1 **Effects of intrauterine insulin-like growth factor-1 therapy**

2 **for fetal growth restriction on adult metabolism and body**

3 **composition are sex-specific**

4 *Supplementary material*

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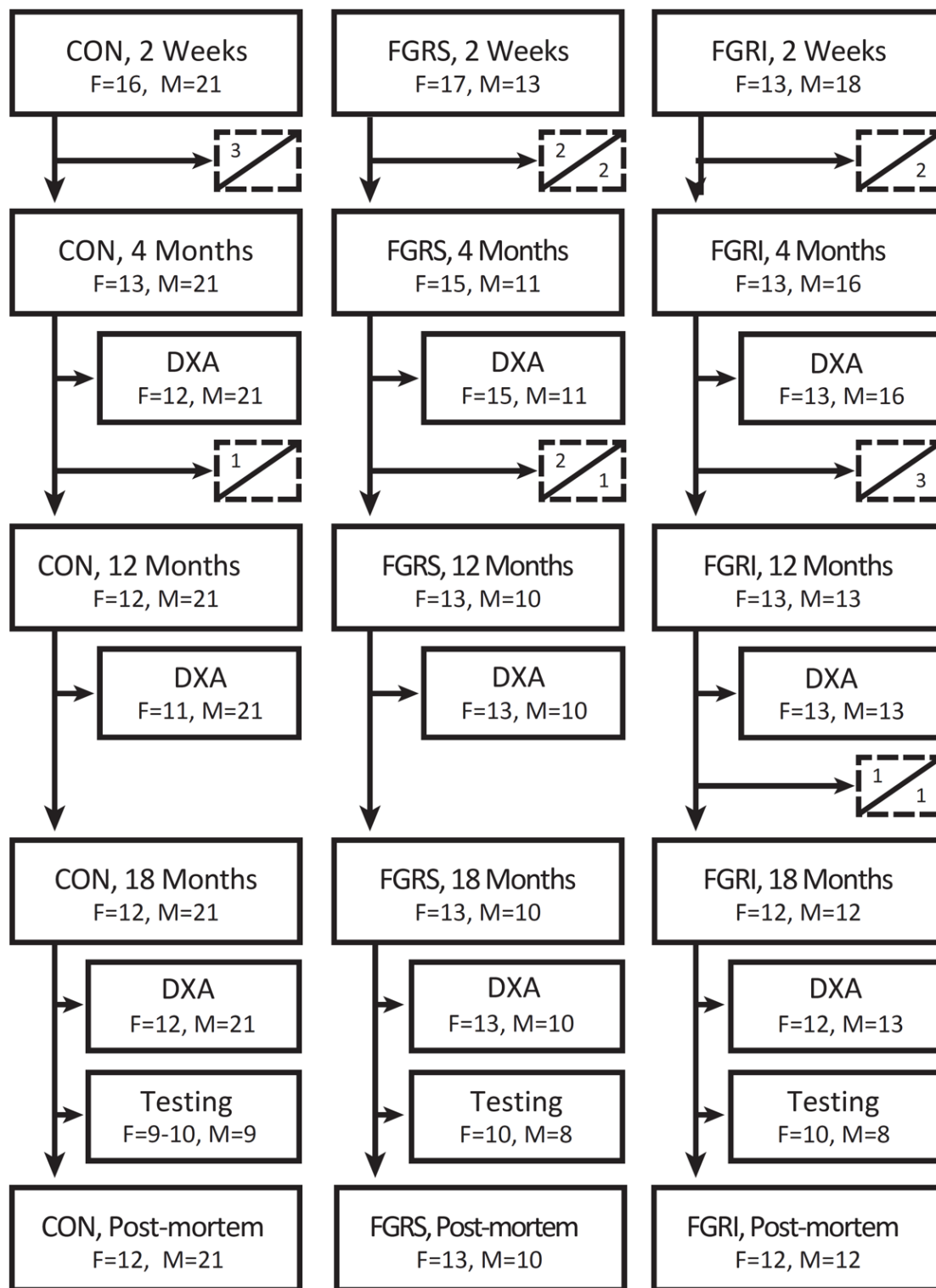17 University of Auckland
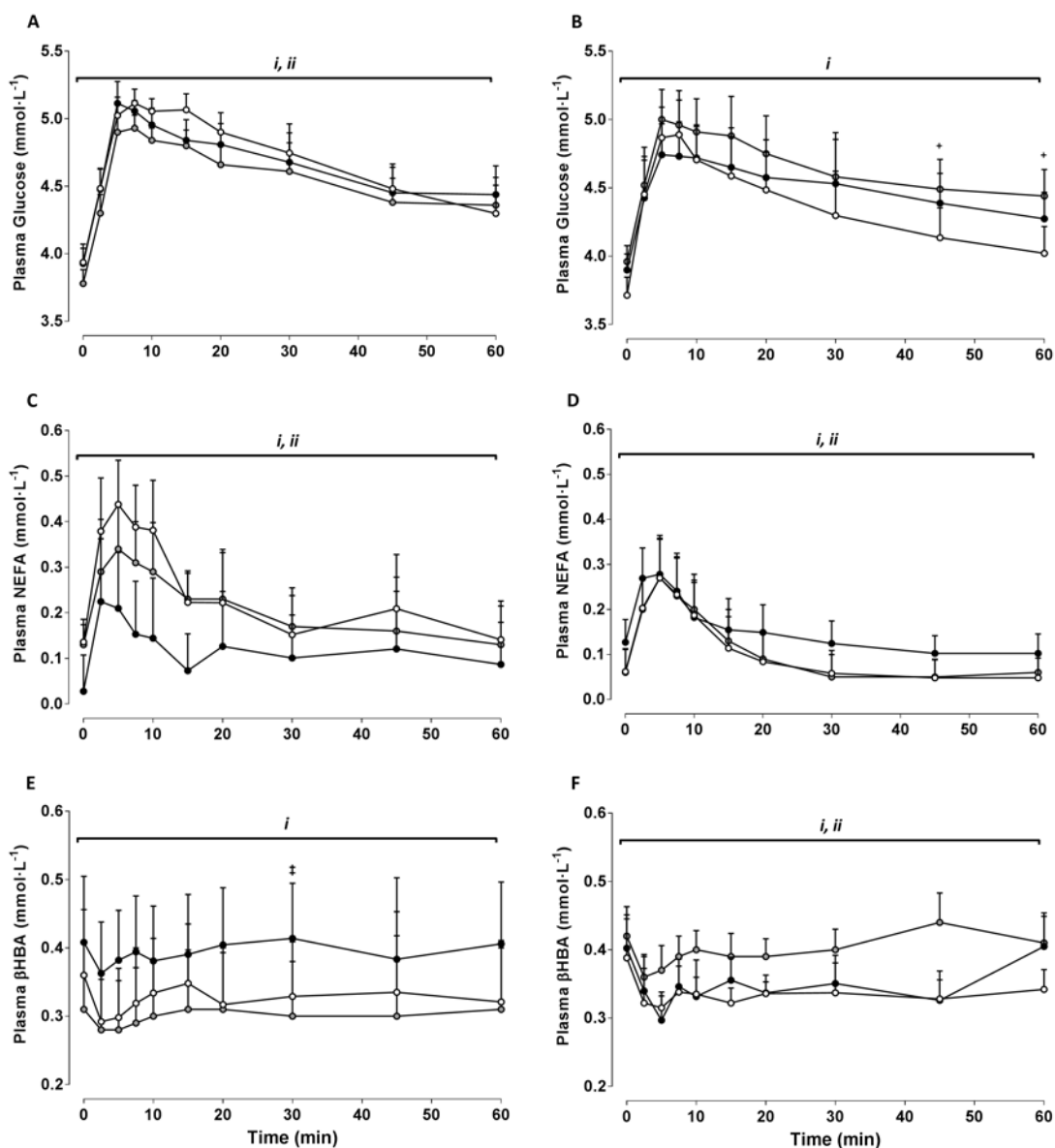18 Private Bag 92019
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Supplementary Figure 1. **Animals utilised during the project according to experimental group and sex.** Dashed boxes report exclusions, deaths and euthanasia. Split boxes reporting postnatal deaths indicate the number of females (top left) and males (bottom right) for each experimental group. Circumstances constituting exclusion from the project and/or euthanasia were due to postnatal illness or paddock deaths.

