

Bible of Pediatric Urology & Nephrology

A Handbook for Residents & Medical Students Departments of Urology & Pediatrics Loyola University Chicago

Section of Pediatric Urology

David A. Hatch, M.D., Chief
Professor of Urology & Pediatrics
Pager: 12747
e-mail: dhatch@luhs.org

Derek Matoka, M.D.
Pager: 16964
e-mail: dmatoka@luhs.org

Anne Casaccio, R.N.
Pediatric Urology Nurse Specialist
Phone: 216-5111
Pager: 10100
e-mail: acasacc@lumc.edu

Linda Bauman, Senior Secretary
Phone: 216-6266
Fax: 216-6585
e-mail: lbauman@luhs.org

Section of Pediatric Nephrology

Rekha Agrawal, M.D., Chief
Associate Professor of Pediatrics
Pager: 18661
Phone: 327-9149
Fax: 327-9153
e-mail: ragrawa@luhs.org

Andrew J. Aronson, M.D.
Pager: 312/250-2933
Phone: 327-9149
Fax: 327-9153
e-mail: drandrewj@aol.com

Nannette Rodriguez, Secretary
Phone: 327-9149
Fax: 327-9153

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Web Sites

Pediatric Urology Pamphlets & Forms:
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G/U Development:
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WebPro U/S: 147.126.115.160/webpro

LUMC Phone Numbers**3**

2 Labor/Del..... 63961	Dialysis OUT..... 17050	63890	VA 7W..... 2276-2074
2 Nwbrn Nrsry..... 64321	Dictation..... 68700	OR 6..... 68444	VA Dialysis..... 2276-2783
2 PostPartum..... 63995	E R..... 63882	OR 11..... 68820	VA Lab Info..... 2276-2587
4 ICU N..... 64250	ER Peds..... 64109	OR 13..... 68440	VA Lab Info..... 2276-4052
4 ICU S..... 64265	ER Triage..... 64126	OR 16..... 68438	VA OR..... 2276-2049
4 ICU W..... 64269	G/U Clin Sched..... 63807	OR FAX..... 69396	VA Renal..... 2276-2781
4 Peds..... 66606	Hickory Hills..... 708.233.5333	OR PAR..... 63901	VA SICU..... 2276-2586
4 PICU..... 64660	Lab Info..... 63941	PAT/IN..... 63686	VA Surg Svc..... 2276-1700
4 Ped W [IMC]..... 66000	Lagrange Pk..... 708.485.1020	PAT/OP..... 64573	VA Urol..... 2276-1941
5 N..... 63763	LASCO..... 630.916.6665	Pediatrics..... 79120	Wheaton Clinic . 630.665.5995
5 NICU..... 68261	Library..... 65307	Peds Admit Res Pgr..... 14075	XRay FAX..... 68394
5 S..... 63446	Library/Medline..... 69193	Peds Clinic..... 64786	XRay File..... 63921
6N..... 69138	LUPF..... 65626	Peds Sched..... 63282	XRay Reading..... 63914
6S..... 69110	LUMOC Lab..... 64671	Pharmacy..... 63877	XRay Sched..... 66715
7S..... 63986	Med Rec Charts..... 63866	PreOp Holding..... 38585	XRay Sp Proc..... 63920
Admit Res..... 63848	Nucl Med..... 63777	Qual Assurance..... 63666	
Blood Bank..... 63951	OBT Appoint..... 630.953.6600	Risk Mngmnt..... 68137	
Central Sched..... 68563	OBT Fax..... 630.953.6677	Surg Hostess..... 63683	
CMH Westcstr..... 836.4800	OBT G/U..... 630.953.6758	Surg Path..... 72632	
CMH Surgery..... 836.4900	OBT Peds..... 630.953.6650	Surg Sched..... 63999	
CMH Surg Info..... 836.4854	OBT Peds RN..... 630.953.6656	Tissue Typing..... 63258	
Clin Lab..... 63941	OBT RN..... 630.953.6754	U/S..... 64788	
CT Scan..... 63725	OPS FAX..... 69254	Uro Clinic..... 64699	
Cytogenetics..... 68534	OPS OR..... 64506	Urodynamics..... 63658	
Cytology..... 63948	OPS Recept..... 64573	Utilization Rev..... 66537	
Darien..... 630.985.4989	OPS Sched..... 63817	VA 6E..... 2276-1470	
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Weekly Schedule [Dr. Hatch]**4**

	Mon	Tue	Wed	Thursday	Fri
a.m.	8:30 Clinic [ELM]]	7:00 [1,3,5] Surgery [ASC] [2,4] Surgery [LASCO]	7:00 or 8:00 Pre-op Conf [1st & 3rd] Surgery [InPt]	8:30 [1,3] Clinic [HH] [2nd] Clinic [OBT]	7:00 Urol Grnd Rnds [G/U conf room] [1st & 3rd] ASC [2nd] Ped Uri Jml Club
p.m.	1:30 [1,3,5] Clinic [Dar]	1:00 [1,3,5] Surg [ASC] [2,4] Clinic [OBT]	[1st,3rd] Surgery [InPt] 1:30 [2nd] Clinic [OBT] 4 th : Spina Bifida Clinic [OPC 4 th fl NeuroSurg]	1:00 [1,3] Clinic [HH]	[1st & 3rd] ASC

ASC=Loyola Ambulatory Surgery Center, CMH=Children's Memorial Westchester [Enterprise Dr. off 22nd], Dar=Darien [SE Corner 75th & Lemont Rd.], ELM=Elmhurst Center for Primary Care [300 N York Rd., Elmhurst 60126], HH=Hickory Hills [9608 Roberts Rd.], LASCO=Loyola Amb. Surg Center Oakbrook Terrace [1S 240 Summit Ave., Oakbrook Tce.], OBT=Oakbrook Terrace [1S 260 Summit Ave., Oakbrook Tce.], OPC=Loyola Outpatient Center

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Weekly Schedule [Dr. Hatch]**4**

	Mon	Tue	Wed	Thursday	Fri
a.m.	8:30 Clinic [ELM]]	7:00 [1,3,5] Surgery [ASC] [2,4] Surgery [LASCO]	7:00 or 8:00 Pre-op Conf [1st & 3rd] Surgery [InPt]	8:30 [1,3] Clinic [HH] [2nd] Clinic [OBT]	7:00 Urol Grnd Rnds [G/U conf room] [1st & 3rd] ASC [2nd] Ped Uri Jml Club
p.m.	1:30 [1,3,5] Clinic [Dar]	1:00 [1,3,5] Surg [ASC] [2,4] Clinic [OBT]	[1st,3rd] Surgery [InPt] 1:30 [2nd] Clinic [OBT] 4 th : Spina Bifida Clinic [OPC 4 th fl NeuroSurg]	1:00 [1,3] Clinic [HH]	[1st & 3rd] ASC

ASC=Loyola Ambulatory Surgery Center, CMH=Children's Memorial Westchester [Enterprise Dr. off 22nd], Dar=Darien [SE Corner 75th & Lemont Rd.], ELM=Elmhurst Center for Primary Care [300 N York Rd., Elmhurst 60126], HH=Hickory Hills [9608 Roberts Rd.], LASCO=Loyola Amb. Surg Center Oakbrook Terrace [1S 240 Summit Ave., Oakbrook Tce.], OBT=Oakbrook Terrace [1S 260 Summit Ave., Oakbrook Tce.], OPC=Loyola Outpatient Center

Weekly Schedule [Dr. Matoka]

5

	Mon	Tue	Wed	Thursday	Fri
a.m.		[1st & 3rd] [2nd & 4th] ASC	7:00 - 9:00 PreOp 1st & 3rd InPt Sug [2nd & 4th] Clinic HG	[2nd & 4th] LASCO	7:00 Urol Gnd Rnds [Uro Conf Rm] [2nd] Ped Uro Jml Club
[1st					
p.m.	[1st & 3rd] Clinic [OBTMC]	[1st & 3rd] Wheaton [2nd & 4th] ASC	[1st & 3rd] InPt Surg [2nd & 4th] Clinic HG [4th Odd months] Spina Bifida Clinic LOC 4-Neurosurg		Clinic [LOC]

HG=Homer Glen [15750 Marian], HH=Hickory Hills [9608 Roberts Rd.], LASCO=Loyola Amb. Surg Center Oakbrook Terrace [1S 240 Summit Ave., Oakbrook Tce.],

Weekly Schedule [Dr. Matoka]

5

	Mon	Tue	Wed	Thursday	Fri
a.m.		[1st & 3rd] [2nd & 4th] ASC	7:00 - 9:00 PreOp 1st & 3rd InPt Sug [2nd & 4th] Clinic HG	[2nd & 4th] LASCO	7:00 Urol Gnd Rnds [Uro Conf Rm] [2nd] Ped Uro Jml Club
[1st					
p.m.	[1st & 3rd] Clinic [OBTMC]	[1st & 3rd] Wheaton [2nd & 4th] ASC	[1st & 3rd] InPt Surg [2nd & 4th] Clinic HG [4th Odd months] Spina Bifida Clinic LOC 4-Neurosurg		Clinic [LOC]

