

**Supplementary Table S1:** Summary results of chronic iron and curcumin supplementation on inflammatory and iron status markers. Results are presented as mean difference, standard error of difference, *p* value and significance where \* represents significance values when comparing time points within the same conditions (\**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001, \*\*\*\**p* < 0.0001); ns indicates no significant difference (*p* > 0.05).

Biomarker	Groups	Time points	Whole group												Subgroup analysis based on baseline serum ferritin levels (ng/mL)																	
			<30				≥30				<50				≥50				<250				≥250									
			N1	N2	Mean Diff	SE of diff.	N1	N2	Mean Diff	SE of diff.	N1	N2	Mean Diff	SE of diff.	N1	N2	Mean Diff	SE of diff.	N1	N2	Mean Diff	SE of diff.	N1	N2	Mean Diff	SE of diff.	p value	Sig				
FS0_Plte	B vs E	M vs E	30	30	-0.21	0.5940	ns	13	12	-0.34	0.5105	ns	17	18	-0.11	0.36	ns	17	16	-0.03	0.17	0.0550	ns	13	14	0.07	0.44	0.9877	ns			
	B vs E	M vs E	30	29	-1.08	1.01	0.5383	ns	13	12	-0.31	0.21	0.3490	ns	17	17	-1.61	1.76	0.3803	ns	17	15	-0.22	0.17	0.4365	ns	13	14	-1.95	2.19	0.6549	ns
	B vs E	M vs E	31	30	-0.41	0.45	0.8901	ns	8	9	-0.63	0.40	0.5400	ns	22	22	-0.31	0.29	0.5440	ns	19	18	-0.18	0.14	0.4910	ns	16	15	-0.49	0.54	0.4507	ns
FS18_Plte	B vs E	M vs E	31	29	0.06	0.25	0.5712	ns	9	7	-0.44	0.44	0.6135	ns	22	22	0.23	0.30	0.7240	ns	15	13	-0.28	0.26	0.5497	ns	16	16	0.36	0.40	0.6470	ns
	B vs E	M vs E	30	29	0.27	0.23	0.4806	ns	8	7	1.17	0.80	0.3752	ns	22	22	-0.04	0.24	0.5468	ns	14	13	0.70	0.38	0.2059	ns	16	16	-0.12	0.32	0.9290	ns
	B vs E	M vs E	31	31	0.32	0.35	0.6440	ns	10	10	0.63	0.69	0.6416	ns	21	21	0.17	0.41	0.9137	ns	21	21	0.58	0.50	0.4859	ns	10	10	-0.24	0.25	0.6203	ns
FS18_Curt	B vs E	M vs E	31	31	0.15	0.50	0.9510	ns	10	10	0.62	0.73	0.6778	ns	21	21	-0.08	0.05	0.8621	ns	21	21	0.71	0.55	0.4167	ns	10	10	-1.03	0.95	0.5491	ns
	B vs E	M vs E	30	29	0.29	0.27	0.5166	ns	12	12	0.18	0.28	0.7936	ns	18	18	0.40	0.44	0.6406	ns	19	19	0.18	0.38	0.5814	ns	11	11	0.54	0.72	0.4737	ns
	B vs E	M vs E	30	29	0.29	0.17	0.2081	ns	12	12	0.20	0.31	0.7942	ns	18	18	0.35	0.19	0.1976	ns	19	19	0.23	0.20	0.5068	ns	11	11	0.39	0.30	0.4198	ns
FS65_Plte	B vs E	M vs E	31	29	-0.03	0.31	0.9888	ns	10	9	0.49	0.39	0.4647	ns	20	20	-0.24	0.41	0.8624	ns	16	14	0.32	0.3813	0.515	ns	15	15	-0.45	0.50	0.6512	ns
