Cornell University
College of Agriculture and Life Sciences

Dale E. Bauman
Liberty Hyde Bailey Professor
Department of Animal Science
262 Morrison Hall
Ithaca, NY 14853-4801

Telephone: 607 255-2262
Fax: 607 255-9829
E-mail: deb6@cornell.edu

IGF-I FACT SHEET

I. Human Body IGF-I

A. *Blood concentration*

Juskevich and Guyer. 1990. Science 249:875-883
Boum et al. 1993. J. Clin. Endocrinol. Metab. 75:1610-1616

- Adult = 200 ng/ml, infant = 100 ng/ml
- Range 50-800 ng/ml

B. *Production rate (adult)*

Guler et al. 1989. Acta Endocinolo. 121:753-758

- Total IGF-I 10,000,000 to 13,000,000 ng/day

C. *Gastrointestinal secretions (adult)*

Chaurasia et al. 1994. Peptides 50:113-119
Vander, Sheman & Luciano (ed). 1990. Human Physiology, published by McGraw-Hill Publishing Co.

- Total IGF-I 357,400 ng/day
- Secretion

	Volume	IGF-I Concentration (ng/ml)	
	(ml/day)	range	average
Saliva	1500	2.8 – 9.1	6.3
Gastric juice	2000	11.2 – 73.5	24.5
Intestinal secretions	1500	22.4 – 294.7	172.2
Pancreatic juice	1500	3.5 – 56.7	25.2
Bile	500	4.2 – 7.7	6.3

II. Cow Milk IGF-I and Digestion

NIH Technology Assessment Conference. 1990. NIH Proc.
Phillips et al. 1995. Pediatric Res. 37:586
Houle et al. 1997. Pediatric Res. 42:78
Donovan et al. 1997. J Pediatric Gastroenterology & Nutr. 24:174.

A. *Concentration*

- Average 4 ng/ml at mid lactation
- Range 15-35 in early lactation (first 30 days) and 1-20 ng/ml at mid lactation

B. *Milk IGF-I digestion*

- IGF-I comprises one-tenth of one millionth of total milk proteins and digestion in the gastrointestinal tract is like other dietary proteins.
- Studies providing physiological to pharmacological amounts of dietary IGF-I have demonstrated negligible amounts are absorbed as intact proteins.

III. Human IGF-I Production and Milk Equivalent

- Daily IGF-I from saliva and other digestive secretions is equal to amount of IGF-I in 95 quarts of milk.
- Daily IGF-I from whole body production is equal to amount of IGF-I in over 3000 quarts of milk.
- IGF-I intake in a serving of milk is equal to ~0.03% of the bodies daily production.

Prepared by D.E. Bauman, Cornell University
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