HG=Homer Glen [15750 Marian], HH=Hickory Hills [9608 Roberts Rd.], LASCO=Loyola Amb. Surg Center Oakbrook Terrace [1S 240 Summit Ave., Oakbrook Tce.],

Weekly Schedule [Dr. Matoka]

5

	Mon	Tue	Wed	Thursday	Fri
a.m.		[1st & 3rd] [2nd & 4th] ASC	7:00 - 9:00 PreOp 1st & 3rd InPt Sug [2nd & 4th] Clinic HG	[2nd & 4th] LASCO	7:00 Urol Gnd Rnds [Uro Conf Rm] [2nd] Ped Uro Jml Club
[1st					
p.m.	[1st & 3rd] Clinic [OBTMC]	[1st & 3rd] Wheaton [2nd & 4th] ASC	[1st & 3rd] InPt Surg [2nd & 4th] Clinic HG [4th Odd months] Spina Bifida Clinic LOC 4-Neurosurg		Clinic [LOC]

HG=Homer Glen [15750 Marian], HH=Hickory Hills [9608 Roberts Rd.], LASCO=Loyola Amb. Surg Center Oakbrook Terrace [1S 240 Summit Ave., Oakbrook Tce.],

Weekly Schedule [Dr. Matoka]

5

	Mon	Tue	Wed	Thursday	Fri
a.m.		[1st & 3rd] [2nd & 4th] ASC	7:00 - 9:00 PreOp 1st & 3rd InPt Sug [2nd & 4th] Clinic HG	[2nd & 4th] LASCO	7:00 Urol Gnd Rnds [Uro Conf Rm] [2nd] Ped Uro Jml Club
[1st					
p.m.	[1st & 3rd] Clinic [OBTMC]	[1st & 3rd] Wheaton [2nd & 4th] ASC	[1st & 3rd] InPt Surg [2nd & 4th] Clinic HG [4th Odd months] Spina Bifida Clinic LOC 4-Neurosurg		Clinic [LOC]

HG=Homer Glen [15750 Marian], HH=Hickory Hills [9608 Roberts Rd.], LASCO=Loyola Amb. Surg Center Oakbrook Terrace [1S 240 Summit Ave., Oakbrook Tce.],

Weekly Schedule [Dr. Agrawal] 6

Mon	Tue	Wed	Thursday	Fri
a.m.			Clinic [OPC]	8:00-12:00 Clinic [OPC]

p.m. 1:00 Clinic [OBT]	1:00 - 7:00 Clinic [OBT]	1:00 Clinic [OPC]		1:00 [1,3,5] Ped Transplant Cnf
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OBT = Oakbrook Terrace [1S 260 Summit Avenue], OPC = Outpatient Center [Maywood]

Weekly Schedule [Dr. Agrawal] 6

Mon	Tue	Wed	Thursday	Fri
a.m.			Clinic [OPC]	8:00-12:00 Clinic [OPC]

p.m. 1:00 Clinic [OBT]	1:00 - 7:00 Clinic [OBT]	1:00 Clinic [OPC]		1:00 [1,3,5] Ped Transplant Cnf
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OBT = Oakbrook Terrace [1S 260 Summit Avenue], OPC = Outpatient Center [Maywood]

Weekly Schedule [Dr. Agrawal] 6

Mon	Tue	Wed	Thursday	Fri
a.m.			Clinic [OPC]	8:00-12:00 Clinic [OPC]

p.m. 1:00 Clinic [OBT]	1:00 - 7:00 Clinic [OBT]	1:00 Clinic [OPC]		1:00 [1,3,5] Ped Transplant Cnf
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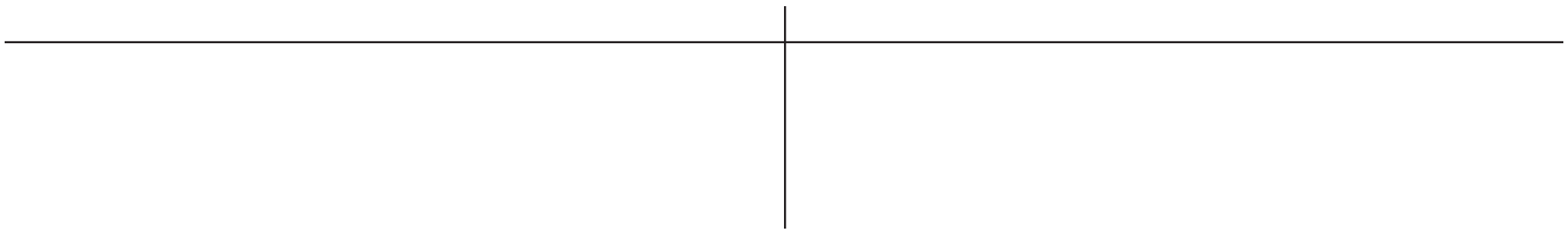
OBT = Oakbrook Terrace [1S 260 Summit Avenue], OPC = Outpatient Center [Maywood]

Weekly Schedule [Dr. Agrawal] 6

Mon	Tue	Wed	Thursday	Fri
a.m.			Clinic [OPC]	8:00-12:00 Clinic [OPC]

p.m. 1:00 Clinic [OBT]	1:00 - 7:00 Clinic [OBT]	1:00 Clinic [OPC]		1:00 [1,3,5] Ped Transplant Cnf
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OBT = Oakbrook Terrace [1S 260 Summit Avenue], OPC = Outpatient Center [Maywood]



Oral Drugs**8**

Drug	Dose (per dose)	Tabs/Concentration	CRF Dose	Contraind.
Acetamin/Codeine	0.4 cc/Kg q 4h	12.5 mg Codeine/5 cc		
Amlodipine	0.15 - 0.3 mg/kg/BID			
Amoxicillin < 3 mo	15 mg/kg BID	125mg/5 ml, 250mg/5ml		
Amoxicillin > 3 mo	22.5 mg/Kg BID	125, 250, 500 mg		
Ampicillin	12.5 mg/Kg TID	250, 500 mg		
Augmentin	13 mg/Kg TID			
Benadryl	1 mg/Kg QID	25, 50 mg		Neonates
Carbencillin	25 mg/Kg QID	382 mg	Reduce	
Cefaclor	7-12 mg/Kg TID	250, 500 mg	No Change	
Cefadroxil (Duricef)	15 mg/Kg BID	125/5, 250/5		
Cefixime (Suprax)	4 mg/Kg b.i.d.			
Cephalexin	15 mg/Kg QID	250,500, 1000	Reduce to BID	
Choloral Hydrate	25-75 mg/Kg		Contraind.	CRF
Ciprofloxacin	10-15 mg/Kg BID (Max. 1.5 gm)			
Clonidine	.05-1.2 mg/Kg BID	0.1, 0.2 mg		
Cod/Acetamin.	0.4 cc/Kg q 4h	12.5 mg/5 cc		
Ditropan	2.5-5 mg BID, TID	5 mg		
Ditropan Elix	2.5-5 mg BID, TID	5 mg/tsp		
Ditropan XL		5, 10, 15 mg		
Enalapril	.1 mg/Kg BID		Reduce by 50% for GFR< 10 ml/min	
Erythromycin	10 mg/Kg TID	200, 400 mg		<2 mo
Fluconazole	10 mg/kg (load)			
Fluconazole	3-6 mg/kg/d			
Hydralazine	0.1-1 mg/Kg QID	10,25,50 mg		

Oral Drugs**8**

Drug	Dose (per dose)	Tabs/Concentration	CRF Dose	Contraind.
Acetamin/Codeine	0.4 cc/Kg q 4h	12.5 mg Codeine/5 cc		
Amlodipine	0.15 - 0.3 mg/kg/BID			
Amoxicillin < 3 mo	15 mg/kg BID	125mg/5 ml, 250mg/5ml		
Amoxicillin > 3 mo	22.5 mg/Kg BID	125, 250, 500 mg		
Ampicillin	12.5 mg/Kg TID	250, 500 mg		
Augmentin	13 mg/Kg TID			
Benadryl	1 mg/Kg QID	25, 50 mg		Neonates
Carbencillin	25 mg/Kg QID	382 mg	Reduce	
Cefaclor	7-12 mg/Kg TID	250, 500 mg	No Change	
Cefadroxil (Duricef)	15 mg/Kg BID	125/5, 250/5		
Cefixime (Suprax)	4 mg/Kg b.i.d.			
Cephalexin	15 mg/Kg QID	250,500, 1000	Reduce to BID	
Choloral Hydrate	25-75 mg/Kg		Contraind.	CRF
Ciprofloxacin	10-15 mg/Kg BID (Max. 1.5 gm)			
Clonidine	.05-1.2 mg/Kg BID	0.1, 0.2 mg		
Cod/Acetamin.	0.4 cc/Kg q 4h	12.5 mg/5 cc		
Ditropan	2.5-5 mg BID, TID	5 mg		
Ditropan Elix	2.5-5 mg BID, TID	5 mg/tsp		
Ditropan XL		5, 10, 15 mg		
Enalapril	.1 mg/Kg BID		Reduce by 50% for GFR< 10 ml/min	
Erythromycin	10 mg/Kg TID	200, 400 mg		<2 mo
Fluconazole	10 mg/kg (load)			
Fluconazole	3-6 mg/kg/d			
Hydralazine	0.1-1 mg/Kg QID	10,25,50 mg		

