

Table S1. Cortical bone parameters of tibiae from WT and muscular dystrophy mouse models as assessed by μ CT. Data are presented as mean \pm SD (n>6); * denotes p<0.05 compared to WT mice.

Mouse type	3 weeks at cull	5 weeks at cull	7 weeks at cull
Cortical tissue area, mm² (SD)			
WT	0.62 (0.09)	0.71 (0.08)	0.94 (0.06)
<i>mdx</i>	0.56 (0.05)	0.81 (0.07)	0.92 (0.10)
<i>mdx:utr^{+/-}</i>	0.54 (0.06)	0.81 (0.05)	0.97 (0.08)
<i>mdx:cmah^{-/-}</i>	0.54 (0.07)	0.76 (0.06)	0.96 (0.08)
Cortical bone area, mm² (SD)			
WT	0.29 (0.07)	0.41 (0.07)	0.58 (0.07)
<i>mdx</i>	0.25 (0.03)	0.48 (0.05)	0.60 (0.07)
<i>mdx:utr^{+/-}</i>	0.25 (0.03)	0.49 (0.02)	0.63 (0.05)
<i>mdx:cmah^{-/-}</i>	0.22 (0.03) *	0.46 (0.05)	0.62 (0.07)
Periosteal perimeter, in mm (SD)			
WT	3.01 (0.22)	3.16 (0.21)	3.74 (0.11)
<i>mdx</i>	2.85 (0.13)	3.42 (0.16)	3.69 (0.22)
<i>mdx:utr^{+/-}</i>	2.81 (0.18)	3.45 (0.10)	3.80 (0.16)
<i>mdx:cmah^{-/-}</i>	2.78 (0.20)	3.38 (0.19)	3.78 (0.17)
Endosteal perimeter, in mm (SD)			
WT	2.20 (0.11)	2.09 (0.09)	2.33 (0.09)
<i>mdx</i>	2.19 (0.11)	2.21 (0.09)	2.21 (0.17)
<i>mdx:utr^{+/-}</i>	2.08 (0.09)	2.19 (0.12)	2.23 (0.12)
<i>mdx:cmah^{-/-}</i>	2.15 (0.19)	2.09 (0.09)	2.22 (0.07)
Cortical thickness, in mm (SD)			
WT	0.50 (0.08)	0.52 (0.06)	0.51 (0.08)
<i>mdx</i>	0.46 (0.08)	0.55 (0.02)	0.49 (0.07)
<i>mdx:utr^{+/-}</i>	0.48 (0.07)	0.55 (0.03)	0.43 (0.06)
<i>mdx:cmah^{-/-}</i>	0.54 (0.04)	0.54 (0.02)	0.55 (0.02)
Mean polar moment of inertia, in mm⁴ (SD)			
WT	0.05 (0.02)	0.06 (0.02)	0.12 (0.02)
<i>mdx</i>	0.04 (0.01)	0.09 (0.01)	0.12 (0.03)
<i>mdx:utr^{+/-}</i>	0.03 (0.01)	0.09 (0.01)	0.14 (0.02)
<i>mdx:cmah^{-/-}</i>	0.03 (0.01)	0.08 (0.01)	0.13 (0.03)
Mean eccentricity (SD)			
WT	0.57 (0.10)	0.55 (0.15)	0.52 (0.09)
<i>mdx</i>	0.47 (0.11)	0.60 (0.07)	0.59 (0.11)
<i>mdx:utr^{+/-}</i>	0.61 (0.10)	0.63 (0.03)	0.56 (0.07)
<i>mdx:cmah^{-/-}</i>	0.58 (0.10)	0.53 (0.06)	0.57 (0.11)

Table S2. Trabecular bone parameters of tibiae from WT and muscular dystrophy mouse models as assessed by μ CT. Data are presented as mean \pm SD (n>6); * denotes p<0.05 compared to WT mice.

Mouse type	3 weeks at cull	5 weeks at cull	7 weeks at cull
Trabecular thickness, in mm (SD)			
WT	0.03 (0.003)	0.04 (0.003)	0.04 (0.001)
<i>mdx</i>	0.03 (0.002)	0.04 (0.001)	0.04 (0.002)
<i>mdx:utr^{+/-}</i>	0.03 (0.002)	0.04 (0.002)	0.04 (0.001)
<i>mdx:cmah^{-/-}</i>	0.03 (0.001)	0.04 (0.002)	0.05 (0.003) *
Trabecular separation, in mm (SD)			
WT	0.30 (0.05)	0.24 (0.05)	0.18 (0.02)
<i>mdx</i>	0.37 (0.07)	0.26 (0.04)	0.21 (0.02)
<i>mdx:utr^{+/-}</i>	0.36 (0.03)	0.30 (0.06)	0.20 (0.02)
<i>mdx:cmah^{-/-}</i>	0.29 (0.46)	0.23 (0.02)	0.19 (0.01)
Trabecular number, in 1/mm (SD)			
WT	2.04 (0.15)	2.64 (0.43)	3.10 (0.43)
<i>mdx</i>	2.08 (0.42)	2.17 (0.39)	2.67 (0.44)
<i>mdx:utr^{+/-}</i>	2.06 (0.38)	1.96 (0.29) *	2.62 (0.45)
<i>mdx:cmah^{-/-}</i>	2.66 (0.45) *	2.54 (0.35)	2.96 (0.41)
Structural Model Index (SD)			
WT	2.32 (0.08)	2.19 (0.10)	2.14 (0.10)
<i>mdx</i>	2.20 (0.10)	2.31 (0.11)	2.18 (0.07)
<i>mdx:utr^{+/-}</i>	2.15 (0.10) *	2.31 (0.06)	2.21 (0.14)
<i>mdx:cmah^{-/-}</i>	2.19 (0.09)	2.15 (0.13)	2.07 (0.19)
Connectivity (SD)			
WT	618.9 (121.4)	867.3 (221.4)	1042.6 (195.2)
<i>mdx</i>	516.5 (147.2)	702.6 (136.8)	818.1 (207.2)
<i>mdx:utr^{+/-}</i>	429.6 (108.8)	554.4 (78.1) *	897.5 (177.2)
<i>mdx:cmah^{-/-}</i>	561.8 (72.5)	527.5 (107.8) **	723.3 (85.0)***