	B vs E	M vs E	31	29	0.25	0.26	0.5611	ns	10	9	0.48	0.39	0.4647	ns	20	20	-0.24	0.41	0.8624	ns	16	14	0.20	0.28	0.5146	ns	15	15	-0.29	0.35	0.5146	ns
	B vs E	M vs E	30	29	0.23	0.21	0.5264	ns	12	12	0.21	0.26	0.6246	ns	20	20	0.33	0.33	0.5981	ns	14	14	0.22	0.23	0.5237	ns	15	15	-0.01	0.01	0.5237	ns
FS0_Plte	B vs E	M vs E	29	30	-0.01	0.01	0.4011	ns	12	12	-0.01	0.02	0.7755	ns	17	18	-0.02	0.01	0.3535	ns	16	16	-0.01	0.01	0.5755	ns	13	14	-0.01	0.02	0.7172	ns
	B vs E	M vs E	29	29	0.00	0.01	0.5816	ns	12	12	0.00	0.01	0.9816	ns	17	17	0.00	0.01	0.9390	ns	16	15	0.01	0.01	0.6750	ns	13	14	0.00	0.02	0.9804	ns
	B vs E	M vs E	30	29	0.02	0.01	0.2752	ns	12	12	0.01	0.02	0.6663	ns	18	17	0.02	0.01	0.3504	ns	16	15	0.02	0.01	0.2834	ns	13	14	0.01	0.01	0.7197	ns
FS18_Plte	B vs E	M vs E	31	31	0.02	0.05	0.9726	ns	9	8	-0.16	0.08	0.1742	ns	22	21	0.04	0.06	0.8349	ns	15	14	0.12	0.05	0.0736	ns	16	15	0.08	0.09	0.6386	ns
	B vs E	M vs E	31	31	0.01	0.05	0.9726	ns	9	8	-0.16	0.08	0.1742	ns	22	21	0.04	0.06	0.8349	ns	15	14	0.12	0.05	0.0736	ns	16	15	0.08	0.09	0.6386	ns
	B vs E	M vs E	31	29	0.04	0.02	0.5127	ns	7	7	0.11	0.05	0.1363	ns	22	22	0.01	0.02	0.8290	ns	14	13	0.07	0.04	0.1331	ns	15	16	0.01	0.01	0.4916	ns
FS18_Curt	B vs E	M vs E	31	31	-0.01	0.02	0.5022	ns	10	10	0.03	0.04	0.6913	ns	21	21	-0.03	0.02	0.3273	ns	21	21	0.01	0.02	0.5723	ns	10	10	-0.04	0.04	0.5868	ns
	B vs E	M vs E	31	31	-0.02	0.03	0.7065	ns	10	9	-0.08	0.10	0.8744	ns	21	21	-0.04	0.07	0.7746	ns	21	21	-0.04	0.04	0.7427	ns	10	10	0.00	0.02	0.9963	ns
	B vs E	M vs E	30	29	-0.02	0.02	0.5949	ns	12	12	0.02	0.06	0.5980	ns	20	20	0.02	0.06	0.5980	ns	14	13	0.04	0.04	0.5853	ns	15	15	0.04	0.03	0.0404	ns
FS65_Plte	B vs E	M vs E	31	29	-0.01	0.02	0.7587	ns	12	12	-0.03	0.02	0.3270	ns	18	18	-0.02	0.01	0.9997	ns	19	19	-0.02	0.01	0.2117	ns	11	11	0.01	0.01	0.9749	ns
	B vs E	M vs E	30	29	0.01	0.02	0.7587	ns	12	12	-0.03	0.02	0.3270	ns	18	18	-0.02	0.01	0.9997	ns	19	19	-0.02	0.01	0.2117	ns	11	11	0.01	0.01	0.9749	ns
	B vs E	M vs E	29	29	0.02	0.01	0.2752	ns	12	12	0.01	0.02	0.6663	ns	18	17	0.02	0.01	0.3504	ns	16	15	0.01	0.01	0.2834	ns	13	14	0.01	0.01	0.7197	ns
FS18_Plte	B vs E	M vs E	31	31	-0.02	0.02	0.9726	ns	9	8	-0.16	0.08	0.1742	ns	22	21	0.04	0.06	0.8349	ns	15	14	0.12	0.05	0.0736	ns	16	15	0.08	0.09	0.6386	ns