Oral Drugs**8**

Drug	Dose (per dose)	Tabs/Concentration	CRF Dose	Contraind.
Acetamin/Codeine	0.4 cc/Kg q 4h	12.5 mg Codeine/5 cc		
Amlodipine	0.15 - 0.3 mg/kg/BID			
Amoxicillin < 3 mo	15 mg/kg BID	125mg/5 ml, 250mg/5ml		
Amoxicillin > 3 mo	22.5 mg/Kg BID	125, 250, 500 mg		
Ampicillin	12.5 mg/Kg TID	250, 500 mg		
Augmentin	13 mg/Kg TID			
Benadryl	1 mg/Kg QID	25, 50 mg		Neonates
Carbencillin	25 mg/Kg QID	382 mg	Reduce	
Cefaclor	7-12 mg/Kg TID	250, 500 mg	No Change	
Cefadroxil (Duricef)	15 mg/Kg BID	125/5, 250/5		
Cefixime (Suprax)	4 mg/Kg b.i.d.			
Cephalexin	15 mg/Kg QID	250,500, 1000	Reduce to BID	
Choloral Hydrate	25-75 mg/Kg		Contraind.	CRF
Ciprofloxacin	10-15 mg/Kg BID (Max. 1.5 gm)			
Clonidine	.05-1.2 mg/Kg BID	0.1, 0.2 mg		
Cod/Acetamin.	0.4 cc/Kg q 4h	12.5 mg/5 cc		
Ditropan	2.5-5 mg BID, TID	5 mg		
Ditropan Elix	2.5-5 mg BID, TID	5 mg/tsp		
Ditropan XL		5, 10, 15 mg		
Enalapril	.1 mg/Kg BID		Reduce by 50% for GFR< 10 ml/min	
Erythromycin	10 mg/Kg TID	200, 400 mg		<2 mo
Fluconazole	10 mg/kg (load)			
Fluconazole	3-6 mg/kg/d			
Hydralazine	0.1-1 mg/Kg QID	10,25,50 mg		

Oral Drugs**8**

Drug	Dose (per dose)	Tabs/Concentration	CRF Dose	Contraind.
Acetamin/Codeine	0.4 cc/Kg q 4h	12.5 mg Codeine/5 cc		
Amlodipine	0.15 - 0.3 mg/kg/BID			
Amoxicillin < 3 mo	15 mg/kg BID	125mg/5 ml, 250mg/5ml		
Amoxicillin > 3 mo	22.5 mg/Kg BID	125, 250, 500 mg		
Ampicillin	12.5 mg/Kg TID	250, 500 mg		
Augmentin	13 mg/Kg TID			
Benadryl	1 mg/Kg QID	25, 50 mg		Neonates
Carbencillin	25 mg/Kg QID	382 mg	Reduce	
Cefaclor	7-12 mg/Kg TID	250, 500 mg	No Change	
Cefadroxil (Duricef)	15 mg/Kg BID	125/5, 250/5		
Cefixime (Suprax)	4 mg/Kg b.i.d.			
Cephalexin	15 mg/Kg QID	250,500, 1000	Reduce to BID	
Choloral Hydrate	25-75 mg/Kg		Contraind.	CRF
Ciprofloxacin	10-15 mg/Kg BID (Max. 1.5 gm)			
Clonidine	.05-1.2 mg/Kg BID	0.1, 0.2 mg		
Cod/Acetamin.	0.4 cc/Kg q 4h	12.5 mg/5 cc		
Ditropan	2.5-5 mg BID, TID	5 mg		
Ditropan Elix	2.5-5 mg BID, TID	5 mg/tsp		
Ditropan XL		5, 10, 15 mg		
Enalapril	.1 mg/Kg BID		Reduce by 50% for GFR< 10 ml/min	
Erythromycin	10 mg/Kg TID	200, 400 mg		<2 mo
Fluconazole	10 mg/kg (load)			
Fluconazole	3-6 mg/kg/d			
Hydralazine	0.1-1 mg/Kg QID	10,25,50 mg		

Ibuprofen	4-10 mg/kg q 6-8 hours	100 mg/5 ml			9
Imipramine	10-25 mg HS	10, 25, 50, 75 mg			
Isradipine	0.05 - 0.15 mg/kg QID		[Max 0.8 mg]		
Lactulose	1 - 2 ml/Kg/d				
Levsin Elix	1/4-1 tsp QID	0.125/5 cc			
Levsin SL	1 q 4-6 h	0.125 mg			
Levsin Time Caps	1 q 12 h	0.375			
Mandelamine	1 QID	500 mg	Contraind.	CRF	
Metoprolol	1mg/Kg/BID	50, 100 mg			
Midazolam (Versed)	.5 mg/Kg				
Minoxidil	0.2 mg/Kg/d (<30mg)	2.5,10 mg			
Miralax	0.5 - 1.5 gm/Kg/d				
Nifedipine	.25 - .5 mg/Kg q 4-6h (<10 mg)				
Nitrofurantoin	1.5 mg/Kg QID	50, 100 mg	Contraind.	<1 mo (hem anemia)	
Nitrof. Prophyl.	1.5 mg/Kg/d				
Probanthine	15 mg TID	7.5, 15 mg			
Propranolol	0.125 mg/Kg q6-12	10, 40 mg			
Pyridium	100 mg t.i.d.	100,200 mg			
Sulfisoxazole	40 mg/Kg QID	500, 1000 mg		<2 mo (hyperbilirubinemia)	
Suprax (Cefixime)	4 mg/Kg b.i.d.				
Tolterodine (Detrol)		1, 2 mg			
Tolterodine (Detrol LA)		4 mg			
Trim/Sulfa	0.5 mL/Kg BID	1 tab/20 Kg	CrCl<30: 1/2 dose	<2 mo (hyperbilirubinemia)	
T/S Prophyl.	0.25 mL/Kg/d				
Tylenol	10-15 mg/Kg q 4h	80, 325, 500 mg	No change		

Ibuprofen	4-10 mg/kg q 6-8 hours	100 mg/5 ml			9
Imipramine	10-25 mg HS	10, 25, 50, 75 mg			
Isradipine	0.05 - 0.15 mg/kg QID		[Max 0.8 mg]		
Lactulose	1 - 2 ml/Kg/d				
Levsin Elix	1/4-1 tsp QID	0.125/5 cc			
Levsin SL	1 q 4-6 h	0.125 mg			
Levsin Time Caps	1 q 12 h	0.375			
Mandelamine	1 QID	500 mg	Contraind.	CRF	
Metoprolol	1mg/Kg/BID	50, 100 mg			
Midazolam (Versed)	.5 mg/Kg				
Minoxidil	0.2 mg/Kg/d (<30mg)	2.5,10 mg			
Miralax	0.5 - 1.5 gm/Kg/d				
Nifedipine	.25 - .5 mg/Kg q 4-6h (<10 mg)				
Nitrofurantoin	1.5 mg/Kg QID	50, 100 mg	Contraind.	<1 mo (hem anemia)	
Nitrof. Prophyl.	1.5 mg/Kg/d				
Probanthine	15 mg TID	7.5, 15 mg			
Propranolol	0.125 mg/Kg q6-12	10, 40 mg			
Pyridium	100 mg t.i.d.	100,200 mg			
Sulfisoxazole	40 mg/Kg QID	500, 1000 mg		<2 mo (hyperbilirubinemia)	
Suprax (Cefixime)	4 mg/Kg b.i.d.				
Tolterodine (Detrol)		1, 2 mg			
Tolterodine (Detrol LA)		4 mg			
Trim/Sulfa	0.5 mL/Kg BID	1 tab/20 Kg	CrCl<30: 1/2 dose	<2 mo (hyperbilirubinemia)	
T/S Prophyl.	0.25 mL/Kg/d				
Tylenol	10-15 mg/Kg q 4h	80, 325, 500 mg	No change		

Ibuprofen	4-10 mg/kg q 6-8 hours	100 mg/5 ml			9
Imipramine	10-25 mg HS	10, 25, 50, 75 mg			
Isradipine	0.05 - 0.15 mg/kg QID		[Max 0.8 mg]		
Lactulose	1 - 2 ml/Kg/d				
Levsin Elix	1/4-1 tsp QID	0.125/5 cc			
Levsin SL	1 q 4-6 h	0.125 mg			
Levsin Time Caps	1 q 12 h	0.375			
Mandelamine	1 QID	500 mg	Contraind.	CRF	
Metoprolol	1mg/Kg/BID	50, 100 mg			
Midazolam (Versed)	.5 mg/Kg				
Minoxidil	0.2 mg/Kg/d (<30mg)	2.5,10 mg			
Miralax	0.5 - 1.5 gm/Kg/d				
Nifedipine	.25 - .5 mg/Kg q 4-6h (<10 mg)				
Nitrofurantoin	1.5 mg/Kg QID	50, 100 mg	Contraind.	<1 mo (hem anemia)	
Nitrof. Prophyl.	1.5 mg/Kg/d				
Probanthine	15 mg TID	7.5, 15 mg			
Propranolol	0.125 mg/Kg q6-12	10, 40 mg			
Pyridium	100 mg t.i.d.	100,200 mg			
Sulfisoxazole	40 mg/Kg QID	500, 1000 mg		<2 mo (hyperbilirubinemia)	
Suprax (Cefixime)	4 mg/Kg b.i.d.				
Tolterodine (Detrol)		1, 2 mg			
Tolterodine (Detrol LA)		4 mg			
Trim/Sulfa	0.5 mL/Kg BID	1 tab/20 Kg	CrCl<30: 1/2 dose	<2 mo (hyperbilirubinemia)	
T/S Prophyl.	0.25 mL/Kg/d				
Tylenol	10-15 mg/Kg q 4h	80, 325, 500 mg	No change		

