Li, Xuecheng, <i>et al.</i> "A new NASH model in aged mice with rapid progression of steatohepatitis and fibrosis." <i>Plos one</i> 18.5 (2023): e0286257.	CLICK

General Information

Citation	Link
Carreres, Lydie, <i>et al.</i> "Modeling diet-induced NAFLD and NASH in rats: a comprehensive review." <i>Biomedicines</i> 9.4 (2021): 378.	CLICK
Gallage, Suchira, <i>et al.</i> "A researcher's guide to preclinical mouse NASH models." <i>Nature Metabolism</i> 4.12 (2022): 1632-1649.	CLICK
Imajo, Kento, <i>et al.</i> "Rodent models of nonalcoholic fatty liver disease/nonalcoholic steatohepatitis." <i>International journal of molecular sciences</i> 14.11 (2013): 21833-21857.	CLICK
London, Roslyn M., and Jacob George. "Pathogenesis of NASH: animal models." <i>Clinics in liver disease</i> 11.1 (2007): 55-74.	CLICK