

Supplementary file 1

Table S1. Data extraction table

Author	Country	Duration	Type of Group	Type of Treat meant			sample size			Age		
				Group1	Group2	Group3	Group1	Group2	Group3	Group1	Group2	Group3
Marchesini et al (2001) ¹⁸	Italy	4 M	NASH	Metformin 1500 mg/day	Diet		14	6		40	40	
Athyros et al (2006) ¹⁹	Greece	54 W	NAFLD(metabolic syndrome)	Atorvastatin, 20 mg/day	Fenofibrate, 200 mg/day		63	62		60	61	
Ratziu et al (2008) ²⁰	France	1 Y	NASH	rosiglitazone (8mg/day)	placebo		32	31		53.1	54.1	
Hatzitolios A. et al (2004) ²¹	Greece	24 W	NAFLD with dyslipidemia	Omega3 5ml t.i.d.	Atorvastatin 20mg	Orlistat 120 mg t.i.d.	23	28	21	52	53	50
Fan H. et al (2013) ²²	China	12 W	T2 diabetes with NAFLD	Exenatide injection 10mcg b.i.d.	metformin 2g/day		49	68		51.02	54.68	
CAPANNI M. et al (2006) ²³	Italy	12 M	NAFLD	Placebo	n-3 PUFA		14	42		56	58	
Solhi H. et al (2014) ²⁴	Iran	8 W	NASH	silymarin	placebo		33	31		43.6	39.36	
Khoshbaten M. et al (2010) ²⁵	Iran	3 M	NAFLD	N-acetylcysteine	Vit C		15	15		40.1	46.8	
Lindor K. et al (2004) ²⁶	Canada, US	2 Y	NASH	13 to 15 mg/kg/d of oral UDCA	Placebo		80	86		45.4	48.5	
Zein C. et al (2011) ²⁷	USA	1 Y	NASH	pentoxifylline 400 mg t.i.d.	placebo		26	29		50.5	49.6	

Muhammad Amjad Pervez (2017) ²⁸		12M	NAFLD	Tocotrienol	PLACEBO		31	33		44.7	43.9	
K. Shahebrahimi (2017) ²⁹			NAFLD	two gr/day metformin	30 mg/day pioglitazone	800 IU/D VITAMIN E	31	31	31	43.87	43.87	43.87
Chan Wah Kheong (2017) ³⁰	Malaysia	22 M	NAFLD	silymarin	placebo		49	50		49.6	50.1	
Jan Oscarsson (2018) ³¹	Sweden	3 M	hypertriglyceridemia OR NAFLD	Placebo	Omega-3	Fenofibrate	26	25	27	59.5	60	64
Daisuke Ito (2017) ³²	Japan	13 M	NAFLD AND DM-T2	Pioglitazone group	lpravgliflozin group		34	32		59.1	57.3	
Somayyeh Asghari (2018) ³³	Iran	3 M	NAFLD	placebo	Resveratrol		30	30		38.5	40	
K. CELINSKI (2014) ³⁴	POLAND	14 M	NAFLD	tryptophan	melatonin	placebo	28	23	23			
Srinivasan Dasarathy, MD (2015) ³⁵	USA	12 M	NAFLD AND DM	omega 3 fatty acids	placebo (CORN OIL)		18	19		51.5	49.8	
Abdelmalek (2009) ³⁶	usa	27 M	NAFLD	Betaine	Placebo		27	28		47.8	45.7	
Alam (2016) ³⁷	Italy	34 M	NAFLD	Telmisartan	underwent lifestyle modification alone		20	10		43.3	37.9	
ALLER (2011) ³⁸	Spain	3 M	NAFLD	probiotic	placebo		14	14				
Argo (2015) ³⁹	USA	3 Y	NAFLD	Placebo	N-3 PUFA		17	17		47.2	46.4	
Armstrong(2016) ⁴⁰	UK	48 W	non-alcoholic steatohepatitis	liraglutide	Placebo		26	26		50	52	
Balas (2007) ⁴¹	USA	4 W	impaired glucose tolerance or T2DM and NASH	pioglitazone	Placebo		21	14		46.4	51	