Ibuprofen	4-10 mg/kg q 6-8 hours	100 mg/5 ml			9
Imipramine	10-25 mg HS	10, 25, 50, 75 mg			
Isradipine	0.05 - 0.15 mg/kg QID		[Max 0.8 mg]		
Lactulose	1 - 2 ml/Kg/d				
Levsin Elix	1/4-1 tsp QID	0.125/5 cc			
Levsin SL	1 q 4-6 h	0.125 mg			
Levsin Time Caps	1 q 12 h	0.375			
Mandelamine	1 QID	500 mg	Contraind.	CRF	
Metoprolol	1mg/Kg/BID	50, 100 mg			
Midazolam (Versed)	.5 mg/Kg				
Minoxidil	0.2 mg/Kg/d (<30mg)	2.5,10 mg			
Miralax	0.5 - 1.5 gm/Kg/d				
Nifedipine	.25 - .5 mg/Kg q 4-6h (<10 mg)				
Nitrofurantoin	1.5 mg/Kg QID	50, 100 mg	Contraind.	<1 mo (hem anemia)	
Nitrof. Prophyl.	1.5 mg/Kg/d				
Probanthine	15 mg TID	7.5, 15 mg			
Propranolol	0.125 mg/Kg q6-12	10, 40 mg			
Pyridium	100 mg t.i.d.	100,200 mg			
Sulfisoxazole	40 mg/Kg QID	500, 1000 mg		<2 mo (hyperbilirubinemia)	
Suprax (Cefixime)	4 mg/Kg b.i.d.				
Tolterodine (Detrol)		1, 2 mg			
Tolterodine (Detrol LA)		4 mg			
Trim/Sulfa	0.5 mL/Kg BID	1 tab/20 Kg	CrCl<30: 1/2 dose	<2 mo (hyperbilirubinemia)	
T/S Prophyl.	0.25 mL/Kg/d				
Tylenol	10-15 mg/Kg q 4h	80, 325, 500 mg	No change		

IV Drugs **10**

Drug	Use	Dose	CRF Dose
Amicar		3 gm/M2 x 1h	
Amikacin	Prem	7.5 mg/Kg q18h	
Amikacin	Child, Adult	5 mg/Kg q 8h	
Amikacin	Term	7.5 mg;Kg q 12h	
Aminophylline	Load	6 mg/Kg over 20 min	
Aminophylline	Maintenance	0.2-0.9 mg/Kg/h	
Ampicillin	> 7d	30-60 mg/Kg q8h	
Ampicillin	<7d	25-50 mg/Kg q12h	
Atropine	CPR	0.1-0.3 mg/Kg x 2-3	
Benadryl		1-2 mg/Kg (<300mg)	
Cefazolin		12.5-25 mg/Kg q6h	
Ceftazidime	Neo	30 mg/Kg q12h	
Ceftazidime	Child	30-50 mg/Kg q8h	
Ceftriaxone		50-75 mg/Kg/d (or 25-35 mg/BID)	
Clindamycin		10 mg/Kg TID-QID	
Dantrolene	MHypertherm	1 mg/Kg up to 10 mg	
Diazoxide		3-5 mg/Kg bolus	
Gentamicin	Child	2 mg/Kg q8h	
Gentamicin	Prem	2.5 mg/Kg q18h	
Gentamicin	Term	2.5 mg/Kg q8h	
Hydralazine		0.15mg/Kg	

IV Drugs **10**

Drug	Use	Dose	CRF Dose
Amicar		3 gm/M2 x 1h	
Amikacin	Prem	7.5 mg/Kg q18h	
Amikacin	Child, Adult	5 mg/Kg q 8h	
Amikacin	Term	7.5 mg;Kg q 12h	
Aminophylline	Load	6 mg/Kg over 20 min	
Aminophylline	Maintenance	0.2-0.9 mg/Kg/h	
Ampicillin	> 7d	30-60 mg/Kg q8h	
Ampicillin	<7d	25-50 mg/Kg q12h	
Atropine	CPR	0.1-0.3 mg/Kg x 2-3	
Benadryl		1-2 mg/Kg (<300mg)	
Cefazolin		12.5-25 mg/Kg q6h	
Ceftazidime	Neo	30 mg/Kg q12h	
Ceftazidime	Child	30-50 mg/Kg q8h	
Ceftriaxone		50-75 mg/Kg/d (or 25-35 mg/BID)	
Clindamycin		10 mg/Kg TID-QID	
Dantrolene	MHypertherm	1 mg/Kg up to 10 mg	
Diazoxide		3-5 mg/Kg bolus	
Gentamicin	Child	2 mg/Kg q8h	
Gentamicin	Prem	2.5 mg/Kg q18h	
Gentamicin	Term	2.5 mg/Kg q8h	
Hydralazine		0.15mg/Kg	

IV Drugs **10**

Drug	Use	Dose	CRF Dose
Amicar		3 gm/M2 x 1h	
Amikacin	Prem	7.5 mg/Kg q18h	
Amikacin	Child, Adult	5 mg/Kg q 8h	
Amikacin	Term	7.5 mg;Kg q 12h	
Aminophylline	Load	6 mg/Kg over 20 min	
Aminophylline	Maintenance	0.2-0.9 mg/Kg/h	
Ampicillin	> 7d	30-60 mg/Kg q8h	
Ampicillin	<7d	25-50 mg/Kg q12h	
Atropine	CPR	0.1-0.3 mg/Kg x 2-3	
Benadryl		1-2 mg/Kg (<300mg)	
Cefazolin		12.5-25 mg/Kg q6h	
Ceftazidime	Neo	30 mg/Kg q12h	
Ceftazidime	Child	30-50 mg/Kg q8h	
Ceftriaxone		50-75 mg/Kg/d (or 25-35 mg/BID)	
Clindamycin		10 mg/Kg TID-QID	
Dantrolene	MHypertherm	1 mg/Kg up to 10 mg	
Diazoxide		3-5 mg/Kg bolus	
Gentamicin	Child	2 mg/Kg q8h	
Gentamicin	Prem	2.5 mg/Kg q18h	
Gentamicin	Term	2.5 mg/Kg q8h	
Hydralazine		0.15mg/Kg	

IV Drugs **10**

Drug	Use	Dose	CRF Dose
Amicar		3 gm/M2 x 1h	
Amikacin	Prem	7.5 mg/Kg q18h	
Amikacin	Child, Adult	5 mg/Kg q 8h	
Amikacin	Term	7.5 mg;Kg q 12h	
Aminophylline	Load	6 mg/Kg over 20 min	
Aminophylline	Maintenance	0.2-0.9 mg/Kg/h	
Ampicillin	> 7d	30-60 mg/Kg q8h	
Ampicillin	<7d	25-50 mg/Kg q12h	
Atropine	CPR	0.1-0.3 mg/Kg x 2-3	
Benadryl		1-2 mg/Kg (<300mg)	
Cefazolin		12.5-25 mg/Kg q6h	
Ceftazidime	Neo	30 mg/Kg q12h	
Ceftazidime	Child	30-50 mg/Kg q8h	
Ceftriaxone		50-75 mg/Kg/d (or 25-35 mg/BID)	
Clindamycin		10 mg/Kg TID-QID	
Dantrolene	MHypertherm	1 mg/Kg up to 10 mg	
Diazoxide		3-5 mg/Kg bolus	
Gentamicin	Child	2 mg/Kg q8h	
Gentamicin	Prem	2.5 mg/Kg q18h	
Gentamicin	Term	2.5 mg/Kg q8h	
Hydralazine		0.15mg/Kg	

Labetalol		0.25mg/Kg (d+4mg/Kg)		11
Metronidazole	Maintenance	7.5 mg/Kg q6h		
Metronidazole	Load	15 mg/Kg		
Midazolam				
Narcan		5-10 mcg/Kg		
Nipride		0.5-8ug/Kg/Min		
Romazicon	Versed reversal	0.1 mg i.v. (repeat in 1-2 min; d+5 doses)		
Tiacarcillin		50 mg/Kg q8h		
Tobramycin		2 mg/Kg q8h		
Vancomycin		10 mg/Kg q 6h	Dose once per week	
Zofran		0.15 mg/Kg		

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Tobramycin		2 mg/Kg q8h		
Vancomycin		10 mg/Kg q 6h	Dose once per week	
Zofran		0.15 mg/Kg		

Bladder Irrigation [Urology 43:531, 1994]

Gentamycin 480 mg. in 1 L pour NS
Instill 30 ml after cath, b.i.d.