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Supplementary Figure 2. Plasma metabolite response to intravenous epinephrine injection. Plasma glucose, non-esterified fatty acids (NEFA), and β-hydroxybutyric acid (βHBA) response to an intravenous epinephrine injection in female (A, C, E: CON, white, $n=9$; FGRS, grey, $n=10$; FGRI, black, $n=10$) and male (B, D, F: CON, white, $n=9$; FGRS, grey, $n=9$; FGRI, black, $n=8$) sheep. Data are mean ± SEM. Roman numerals denote the significant difference between experimental groups (RM ANOVA: *i*, effect of time, $p<0.05$; *ii*, time*experimental group interaction $p<0.05$). Symbols denote significant differences amongst experimental groups upon post hoc testing: ‡FGRS vs. FGRI $p<0.05$.

	CON	FGRS	FGR
Postnatal illness	4°	4°, 1•	4°
Paddock death			1+

Supplementary Table 1. **Animal losses during experimental procedures.** Sheep excluded, euthanised, or found dead postnatally due to: °infection-related deaths (coccidiosis, n=2; eosinophilic gastroenteritis and hepatocellular atrophy, n=1; listeriosis, n=2; lymphocytic meningoencephalitis, n=1; pneumonia, n=4; rhododendron poisoning, n=1; umbilical infection, n=1), •non-specific pulmonary edema, n=1; + fight wounds, n=1.

	Female			Male			Significance (treatment effect)	
	CON n=11	FGRS n=13	FGRI n=13	CON n=21	FGRS n=10	FGRI n=13	Female	Male
BMC (g)	745±45	703±42	698±45	826±83	760±87	827±86	ns	ns
BMD (g·cm^{-2})	1.38±0.05	1.33±0.04	1.26±0.13	1.40±0.10	1.37±0.12	1.42±0.11	ns	ns
Chest LM (kg)	12.3±0.6	12.0±0.6	12.1±0.6	15.8±0.6	14.6±0.7	15.1±0.7	ns	ns
Chest FM (kg)	2.5±0.6	2.1±0.6	2.2±0.6	1.2±0.2	0.7±0.2	0.7±0.2	ns	ns
Abdominal LM (kg)	20.3±1.2	19.5±1.2	19.2±1.2	24.8±0.5	22.8±0.8	23.0±0.8	ns	ns
Abdominal FM (kg)	4.1±1.0	3.4±0.9	3.5±1.0	1.9±0.4	1.1±0.4	1.1±0.4	ns	ns
Rump LM (kg)	8.9±0.4	8.6±0.4	8.9±0.4	10.7±0.4	9.8±0.5	10.2±0.4	ns	ns
Rump FM (kg)	1.8±0.4	1.5±0.4	1.6±0.4	0.8±0.1	0.5±0.2	0.5±0.2	ns	ns
Total LM (%)	41.4±2.2	40.2±2.1	40.2±2.2	51.4±1.4	47.3±1.8	48.4±1.6	ns	ns
Total FM (%)	8.4±2.0	7.0±1.9	7.2±2.0	3.9±0.7	2.3±0.8	2.2±0.8	ns	ns
LM:WT (%)	70.0±1.5	70.5±1.3	73.1±1.7	75.8±1.0	76.7±1.3	76.2±1.2	ns	ns
FM:WT (%)	14.1±2.7	12.4±2.6	12.1±2.6	5.7±1.1	3.4±1.2	3.5±1.2	ns	ns
Chest FM:WT (%)	4.2±0.8	3.7±0.8	3.6±0.8	1.7±0.3	1.0±0.4	1.1±0.4	ns	ns
Abdominal FM:WT (%)	6.8±1.3	6.0±1.2	5.8±1.3	2.7±0.6	1.6±0.6	1.7±0.6	ns	ns
Rump FM:WT (%)	3.0±0.6	2.7±0.5	2.6±0.6	1.2±0.2	0.7±0.2	0.7±0.2	ns	ns
Abdominal FM:Total FM (%)	48.8±0.6	48.5±0.5	47.3±0.7	48.2±0.6	48.3±0.6	48.2±0.6	ns	ns

Supplementary Table 2. **Body composition at 12 months of age.** Bone mineral content (BMC), bone mineral density (BMD) compartmental and total lean mass (LM) and fat mass (FM), absolute and, where appropriate, relative to weight (WT). Data are mean ± SEM.

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