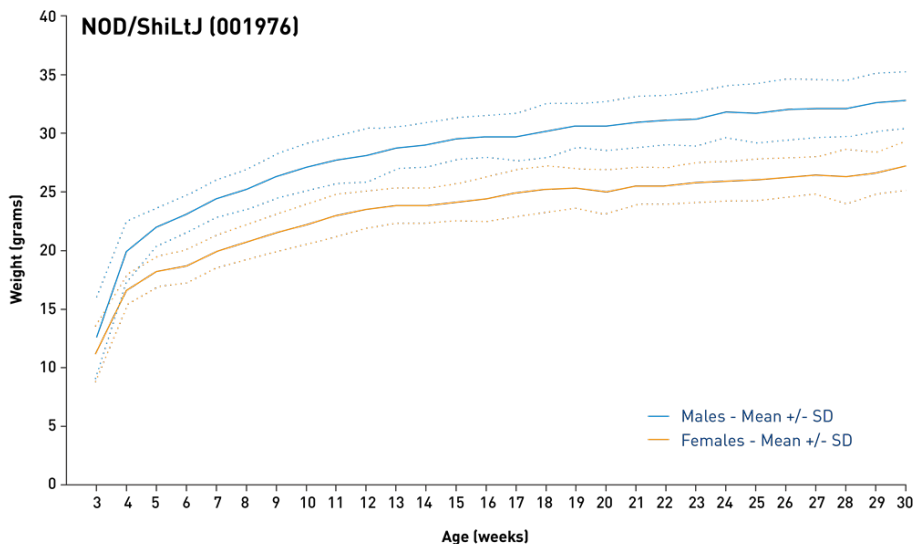


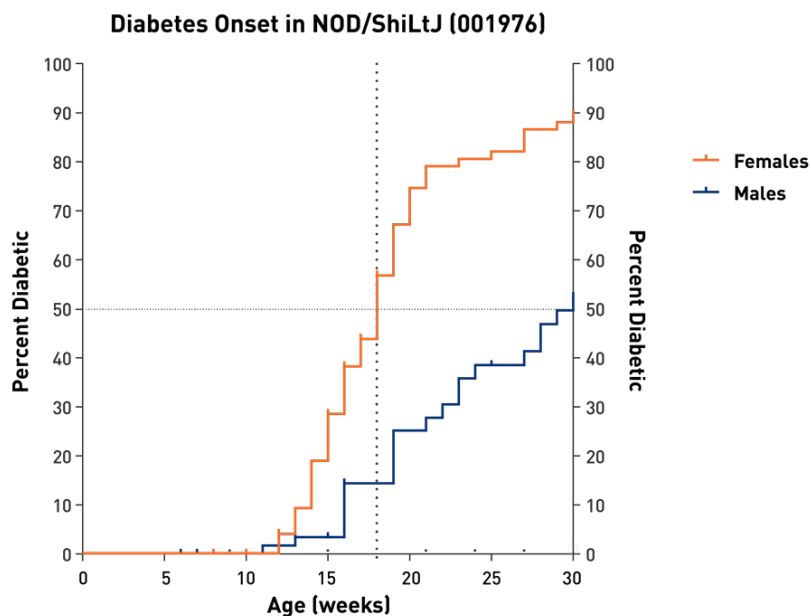
Physiological Data Summary – NOD/ShiLtJ (001976)



		Body Weights														
		Age (weeks)	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Female	Mean		11.2	16.6	18.2	18.7	19.9	20.7	21.5	22.2	23.3	23.5	23.8	23.8	24.1	24.4
	St Dev		2.4	1.3	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.6	1.5	1.5	1.6	1.9
Male	Mean		12.6	19.9	22.0	23.1	24.4	25.2	26.3	27.1	27.7	28.1	28.7	29.0	29.5	29.7
	St Dev		3.4	2.6	1.6	1.6	1.6	1.7	1.9	2.0	2.0	2.3	1.8	1.9	1.8	1.8