Note: Solution can be kept at room temperature for up to 3 months.

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Treatment of Hemorrhagic Cystitis **12**

Drug	Dose	Contraindications
AMICAR	5 gm po, iv; 1 - 1.25 gm/h (<30 gm)	Upper tract bleeding, VUR
Silver Nitrate	0.5 - 1.0 % soln (H2O) instilled for 10 - 20 min	
Alum	1% soln (H2O) continuous irrigation	
Phenol	Under anesthesia, using S/P tube: 30 cc 100% Phenol w/ 30 cc glycerine x 1 min, suction then instill 60 cc 95% ETOH x 1 min, suction, NS irrigation	
Formalin	1% (0.37% formaldehyde) or 10% (3.7% formaldehyde). Under anesthesia instill 50cc for 4 - 10 min. in reverse Trendelenberg position	VUReflux

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SBE Prophylaxis For G/U or G/I Surgery

[Circulation 116:1736, 2007]

Patients at risk for endocarditis
Prosthetic valve
Previous endocarditis
Cong. heart defect
Unrepaired cyanotic, palliative shunts
Repaired <6 months
Repaired with residual defects
Heart transplant recip. w/ valvulopathy

Standard Regimen
60 min prior to surgery
Amoxicillin, 50 mg/Kg p.o.
or Ampicillin, 50 mg/kg i.m.

PCN Allergic Patients:
Clindamycin, 20 mg/kg p.o.
or
Azithromycin, 15 mg/kg p.o.

Medical Therapy of Priapism 13

Acute:
10 mg Neo-syneprine in 30 ml NS (333 ug/ml)
1 ml intracorporal injection q 5-8 min x 3-4

Chronic:
Via 19 g needle
Irrigate w/ NS
Irrigate w/ Neo-syneprine (10 mg/ 1 L NS)

Sickle Cell Disease:
1. Hydration, O²
2. Exchange transfusions
3. Irrigation (as above)

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Pediatric Renal Transplant Immunosuppression**Pre Op****Cadaver**

Pred.: (solumedrol) 10 mg/kg
Daclizumab (zenapax), 1 mg/kg

Living Donor

Day -1: Pred. 1 mg/kg (min. 20 mg/day)
MMF 1200 mg/M²
Neoral 5mg/kg q 9 p.m., prior to trnsplnt
Day of Transplant: Solumedrol, 10 mg/kg
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Post Op**Pred.**

Day 2.....2 mg/kg q 6 h
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5.....1 mg/kg q 8 h
6.....1 mg/kg q 12 h

Week 2.....1 mg/kg/day
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12-13.....0.35 mg/kg/day
14-15.....0.30 mg/kg/day
16-17.....0.25 mg/kg/day
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20-39.....0.15 mg/kg/day

MMF: 1,200 mg/M²/day divided b.i.d

Neoral: 12-14 mg/kg divided q 12 hours

Target levels: [month]
1.....325-375
2-6.....275-325
6 - 12.....200-250
> 12.....175-225

Zenapax: 1 mg/kg at trnsplnt, post-op weeks 2,4,6,8

Prophylaxis

Gancyclovir 35 mg/kg, t.i.d.
D+/R- 6 mo.
R+ 3 mo.
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Trim/sulfa 1 y
Nystatin 3 mo.

Monitoring:

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Rejection:

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Creatinine Clearance Formulas

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24 Hour Urine Collection

Schwartz Formula [Ped Clin NA 34:571, 1987]

$$\text{Clearance}_{[C]} = \frac{K \times \text{Length}_{(m)}}{\text{Creatinine}_{[P]}}$$

- K = .45 term
- .55 2-12 & Female adolescents
- .70 Males > 12 y

Cockcroft and Gault Equation [Adults]

[Nephron 16:31,1976]

$$\text{Clearance}_{[C]} = \frac{(140 - \text{Age}_{(y)}) \times \text{Weight}_{(kg)}}{2 \times \text{Creatinine}_{[P]}}$$

(15% less in Females)

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Urine Excretion Formulas**Urine Protein** [NEJM 309:1543, 1983]

$$\text{Protein}_{[\text{urine}]} : \text{Creatinine}_{[\text{urine}]} = X \pm 2.5\text{SD}$$

Neonates	.02 - .30	2-12 y	.01 - .15
1 y	.02 - .32	Adult	.01 - .05

Hypercalciuria [Sem Neph 16:393, 1996]

$$\text{Cr}_{[\text{urine}]}^{++} : \text{Creatinine}_{[\text{urine}]}$$

Normals	
0-6 mo.	< 0.8
7 - 12 mo.	< 0.6
> 2 years	< 0.2

Uricosuria

$$\text{Uric Acid}_{[\text{urine}]} : \text{Creatinine}_{[\text{urine}]}$$

Normal: < 1.0

Stone Risk Analysis (School Age Children)

16

[Sem Nephrology 16 (5):389-397,1996]

Ca++	< 4 mg/Kg/day
Oxylate	< 55 mg/1.73 m ² /day
Citrate	> 150 mg/gm Cr
Uric acid	< 815 mg/1.73 m ² /day
Cystine	< 60 mg/day
Mg+	< 88 mg/1.73 m ² /day
Volume	> 20ml/Kg/day

Normal Urinary Oxalate:Cr in Children

[Sem Nephrology 16 (5):394,1996]

Millimoles Ox=mg/88 | Millimoles Cr=mg/112,000

0-6 m	< 360
7-24 m	< 174
2-4.9 y	< 101
5 y	< 82
9 y	< 69
12 y	< 50

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Citrate	> 150 mg/gm Cr
Uric acid	< 815 mg/1.73 m ² /day
Cystine	< 60 mg/day
Mg+	< 88 mg/1.73 m ² /day
Volume	> 20ml/Kg/day

Normal Urinary Oxalate:Cr in Children

[Sem Nephrology 16 (5):394,1996]

Millimoles Ox=mg/88 | Millimoles Cr=mg/112,000

0-6 m	< 360
7-24 m	< 174
2-4.9 y	< 101
5 y	< 82
9 y	< 69
12 y	< 50

Urine Excretion Formulas**Urine Protein** [NEJM 309:1543, 1983]

$$\text{Protein}_{[\text{urine}]} : \text{Creatinine}_{[\text{urine}]} = X \pm 2.5\text{SD}$$

Neonates	.02 - .30	2-12 y	.01 - .15
1 y	.02 - .32	Adult	.01 - .05

Hypercalciuria [Sem Neph 16:393, 1996]

$$\text{Cr}_{[\text{urine}]}^{++} : \text{Creatinine}_{[\text{urine}]}$$

Normals	
0-6 mo.	< 0.8
7 - 12 mo.	< 0.6
> 2 years	< 0.2

Uricosuria

$$\text{Uric Acid}_{[\text{urine}]} : \text{Creatinine}_{[\text{urine}]}$$

Normal: < 1.0

Stone Risk Analysis (School Age Children)

16

[Sem Nephrology 16 (5):389-397,1996]

Ca++	< 4 mg/Kg/day
Oxylate	< 55 mg/1.73 m ² /day
Citrate	> 150 mg/gm Cr
Uric acid	< 815 mg/1.73 m ² /day
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Mg+	< 88 mg/1.73 m ² /day
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Fractional Excretion of Na+

[Jama 236:579, 1976]

$$FENa^+ = \frac{N \uparrow_{[urine]} \times C \uparrow_{[plasma]}}{N \uparrow_{[plasma]} \times C \uparrow_{[urine]}}$$

Prerenal Acute Renal Failure < 1%

Bladder Capacity

Method 1 [J Urol 158:2261, 1997]

$$< 2 \text{ years: } 2 \times Age(y)$$

$$> 2 \text{ years: } \frac{Age(y)}{2} + 6$$

Method 2 [Koff, J Urol 130:1138, 1983]

Age (Oz.) + 2 Oz.

Body Surface Area (BSA)

17

$$BSA = \sqrt{\frac{H \text{ (m)} \times W \text{ (kg)}}{3600}}$$

Correction Factor for Standard BSA

$$BSA_{(Correction)} = \frac{BSA_{(Calculated)}}{1.3}$$

Maintenance Fluids in Children

D5 .2NS

Wt. (Kg) Vol. (ml)/hour

1-10 Kg 4 ml/Kg/hour

10-20 Kg 40 ml/h + 4 ml/Kg >10/h

>20 Kg 60 ml/h + 1 ml/Kg > 20/h

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Maintenance Fluids in Children

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Wt. (Kg) Vol. (ml)/hour

1-10 Kg 4 ml/Kg/hour

10-20 Kg 40 ml/h + 4 ml/Kg >10/h

>20 Kg 60 ml/h + 1 ml/Kg > 20/h

ICCS Terminology of Lower Urinary Tract Function [*J Urol* 176:314, July, 2006]

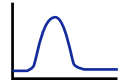
18

Symptoms
 Storage
 Increased: e" 8 voids / day
 Decreased: d" 3 voids / day
 Incontinence
 Continuous
 Intermittent
 Urgency
 Nocturia

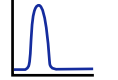
UroFlow
 Flow rate (Normal: Max [ml/sec]² > voided vol.)