	B vs E	M vs E	31	31	-0.02	0.02	0.9726	ns	9	8	-0.16	0.08	0.1742	ns	22	21	0.04	0.06	0.8349	ns	15	14	0.12	0.05	0.0736	ns	16	15	0.08	0.09	0.6386	ns
	B vs E	M vs E	31	29	0.04	0.02	0.5127	ns	7	7	0.11	0.05	0.1363	ns	21	21	-0.02	0.02	0.8290	ns	14	13	0.07	0.04	0.1331	ns	15	16	0.01	0.01	0.4916	ns
FS18_Curt	B vs E	M vs E	31	31	-0.02	0.02	0.7065	ns	9	7	-0.33	0.46	0.6080	ns	22	22	0.30	0.26	0.8465	ns	15	14	-0.03	0.04	0.9881	ns	16	15	0.29	0.34	0.6676	ns
	B vs E	M vs E	31	31	-0.02	0.02	0.7065	ns	9	7	-0.33	0.46	0.6080	ns	22	22	0.30	0.26	0.8465	ns	15	14	-0.03	0.04	0.9881	ns	16	15	0.29	0.34	0.6676	ns
	B vs E	M vs E	30	29	-0.29	0.07	0.1582	ns	9	8	-0.56	0.30	0.2116	ns	22	21	0.02	0.01	0.9953	ns	15	14	-0.43	0.18	0.0861	ns	16	15	0.11	0.23	0.8807	ns
FS65_Plte	B vs E	M vs E	31	31	-0.02	0.02	0.7065	ns	9	7	-0.33	0.46	0.6080	ns	22	22	0.30	0.26	0.8465	ns	15	14	-0.03	0.04	0.9881	ns	16	15	0.29	0.34	0.6676	ns
	B vs E	M vs E	31	31	-0.02	0.02	0.7065	ns	9	7	-0.33	0.46	0.6080	ns	22	22	0.30	0.26	0.8465	ns	15	14	-0.03	0.04	0.9881	ns	16	15	0.29	0.34	0.6676	ns
	B vs E	M vs E	30	29	-0.02	0.02	0.5127	ns	7	7	0.11	0.05	0.1363	ns	21	21	-0.02	0.02	0.8290	ns	14	13	0.07	0.04	0.1331	ns	15	16	0.01	0.01	0.4916	ns
FS65_Plte	B vs E	M vs E	31	31	-0.02	0.02	0.8418	ns	10	9	-0.01	0.01	0.5811	ns	21	20	-0.02	0.04	0.9103	ns	16	14	-0.04	0.04	0.4970	ns	15	15	0.02	0.04	0.7524	ns
	B vs E	M vs E	30	29	-0.02	0.02	0.8418	ns	10	9	-0.01	0.01	0.5811	ns	21	20	-0.02	0.04	0.9103	ns	16	14	-0.04	0.04	0.4970	ns	15	15	0.02	0.04	0.7524	ns
	B vs E	M vs E	29	29	-0.02	0.02	0.5264	ns	12	12	-0.02	0.04	0.6053	ns	18	18	0.01	0.01	0.8806	ns	19	19	0.01	0.01	0.8506	ns	11	11	0.01	0.01	0.2122	ns
FS0_Plte	B vs E	M vs E	29	29	0.05	0.04	0.4550	ns	12	12	-0.02	0.02	0.3644	ns	17	18	0.07	0.03	0.7573	ns	16	16	-0.02	0.02	0.5637	ns	13	14	0.02	0.03	0.6303	ns
	B vs E	M vs E	29	29	0.05	0.04	0.5593	ns	12	12	-0.02	0.02	0.3647	ns	17	17	0.08	0.03	0.4579	ns	16	15	-0.02	0.02	0.5637	ns	13	14	0.01	0.01	0.5079	ns
	B vs E	M vs E	30	29	0.05	0.04	0.5593	ns	12	12	-0.02	0.02	0.3647	ns	17	17	0.08	0.03	0.4579	ns	16	15	-0.02	0.02	0.5637	ns	13	14	0.01	0.01	0.5079	ns
FS18_Plte	B vs E	M vs E	30	29	-0.03	0.02	0.2391	*	8	7	-0.03	0.05	0.7393	ns	22	22	-0.04	0.02	0.3146	ns	30	29	-0.03	0.02	0.2391	*	16	16	-0.02	0.02	0.7546	*
	B vs E	M																														