

SARUBBI-HULL NOMOGRAM FOR AMINOGLYCOSIDES

Drug	Therapeutic Concentration	Maximum Peak Concentration	Maximum Trough Concentration
Amikacin	15-25µg/mL	35 µg/mL	5µg/mL
Gentamicin	4-10µg/mL	10µg/mL	2µg/mL
Kanamycin	15-30µg/mL	30-35µg/mL	5µg/mL
Tobramycin	4-10µg/mL	10µg/mL	2µg/mL

General dosing information: The following dosing chart by Sarubbi-Hull (Ann Intern Med 1978; 89: 612-8) may be used to provide the clinician with an *initial* loading dose and maintenance dose regimen in adult patients. *Further dosage adjustments should be individualized and based on peak/trough serum concentrations*, which should be drawn after the 3rd maintenance dose.

1. Select loading dose (based on IBW) to provide peak serum concentration in the range listed below for the desired aminoglycoside:

Aminoglycoside	Usual Loading Dose	Expected Peak Serum Concentration
Gentamicin; Tobramycin	1.5-2mg/kg	4-10µg/mL
Amikacin; Kanamycin	5-7.5mg/kg	15-30µg/mL

2. Select maintenance dose (as % of loading dose) to maintain peak serum concentrations indicated above according to desired dosing interval and the patient's corrected CrCl:

CrCl (mL/min)	Half-life (hours)	Percentage of Loading Dose Required for Dosage Interval Selected*		
		8 hours	12 hours	24 hours
90	3.1	84%	-	-
80	3.4	80	91%	-
70	3.9	76	88	-
60	4.5	71	84	-
50	5.3	65	79	-
40	6.5	57	72	92%
30	8.4	48	57	81
20	11.9	37	50	75
17	13.6	33	46	70
15	15.1	31	42	67
12	17.9	27	37	61
10	20.4	24	34	56
7	25.9	19	28	47
5	31.5	16	23	41
2	46.8	11	16	30
0	69.3	8	11	21

* This chart is not applicable to neonates and children.

Full-text of the *A to Z Drug Facts* excerpted in this formulary is available to UW Medicine practitioners at www.formchecker.com/FormChecker/Servlet/AuthenticatePage?uid=38o5pbid3