Flow curve shape

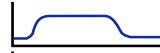
Bell (normal)



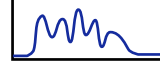
Tower



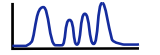
Plateau (obstructed)



Staccato



Interrupted



Post-void residual (PVR): 5 – 20 ml

Voiding symptoms
 Hesitancy
 Straining
 Weak stream
 Intermittency

Expected bladder capacity (EBC)
 [1 + Age in years in oz.]
 Small < 65% EBC
 Large > 150% EBC

ICCS Terminology of Lower Urinary Tract Function [*J Urol* 176:314, July, 2006]

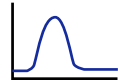
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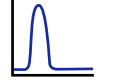
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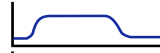
Bell (normal)



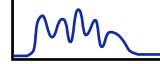
Tower



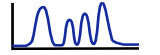
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ICCS Terminology of Lower Urinary Tract Function [*J Urol* 176:314, July, 2006]

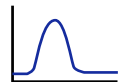
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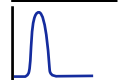
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 Flow rate (Normal: Max [ml/sec]² > voided vol.)

Flow curve shape

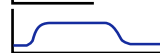
Bell (normal)



Tower



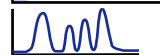
Plateau (obstructed)



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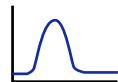
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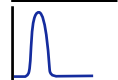
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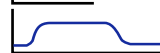
Bell (normal)



Tower



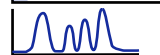
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 Large > 150% EBC

Normal Hemoglobin [*J Ped* 94:26 1979]

Age	Avg.	- 2SD
26-30w	13.4	11
28w	14.5	
32w	15	
Term	16.5	13.5
1-3d	18.5	14.5
2w	16.6	13.4
1m	13.9	10.7
2m	11.2	9.4
6m	12.6	11.1
6-24m	12	10.5
2-6y	12.5	11.5
6-12y	13.5	11.5
12-18y	14.5	13
Adult M	15.5	13.5
Adult F	14	12

Stretched Penile Length In Normal Males 20[*Congenital Malformations of the Urinary Tract*, Praeger, 1983, p 527]

Age	Mean ± SD	Mean - 2.5 SD
(30 w)	2.5 ± 0.4	1.5
(34 w)	3.0 ± 0.4	2.0
Term	3.5 ± 0.4	2.5
0-5 m	3.9 ± 0.8	1.9
6-12 m	4.3 ± 0.8	2.3
1-2 y	4.7 ± 0.8	2.6
2-3 y	5.1 ± 0.9	2.9
3-4 y	5.5 ± 0.9	3.3
4-5 y	5.7 ± 0.9	3.5
5-6 y	6.0 ± 0.9	3.8
6-7 y	6.1 ± 0.9	3.9
7-8 y	6.2 ± 1.0	3.7
9-10 y	6.3 ± 1.0	3.8
10-11 y	6.3 ± 1.0	3.7
Adult	13.3 ± 1.6	9.3

NI Urethral Calibre = 8 Fr + age (y)

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6-24m	12	10.5
2-6y	12.5	11.5
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7-8 y	6.2 ± 1.0	3.7
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2-3 y	5.1 ± 0.9	2.9
3-4 y	5.5 ± 0.9	3.3
4-5 y	5.7 ± 0.9	3.5
5-6 y	6.0 ± 0.9	3.8
6-7 y	6.1 ± 0.9	3.9
7-8 y	6.2 ± 1.0	3.7
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10-11 y	6.3 ± 1.0	3.7
Adult	13.3 ± 1.6	9.3

NI Urethral Calibre = 8 Fr + age (y)

Testis Size in Boys (mean ± 2SD)

[Kinderarztl. Prax. 58 (5): 243, 1990]

Age	Length (mm)	Volume (ml)
5	22.8 - 26.4	0.9 - 2.0
6	21.1 - 25.6	0.7 - 1.4
7	21.0 - 26.4	0.6 - 1.5
8	23.0 - 23.0	1.1 - 1.1
9	21.1 - 25.4	0.6 - 1.4
10	21.3 - 26.2	0.7 - 1.7
11	22.2 - 24.8	0.9 - 1.9
12	22.9 - 33.4	0.9 - 4.0
13	23.0 - 37.1	0.6 - 4.7
14	28.3 - 48.4	0.6 - 14.0
15	37.6 - 51.3	5.4 - 20.2
16	38.5 - 54.0	4.8 - 21.9
17	43.2 - 53.5	10.9 - 22.1
18	44.6 - 52.9	12.7 - 24.7

Normal Renal Lengths [cm] by Ultrasound 21

[Rosenbaum, AJR 142:467, 1984]

Age	+2.5 SD	Mean	-2.5 SD
Term	5.3	4.5	3.7
2mo	6.9	5.3	3.6
6mo	7.8	6.2	4.5
10mo	7.8	6.2	4.7
1.5	8.0	6.7	5.3
2.5	8.7	7.4	6.0
3.5	9.0	7.4	5.8
4.5	9.1	7.9	6.6
5.5	9.4	8.1	6.7
6.5	9.6	7.8	6.0
7.5	9.6	8.3	7.1
8.5	11.1	8.9	6.7
9.5	11.5	9.2	7.0
10.5	11.2	9.2	7.1
11.5	11.2	9.6	8.0
12.5	12.6	10.4	8.2
13.5	11.7	9.8	7.9
14.5	11.6	10.1	8.5
15.5	12.8	10.9	9.0
16.5	12.2	10.0	7.9
17.5	11.3	10.5	9.8
18.5	11.1	10.8	10.5

Avg renal length = 4 cm + .6 cm/ x age (y)

Testis Size in Boys (mean ± 2SD)

[Kinderarztl. Prax. 58 (5): 243, 1990]

Age	Length (mm)	Volume (ml)
5	22.8 - 26.4	0.9 - 2.0
6	21.1 - 25.6	0.7 - 1.4
7	21.0 - 26.4	0.6 - 1.5
8	23.0 - 23.0	1.1 - 1.1
9	21.1 - 25.4	0.6 - 1.4
10	21.3 - 26.2	0.7 - 1.7
11	22.2 - 24.8	0.9 - 1.9
12	22.9 - 33.4	0.9 - 4.0
13	23.0 - 37.1	0.6 - 4.7
14	28.3 - 48.4	0.6 - 14.0
15	37.6 - 51.3	5.4 - 20.2
16	38.5 - 54.0	4.8 - 21.9
17	43.2 - 53.5	10.9 - 22.1
18	44.6 - 52.9	12.7 - 24.7

Normal Renal Lengths [cm] by Ultrasound 21

[Rosenbaum, AJR 142:467, 1984]

Age	+2.5 SD	Mean	-2.5 SD
Term	5.3	4.5	3.7
2mo	6.9	5.3	3.6
6mo	7.8	6.2	4.5
10mo	7.8	6.2	4.7
1.5	8.0	6.7	5.3
2.5	8.7	7.4	6.0
3.5	9.0	7.4	5.8
4.5	9.1	7.9	6.6
5.5	9.4	8.1	6.7
6.5	9.6	7.8	6.0
7.5	9.6	8.3	7.1
8.5	11.1	8.9	6.7
9.5	11.5	9.2	7.0
10.5	11.2	9.2	7.1
11.5	11.2	9.6	8.0
12.5	12.6	10.4	8.2
13.5	11.7	9.8	7.9
14.5	11.6	10.1	8.5
15.5	12.8	10.9	9.0
16.5	12.2	10.0	7.9
17.5	11.3	10.5	9.8
18.5	11.1	10.8	10.5

Avg renal length = 4 cm + .6 cm/ x age (y)

Testis Size in Boys (mean ± 2SD)

[Kinderarztl. Prax. 58 (5): 243, 1990]

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5	22.8 - 26.4	0.9 - 2.0
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8	23.0 - 23.0	1.1 - 1.1
9	21.1 - 25.4	0.6 - 1.4
10	21.3 - 26.2	0.7 - 1.7
11	22.2 - 24.8	0.9 - 1.9
12	22.9 - 33.4	0.9 - 4.0
13	23.0 - 37.1	0.6 - 4.7
14	28.3 - 48.4	0.6 - 14.0
15	37.6 - 51.3	5.4 - 20.2
16	38.5 - 54.0	4.8 - 21.9
17	43.2 - 53.5	10.9 - 22.1
18	44.6 - 52.9	12.7 - 24.7

Normal Renal Lengths [cm] by Ultrasound 21

[Rosenbaum, AJR 142:467, 1984]

Age	+2.5 SD	Mean	-2.5 SD
Term	5.3	4.5	3.7
2mo	6.9	5.3	3.6
6mo	7.8	6.2	4.5
10mo	7.8	6.2	4.7
1.5	8.0	6.7	5.3
2.5	8.7	7.4	6.0
3.5	9.0	7.4	5.8
4.5	9.1	7.9	6.6
5.5	9.4	8.1	6.7
6.5	9.6	7.8	6.0
7.5	9.6	8.3	7.1
8.5	11.1	8.9	6.7
9.5	11.5	9.2	7.0
10.5	11.2	9.2	7.1
11.5	11.2	9.6	8.0
12.5	12.6	10.4	8.2
13.5	11.7	9.8	7.9
14.5	11.6	10.1	8.5
15.5	12.8	10.9	9.0
16.5	12.2	10.0	7.9
17.5	11.3	10.5	9.8
18.5	11.1	10.8	10.5