Baniasadi (2015) ⁴²	IRAN	6 M	NASH	pantoxifyllin	Placebo Group		15	15		35.7	39.4	
Belfort (2006) ⁴³	USA	6 M	nonalcoholic steatohepatitis	Placebo	Pioglitazone		21	26		51	51	
Chachay (2014) ⁴⁴	Australia	8 W	NAFLD	resveratrol	PLACEBO		10	10		48.8	47.5	
Chen (2015) ⁴⁵	China	3 M	NAFLD	Placebo	Resveratrol		30	30		43.5	45.2	
Cui (2016) ⁴⁶	USA	6 M	hepatic steatosis	sitagliptin	placebo		25	25		52.9	54.9	
Cusi (2016) ⁴⁷	USA	6 Y	NASH and prediabetes or T2DM	Placebo	Pioglitazone		51	50		49	52	
Deng (2017) ⁴⁸	China	3 Y	NAFLD AND T2DM	Sitagliptin	Diet		36	36		63.7	64.1	
Ebrahimi-Mameghani (2016) ⁴⁹	Iran	15 M	NAFLD	DIET	linoleic acid		19	19		36.74	38.58	
Ekhlasli (2017) ⁵⁰	Iran	3 M	NAFLD	Probiotic	Placebo		32	32		12.7	12.6	
Eslamparast (2014) ⁵¹	Iran	28 W	NAFLD	Synbiotic	Placebo		26	26		46.35	45.69	
Faghihzadeh (2014) ⁵²	Iran	12 W	NAFLD	Resveratrol	PLACEBO		25	25		44.04	46.28	
Feng (2017) ⁵³	China	6 M	T2DM with NAFLD	Liraglutide	Gliclazide	Metformin	29	29	29	46.79	48.07	46.31
Garinis (2010) ⁵⁴	Italy	6 M	NAFLD	Metformin	Diet		20	25		40.8	45.8	
Hajiaghahmohammadi(2012) ⁵⁵	Iran	4 M	NAFLD	Pioglitazone	Metformin	Silymarin	22	22	22	32.62	32.62	32.62
Han (2014) ⁵⁶	China	6 M	NAFLD	METFORMIN	Vitamin E		112	111				
Harrison (2003) ⁵⁷	USA	6 M	Nonalcoholic Steatohepatitis	Placebo	Vitamin E,VIT.C		22	23		50.2	52.5	
Harrison (2009) ⁵⁸	USA	24 M	Nonalcoholic Steatohepatitis	DIET Group	Orlistat Group		18	23		45.8	47.9	

Haukeland(2009) ⁵⁹	Norway	6 M	NAFLD	Placebo	Metformin		24	20		49.9	44.3	
Heebøll (2016) ⁶⁰	Denmark	6 M	NAFLD	Resveratrol	PLACEBO		13	13				
Hirata (2013) ⁶¹	Japan	12 M	NAFLD and hypertension	Telmisartan	Losartan		12	7		57.7	60.3	
Hussain (2016) ⁶²	Pakistan	12 W	NAFLD	Vildagliptin	Placebo		29	29		28	31	
Khoo (2017) ⁶³	Singapore	21 M	NAFLD	diet	Liraglutide		12	12		43.7	39	
LE (2012) ⁶⁴	USA	24 W	NASH	Colesevelam	Placebo		25	25		45.4	50.3	
Lee (2008) ⁶⁵	Singapore	3 M	NASH	Pentoxifylline	PLACEBO		11	9		47	47.89	
Leuschner (2010) ⁶⁶	Germany AND Greece	18 M	NASH	UCDA	PLACEBO		95	91		41.45	45.02	
Li (2015) ⁶⁷	China	6 M	NASH	PLACEBO	PUFA		39	39		50.4	52.6	
Loomba (2015) ⁶⁸	USA	24 W	NASH	Ezetimibe	Placebo		25	25		49	49.5	
McPherson (2017) ⁶⁹	UK	2 Y	NAFLD	Losartan	PLACEBO		24	21		58	45	
Mendez-Sanchez (2004) ⁷⁰	Mexico	6 W	NAFLD	UCDA	PLACEBO		12	11		39.7	37.8	
Merat (2003) ⁷¹	Iran	6 M	NASH	drug:probuco l	PLACEBO		18	9		36.3	35.9	
Mofidi (2017) ⁷²	Iran	28 W	NAFLD	synbiotic supplementa tion	placebo		21	21		40.9	44.61	
van Wagner (2011) ⁷³	USA Chicago, IL	3 Y	NAFLD	PANTOXYPHY LINE 400 mg	placebo		21	9		48	53	
Zelber-Sagi (2006) ⁷⁴	Israel	2 M	NAFLD	orlistat 120 mg	placebo		21	23		48.4	47	
Wah Kheong (2017) ⁷⁵	Malaysia	2Y	NAFLD	silymarin 700 mg	placebo		49	50		49.6	50.1	
Wong (2013) ⁷⁶	China	6M	NAFLD	probiotic	DIATE		10	10		42	55	
Tiikkainen (2004) ⁷⁷	Finland	16 W	NAFLD	Rosiglitazone	Metformin		9	11		50	46	