		Age (weeks)	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Female	Mean		24.9	25.2	25.0	25.5	25.5	25.5	25.8	25.9	26.0	26.2	26.4	26.3	26.6	27.2
	St Dev		2.0	2.0	1.7	1.9	1.6	1.6	1.7	1.7	1.8	1.7	1.6	2.3	1.8	2.1
Male	Mean		29.7	30.2	30.6	30.6	30.9	31.1	31.2	31.8	31.7	32.0	32.1	32.1	32.6	32.8
	St Dev		2.0	2.3	1.9	2.1	2.2	2.1	2.3	2.2	2.5	2.6	2.5	2.4	2.5	2.4

120 female and 80 male mice were obtained at weaning (birthdate +/- 3 days) from colonies in the Bar Harbor (standard barrier) and Sacramento (maximum barrier) facilities, and weighed the same day each week until 30 weeks of age. Mice were fed a 6% fat diet (LabDiet 5K52 formulation), ad libitum. Mice were removed from the study when they became diabetic, developed adverse clinical signs, or were used for phenotyping projects. The study was conducted in 2017.



Diabetes onset was monitored weekly between the ages of 3 and 30 weeks in the same 120 female and 80 male mice used for the weighing study. Diabetes was defined as a non-fasting blood glucose level exceeding 250 mg/dL. Blood was sampled in the morning from the submandibular route and analyzed using a OneTouch Ultra2 handheld glucometer that was validated using a control solution on each measurement day.

Data were combined from two independent studies that each included 60 females and 40 males. Median onset was 18 weeks for females and 30 weeks for males. The Kaplan-Meier curves did not differ significantly between the individual studies (conducted in Standard and Maximum barrier rooms). More information about barrier levels and tolerated

Parameter	Units	Females			Males		
Hematology							
Age	Weeks	8	16	30	8	16	30
White blood cell count (WBC)	10 ³ cells/ μ L	1.9	2.1	1.6	2.8	2.2	3.0
Red blood cell count (RBC)	10 ⁶ cells/ μ L	8.5	7.2	7.2	7.7	7.7	7.3
Hemoglobin	g/dL	13.9	11.9	11.8	12.3	12.0	11.4
Hematocrit	%	42.4	36.1	36.1	38.1	36.7	35.9
Mean cell volume (MCV)	fL	49.9	50.1	50.4	49.3	47.6	49.0
Mean cell hemoglobin (MCH)	pg	16.4	16.5	16.4	15.9	15.6	15.6
Mean cell hemoglobin concentration (MCHC)	g/dL	32.8	33.0	32.6	32.4	32.8	31.8
Platelet count	10 ³ cells/ μ L	947	846	1066	846	1019	1154
Mean platelet volume (MPV)	fL	5.1	5.2	5.7	5.2	5.0	5.2
Percent reticulocytes	%	4.9	6.2	6.2	5.0	5.6	4.8
Reticulocyte hemoglobin	pg	16.5	16.7	17.3	16.2	16.6	17.0
Reticulocyte count	10 ⁹ cells/L	392	423	422	375	396	334
Percent neutrophils	%	25.7	31.9	34.5	24.7	32.7	46.8
Percent Lymphocytes	%	60.9	58.1	53.1	61.7	55.7	42.2
Percent Monocytes	%	5.1	5.6	3.5	5.2	7.8	8.8
Percent Eosinophils	%	6.6	3.8	2.4	7.7	3.5	1.7
Percent Basophils	%	0.8	0.3	0.5	0.6	0.2	0.3
Neutrophil count	10 ³ cells/ μ L	0.47	0.58	0.54	0.70	0.65	1.53
Lymphocyte count	10 ³ cells/ μ L	1.16	1.29	0.84	1.77	1.31	1.15
Monocyte count	10 ³ cells/ μ L	0.09	0.13	0.08	0.19	0.20	0.34
Eosinophil count	10 ³ cells/ μ L	0.11	0.06	0.03	0.16	0.05	0.05
Basophil count	10 ³ cells/ μ L	0.01	0.01	0.01	0.02	0.00	0.01