Avg renal length = 4 cm + .6 cm/ x age (y)

Testis Size in Boys (mean ± 2SD)

[Kinderarztl. Prax. 58 (5): 243, 1990]

Age	Length (mm)	Volume (ml)
5	22.8 - 26.4	0.9 - 2.0
6	21.1 - 25.6	0.7 - 1.4
7	21.0 - 26.4	0.6 - 1.5
8	23.0 - 23.0	1.1 - 1.1
9	21.1 - 25.4	0.6 - 1.4
10	21.3 - 26.2	0.7 - 1.7
11	22.2 - 24.8	0.9 - 1.9
12	22.9 - 33.4	0.9 - 4.0
13	23.0 - 37.1	0.6 - 4.7
14	28.3 - 48.4	0.6 - 14.0
15	37.6 - 51.3	5.4 - 20.2
16	38.5 - 54.0	4.8 - 21.9
17	43.2 - 53.5	10.9 - 22.1
18	44.6 - 52.9	12.7 - 24.7

Normal Renal Lengths [cm] by Ultrasound 21

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6mo	7.8	6.2	4.5
10mo	7.8	6.2	4.7
1.5	8.0	6.7	5.3
2.5	8.7	7.4	6.0
3.5	9.0	7.4	5.8
4.5	9.1	7.9	6.6
5.5	9.4	8.1	6.7
6.5	9.6	7.8	6.0
7.5	9.6	8.3	7.1
8.5	11.1	8.9	6.7
9.5	11.5	9.2	7.0
10.5	11.2	9.2	7.1
11.5	11.2	9.6	8.0
12.5	12.6	10.4	8.2
13.5	11.7	9.8	7.9
14.5	11.6	10.1	8.5
15.5	12.8	10.9	9.0
16.5	12.2	10.0	7.9
17.5	11.3	10.5	9.8
18.5	11.1	10.8	10.5

Avg renal length = 4 cm + .6 cm/ x age (y)

Charges for Radiologic Studies

22

Test	
Charge	
CT Scan.....	\$986
Intravenous pyelogram (IVP).....	\$462
Lasix renogram (DTPA).....	\$576
Lasix renogram (MAG-3).....	
Nuclear cystogram.....	
Ultrasound (renal & bladder)	\$317
Voiding cystogrethrogram (VCUG).....	\$318

Charges for Radiologic Studies

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Charges for Radiologic Studies

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Nuclear cystogram.....	
Ultrasound (renal & bladder)	\$317
Voiding cystogrethrogram (VCUG).....	\$318

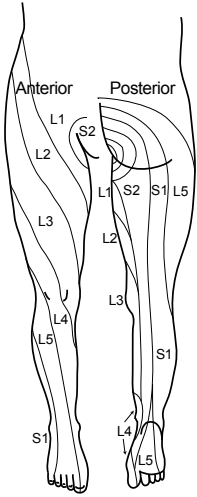
Charges for Radiologic Studies

22

Test	
Charge	
CT Scan.....	\$986
Intravenous pyelogram (IVP).....	\$462
Lasix renogram (DTPA).....	\$576
Lasix renogram (MAG-3).....	
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Ultrasound (renal & bladder)	\$317
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Dermatomes

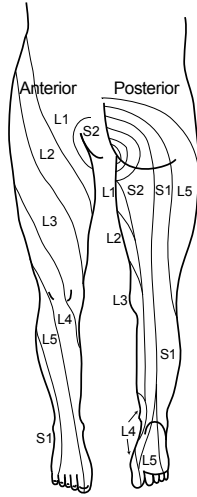
23



L1	L2	L3	L4	L5	S1	S2	S3
Hip Flexion							
Hip Adduction							
Knee Extension							
			Hip Abduction				
			Hip Int. Rotation				
			Hip Ext. Rotation				
			Ankle Dorsiflexion				
			Foot Inversion				
			Hip Extension				
			Knee Flexion				
			Foot Eversion				
			Toe Flexion				
			Toe Extension				
			Plantar Flexion				

Dermatomes

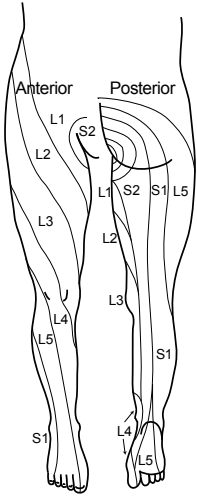
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L1	L2	L3	L4	L5	S1	S2	S3
Hip Flexion							
Hip Adduction							
Knee Extension							
			Hip Abduction				
			Hip Int. Rotation				
			Hip Ext. Rotation				
			Ankle Dorsiflexion				
			Foot Inversion				
			Hip Extension				
			Knee Flexion				
			Foot Eversion				
			Toe Flexion				
			Toe Extension				
			Plantar Flexion				

Dermatomes

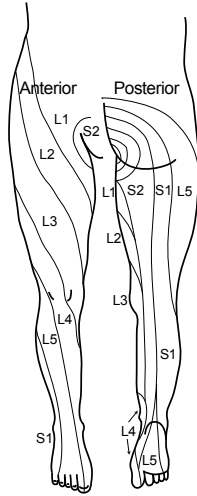
23



L1	L2	L3	L4	L5	S1	S2	S3
Hip Flexion							
Hip Adduction							
Knee Extension							
			Hip Abduction				
			Hip Int. Rotation				
			Hip Ext. Rotation				
			Ankle Dorsiflexion				
			Foot Inversion				
			Hip Extension				
			Knee Flexion				
			Foot Eversion				
			Toe Flexion				
			Toe Extension				
			Plantar Flexion				

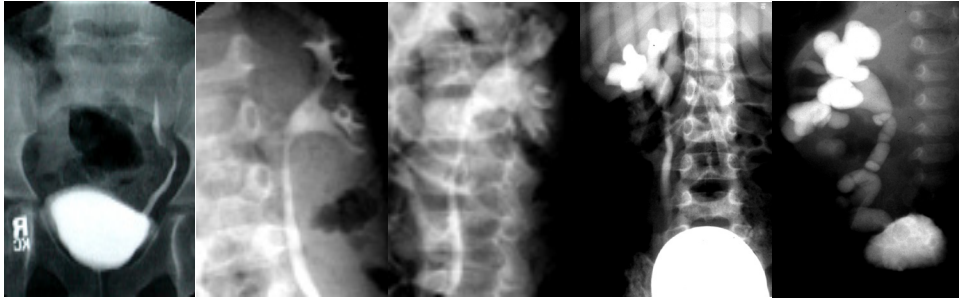
Dermatomes

23

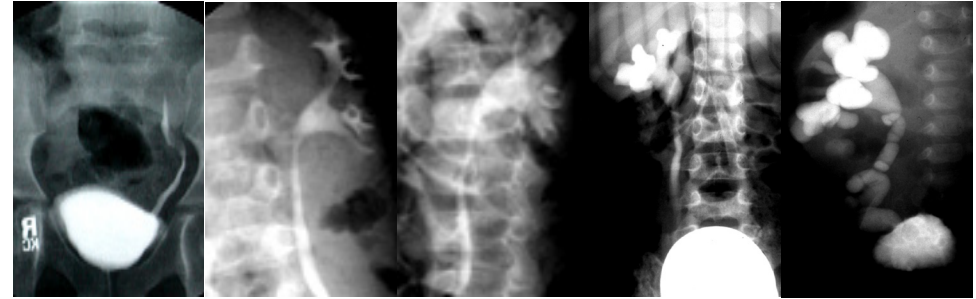


L1	L2	L3	L4	L5	S1	S2	S3
Hip Flexion							
Hip Adduction							
Knee Extension							
			Hip Abduction				
			Hip Int. Rotation				
			Hip Ext. Rotation				
			Ankle Dorsiflexion				
			Foot Inversion				
			Hip Extension				
			Knee Flexion				
			Foot Eversion				
			Toe Flexion				
			Toe Extension				
			Plantar Flexion				

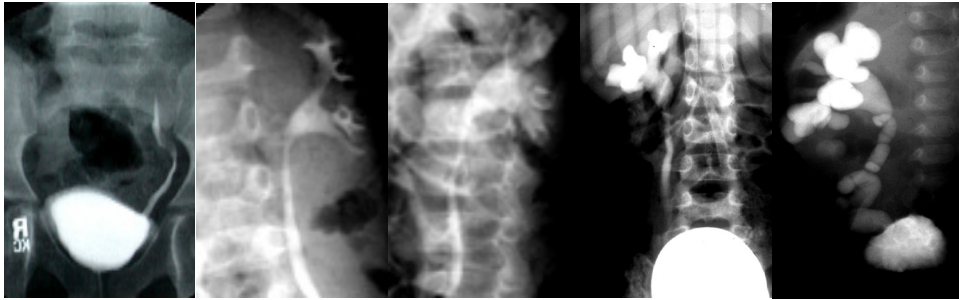
- I. Contrast in ureter, but not in renal pelvis.
- II. Contrast in renal pelvis. Delicate calyces.
- III. Contrast in dilated renal pelvis. Calyces blunted, but
- IV. Contrast in dilated renal pelvis. Calyces concave. (Note: Reflux seen in upper pole of duplex system)
- V. Dilated, tortuous ureter. Dilated pelvis and calyces.