Table S3. Tibial length from WT and muscular dystrophy mouse models as assessed by μ CT. Data are presented as mean \pm SD (n>6).

Mouse type	Tibiae length, in mm (SD)		
	3 weeks at cull	5 weeks at cull	7 weeks at cull
WT	13.02 (0.96)	14.93 (0.18)	16.07 (0.17)
<i>mdx</i>	12.07(0.49)	14.82 (0.59)	16.10 (0.35)
<i>mdx:utr^{+/-}</i>	12.42 (0.12)	14.84 (0.84)	16.27(0.30)
<i>mdx:cmah^{-/-}</i>	12.45 (0.39)	14.99 (0.53)	16.60 (0.42)

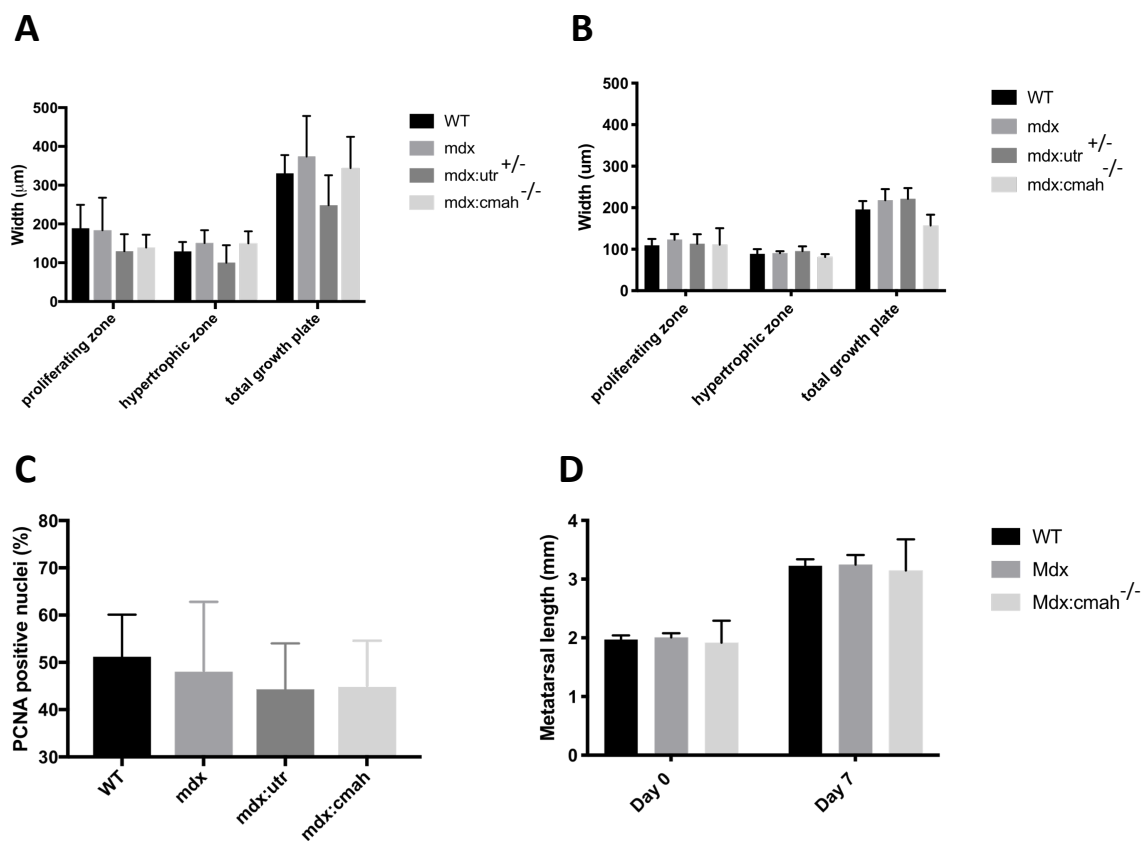


Figure S1. The width of the total growth plate and the individual proliferating and hypertrophic zones were similar at **A**) 3 weeks of age, and **B**) 7 weeks of age. **C**) The percentage of proliferating growth plate chondrocytes was similar in 3-week-old muscular dystrophy and WT mice. Data is presented as mean \pm SD ($n > 6$). **D**) The growth of cultured embryonic (E18) metatarsals from muscular dystrophy and WT mice were similar. Data is presented as mean \pm SD ($n = 12$ metatarsals).