

APPENDIX I: Annotated Examples of Intravenous Insulin Infusion Order Forms and Transition to Subcutaneous Regimens

Example 1 — Markovitz Protocol of IV Insulin

Markovitz LJ, Wiechmann RJ, Harris N, et al. *Endocr Pract.* 2002;8:10–18.

Oldest published protocol of column method but with goal of 120–199 mg/dL.

Table 1
Insulin Infusion Rates for Postoperative Glycemic Management
in Patients Undergoing Heart Surgery*

Column 1†		Column 2‡		Column 3§		Column 4¶		Column 5¶	
BG (mg/dL)	U/h	BG (mg/dL)	U/h	BG (mg/dL)	U/h	BG (mg/dL)	U/h	BG (mg/dL)	U/h
		<100	Off	<100	Off	<100	Off	<100	Off
<120	Off	100-119	0.5	100-119	1.0	100-119	1.0	100-119	1.0
120-149	0.5	120-149	1.0	120-149	1.5	120-149	2.0	120-149	2.0
150-179	1.0	150-179	1.5	150-179	2.0	150-179	3.0	150-179	4.0
180-239	1.5	180-239	2.0	180-209	3.0	180-209	4.0	180-209	8.0
				210-239	4.0	210-239	6.0	210-239	12.0
240-299	2.0	240-299	3.0	240-269	5.0	240-269	8.0	240-269	16.0
				270-299	6.0	270-299	10.0	≥270	20.0
300-359	2.5	300-359	4.0	300-329	7.0	300-329	12.0		
				330-359	8.0	330-359	14.0		
≥360	3.0	≥360	6.0	≥360	12.0	≥360	16.0		

*BG = blood glucose.

†For patients whose estimated rate is ≤1.0 U/h for maintenance.

‡For patients whose estimated rate is 1.1-1.5 U/h for maintenance; most patients start here.

§For patients whose estimated rate is 1.6-2.0 U/h for maintenance and for patients in whom column 2 has failed; some post-heart surgery patients, insulin-requiring patients who use more than 80 U/day, and corticosteroid-treated patients start here.

¶For patients whose estimated rate is >2 U/h for maintenance and in whom column 3 has failed; no patient starts here.

¶For patients whose estimated rate is ≥4 U/h for maintenance and in whom column 4 has failed; candidates include patients receiving high-dose corticosteroids or patients with intra-aortic balloon pumps; no patient starts here.