Zhu (2008) ⁷⁸	China	24 W	NAFLD	n-3 PUFA	placebo		66	68		45	44.03	
Mudaliar (2013) ⁷⁹	USA	6 W	NAFLD AND T2DM	Placebo	25 mg OBETICHO LIC ACID	50 mg OBETIC Holic ACID	23	20	21	53.1	52.7	50.5
Nelson (2009) ⁸⁰	USA	72 W	FLINT	Obeticholic acid	PLACEBO		141	142		52	51	
Nogueira (2016) ⁸¹	Brazil	6 M	NASH	OMEGA - 3	PLACEBO		27	23		53.9	52.5	
Omer (2009-10) ⁸²	Turkey	1 Y	NAFLD	metaformin	Rosiglitazone	METformin+ROSiglitazoe	22	20	22	48	49.3	49.6
PAKRAVAN(2017) ⁸³	Iran	3 M	NAFLD	Melatonin	PLACEBO		47	48		42.5	40.6	
Parikh (2016) ⁸⁴	India	52 W	NAFLD	(Vitamin E)	(UDCA)		95	138		43.75	40.19	
Ratzu (2016) ⁸⁵	USA	52 W	NAFLD	Placebo	Elafibranor , 80 mg	Elafibranor , 120 mg	92	93	89	52.4	52.7	52.4
Razavizade(2013) ⁸⁶	Iran	4 M	NAFLD	Metformin	Pioglitazone		40	40		36.35	34.2	
Santos (2003) ⁸⁷	Brazil	3 M	NAFLD	UDCA	PLACEBO		15	15		38.4	36.6	
SANYAL (2010) ⁸⁸	USA	96 W	NASH	Placebo	Vitamin E	Pioglitazone	83	84	80	45.4	46.6	47
SANYAL (2014) ⁸⁹	USA	2 Y	NASH	Placebo	EPA-E(eicosapentanoic) (1800 mg/d)	EPA-E(eicosapentanoic (n ¼ 2700 mg/d)	72	82	86	50.5	47.8	47.8
Sharma (2012) ⁹⁰	India	6 M	NASH	Pentoxifylline	Pioglitazone		11	9		37.3	40.4	
Qin (2015) ⁹¹	China	3 M	NAFLD	CORN OIL	FISH OIL		34	36		44.3	46	
Shibuya (2017) ⁹²	Japan	3 M	NAFLD	Luseogliflozin	Metformin		16	16		51	60	
Takeshita (2014) ⁹³	Japan	6 M	NAFLD	DIET	Ezetimibe		14	17		55.5	50.4	
Sofi (2010) ⁹⁴	Italy	12 M	NAFLD	N3 PUFA	diet		6	5		55	54	
Chen (2008) ⁹⁵	China	24 W	NAFLD or NASH	Placebo	Omega-3 8cap/day	Omega-3 10cap/day	16	15	15	45	47	46

Shenoy (2014) ⁹⁶	Italy	16 W	NASH	Metadoxine 500mg/day	Placebo		75	59		39.8	41.1	
Hameed (2017) ⁹⁷	USA	96 W	NASH	Obeticholic acid+weight loss	Placebo+w eight loss		102	98		52	50	
Amirkhizi (2018) ⁹⁸	Iran	12 W	NAFLD patients with obesity	ALA	Placebo		23	22		40.6	38.8	
Shafi Kuchay (2018) ⁹⁹	India	20 W	NAFLD Patients With Type 2 Diabetes	Empagliflozin	diet		22	20				
Sofer (2011) ¹⁰⁰	Israel	16 W	NAFLD	Metformin	Placebo		32	31		51.9	55.2	
Abenavoli (2017) ¹⁰¹	Italy	24 W	NAFLD	Mediterrane an diet	without drug		20	10		52	33	