Biochemistry							
Albumin	g/dL	2.8	2.6	2.6	2.6	2.5	2.5
Total protein	g/dL	4.7	4.6	4.7	4.7	4.7	4.9
Blood urea nitrogen	mg/dL	24	27	24	23	26	25
Calcium	mg/dL	9.1	8.9	8.9	9.2	8.8	9.1
Phosphorous	mg/dL	6.9	7.3	6.6	6.7	6.9	6.3
Cholesterol	mg/dL	72	72	80	89	86	96
HDL cholesterol	mg/dL	57	55	66	77	71	83
Triglycerides	mg/dL	132	174	117	116	138	104
Free fatty acids	mEq/L	0.71	1.01	0.83	0.71	0.78	0.79
Glucose	mg/dL	231	237	286	260	222	232
Alanine transferase	IU/L	20.6	28.2	24.7	23.6	27.1	24.8
Thyroxine/T4	μ g/dL	4.6	4.2	4.0	5.4	4.7	4.2
Sodium	mmol/L	150.1	150.7	150.7	150.9	151.2	156.6
Potassium	mmol/L	4.3	4.2	4.6	4.5	4.6	5.2
Chloride	mmol/L	114.8	113.3	116.8	111.6	112.9	118.6

Flow Cytometry - Spleen							
B Cells (B220+)	% viable cells	44.2	45.6	48.2	46.2	47.1	45.1
T Cells (CD3e+)	% viable cells	40.0	39.0	33.7	39.2	37.2	39.1
Helper T Cells (CD3e+, CD4+)	% viable cells	25.8	25.1	21.4	26.2	24.2	25.0
Regulatory T Cells (CD3e+, CD4+, CD25+)	% viable CD4+ cells	11.6	11.4	14.2	12.6	12.7	13.2
NK T Cells (CD3e+, CD49b+)	% viable cells	0.07	0.21	0.15	0.08	0.18	0.23
Cytotoxic T Cells (CD3e+, CD8+)	% viable cells	12.4	12.4	10.9	11.5	11.7	12.7
NK Cells (CD3-, B220-, CD49b+)	% viable cells	1.03	1.07	0.82	1.19	1.36	1.28
Monocytes (CD11b+, SSC Low, Gr1-)	% viable cells	1.64	1.50	1.85	1.61	2.17	1.89
Neutrophils/Granulocytes	% viable cells	0.13	0.96	1.07	0.19	0.87	1.28

(CD11b+, Gr1+)							
Eosinophils (CD11b+, SSC High)	% viable cells	0.20	0.19	0.19	0.15	0.18	0.14
Dendritic Cells (CD11b+, SSC Low, CD11c+)	% viable cells	0.81	0.62	0.65	0.94	0.76	0.69
Plasmacytoid Dendritic Cells (CD11b+, B220+)	% viable cells	1.42	1.21	0.77	1.45	1.27	0.70

Parameter	Units	Females			Males		
Body Composition							
Age	Weeks	8	16	30	8	16	30
Weight (measured on scale)	g	19.9	23.2	25.8	24.4	28.0	30.9
Bone mineral density	g/cm ²	0.049	0.057	0.061	0.052	0.057	0.060
Bone mineral content	g	0.38	0.51	0.57	0.44	0.50	0.58
Bone area	cm ²	7.8	8.9	9.3	8.5	8.8	9.2
Lean tissue	g	14.7	17.0	17.9	18.8	21.5	22.7
Fat tissue	g	3.8	4.3	5.9	4.4	5.5	6.5
Percent fat tissue	%	20.3	20.1	24.5	18.8	20.4	22.3

Organ Weights							
Brain	G	0.4234	0.4392	-	0.4305	0.4226	-
	% of body weight	2.14	1.78	-	1.76	1.42	-
Heart	G	0.1019	0.1050	-	0.1343	0.1385	-
	% of body weight	0.51	0.42	-	0.55	0.46	-
Liver	G	0.9013	0.9918	-	1.1242	1.1983	-
	% of body weight	4.54	4.00	-	4.58	4.00	-
Left kidney	G	0.1049	0.1188	-	0.1323	0.1486	-
	% of body weight	0.53	0.48	-	0.54	0.50	-
Right kidney	G	0.1082	0.1260	-	0.1307	0.1475	-
	% of body weight	0.55	0.51	-	0.53	0.49	-
Spleen	G	0.4234	0.4392	-	0.0704	0.0686	-
	% of body weight	2.14	1.78	-	0.29	0.23	-

Organ weight data were collected from a previous (2014) study and are included here for reference.

Complete data with range and standard deviations are available from the Mouse Phenome Database (MPD, <http://phenome.jax.org/>)