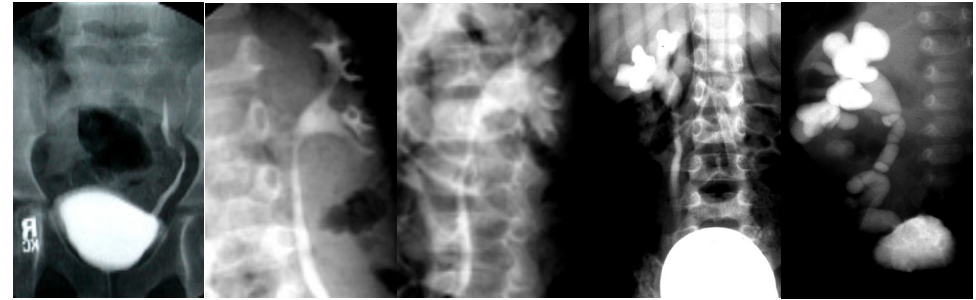
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- V. Dilated, tortuous ureter. Dilated pelvis and calyces.



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- V. Dilated, tortuous ureter. Dilated pelvis and calyces.



Blood Pressure for Girls Age 1-17 years [Pediatrics 79:1, 1987] **26**

Percentiles	Systolic BP	Diastolic BP														
		5%	10%	25%	50%	75%	90%	95%	5%	10%	25%	50%	75%	90%	95%	
Age (y)	Height BP															
1	90 th	97	98	99	100	102	103	104	/	53	53	53	54	55	56	56
	95 th	101	102	103	104	105	107	107	/	57	57	57	58	59	60	60
2	90 th	99	99	100	102	103	104	105	/	57	57	58	58	59	60	61
	95 th	102	103	104	105	107	108	109	/	61	61	62	62	63	64	65
3	90 th	100	100	102	103	104	105	106	/	61	61	61	62	63	63	64
	95 th	104	104	105	107	108	109	110	/	65	65	65	66	67	67	68
4	90 th	101	102	103	104	106	107	108	/	63	63	64	65	65	66	67
	95 th	105	106	107	108	109	111	111	/	67	67	68	69	69	70	71
5	90 th	103	103	104	106	107	108	109	/	65	66	66	67	68	68	69
	95 th	107	107	108	110	111	112	113	/	69	70	70	71	72	72	73
6	90 th	104	105	106	107	109	110	111	/	67	67	68	69	69	70	71
	95 th	108	109	110	111	112	114	114	/	71	71	72	73	73	74	75
7	90 th	106	107	108	109	110	112	112	/	69	69	69	70	71	72	72
	95 th	110	110	112	113	114	115	116	/	73	73	73	74	75	76	76
8	90 th	108	109	110	111	112	113	114	/	70	70	71	71	72	73	74
	95 th	112	112	113	115	116	117	118	/	74	74	75	75	76	77	78

Blood Pressure for Girls Age 1-17 years [Pediatrics 79:1, 1987] **26**

Percentiles	Systolic BP	Diastolic BP														
		5%	10%	25%	50%	75%	90%	95%	5%	10%	25%	50%	75%	90%	95%	
Age (y)	Height BP															
1	90 th	97	98	99	100	102	103	104	/	53	53	53	54	55	56	56
	95 th	101	102	103	104	105	107	107	/	57	57	57	58	59	60	60
2	90 th	99	99	100	102	103	104	105	/	57	57	58	58	59	60	61
	95 th	102	103	104	105	107	108	109	/	61	61	62	62	63	64	65
3	90 th	100	100	102	103	104	105	106	/	61	61	61	62	63	63	64
	95 th	104	104	105	107	108	109	110	/	65	65	65	66	67	67	68
4	90 th	101	102	103	104	106	107	108	/	63	63	64	65	65	66	67
	95 th	105	106	107	108	109	111	111	/	67	67	68	69	69	70	71
5	90 th	103	103	104	106	107	108	109	/	65	66	66	67	68	68	69
	95 th	107	107	108	110	111	112	113	/	69	70	70	71	72	72	73
6	90 th	104	105	106	107	109	110	111	/	67	67	68	69	69	70	71
	95 th	108	109	110	111	112	114	114	/	71	71	72	73	73	74	75
7	90 th	106	107	108	109	110	112	112	/	69	69	69	70	71	72	72
	95 th	110	110	112	113	114	115	116	/	73	73	73	74	75	76	76
8	90 th	108	109	110	111	112	113	114	/	70	70	71	71	72	73	74
	95 th	112	112	113	115	116	117	118	/	74	74	75	75	76	77	78

Blood Pressure for Girls Age 1-17 years [Pediatrics 79:1, 1987] **26**

Percentiles	Systolic BP	Diastolic BP														
		5%	10%	25%	50%	75%	90%	95%	5%	10%	25%	50%	75%	90%	95%	
Age (y)	Height BP															
1	90 th	97	98	99	100	102	103	104	/	53	53	53	54	55	56	56
	95 th	101	102	103	104	105	107	107	/	57	57	57	58	59	60	60
2	90 th	99	99	100	102	103	104	105	/	57	57	58	58	59	60	61
	95 th	102	103	104	105	107	108	109	/	61	61	62	62	63	64	65
3	90 th	100	100	102	103	104	105	106	/	61	61	61	62	63	63	64
	95 th	104	104	105	107	108	109	110	/	65	65	65	66	67	67	68
4	90 th	101	102	103	104	106	107	108	/	63	63	64	65	65	66	67
	95 th	105	106	107	108	109	111	111	/	67	67	68	69	69	70	71
5	90 th	103	103	104	106	107	108	109	/	65	66	66	67	68	68	69
	95 th	107	107	108	110	111	112	113	/	69	70	70	71	72	72	73
6	90 th	104	105	106	107	109	110	111	/	67	67	68	69	69	70	71
	95 th	108	109	110	111	112	114	114	/	71	71	72	73	73	74	75
7	90 th	106	107	108	109	110	112	112	/	69	69	69	70	71	72	72
	95 th	110	110	112	113	114	115	116	/	73	73	73	74	75	76	76
8	90 th	108	109	110	111	112	113	114	/	70	70	71	71	72	73	74
	95 th	112	112	113	115	116	117	118	/	74	74	75	75	76	77	78

Blood Pressure for Girls Age 1-17 years [Pediatrics 79:1, 1987] **26**

Percentiles	Systolic BP	Diastolic BP														
		5%	10%	25%	50%	75%	90%	95%	5%	10%	25%	50%	75%	90%	95%	
Age (y)	Height BP															
1	90 th	97	98	99	100	102	103	104	/	53	53	53	54	55	56	56
	95 th	101	102	103	104	105	107	107	/	57	57	57	58	59	60	60
2	90 th	99	99	100	102	103	104	105	/	57	57	58	58	59	60	61
	95 th	102	103	104	105	107	108	109	/	61	61	62	62	63	64	65
3	90 th	100	100	102	103	104	105	106	/	61	61	61	62	63	63	64
	95 th	104	104	105	107	108	109	110	/	65	65	65	66	67	67	68
4	90 th	101	102	103	104	106	107	108	/	63	63	64	65	65	66	67
	95 th	105	106	107	108	109	111	111	/	67	67	68	69	69	70	71
5	90 th	103	103	104	106	107	108	109	/	65	66	66	67	68	68	69
	95 th	107	107	108	110	111	112	113	/	69	70	70	71	72	72	73
6	90 th	104	105	106	107	109	110	111	/	67	67	68	69	69	70	71
	95 th	108	109	110	111	112	114	114	/	71	71	72	73	73	74	75
7	90 th	106	107	108	109	110	112	112	/	69	69	69	70	71	72	72
	95 th	110	110	112	113	114	115	116	/	73	73	73	74	75	76	76
8	90 th	108	109	110	111	112	113	114	/	70	70	71	71	72	73	74
	95 th	112	112	113	115	116	117	118	/	74	74	75	75	76	77	78

Blood Pressure for Boys Age 1 – 17 Years [Pediatrics 79:1, 1987]

28

Percentiles Age (y)	Height BP	Systolic BP								Diastolic BP							
		5%	10%	25%	50%	75%	90%	95%	5%	10%	25%	50%	75%	90%	95%		
1	90 th	94	95	97	98	100	102	102	/	50	51	52	53	54	54	55	
	95 th	98	99	101	102	104	106	106	/	55	55	56	57	58	59	59	
2	90 th	98	99	100	102	104	105	106	/	55	55	56	57	58	59	59	
	95 th	101	102	104	106	108	109	110	/	59	59	60	61	62	63	63	
3	90 th	100	101	103	105	107	108	109	/	59	59	60	61	62	63	63	
	95 th	104	105	107	109	111	112	113	/	63	63	64	65	66	67	67	
4	90 th	102	103	105	107	109	110	111	/	62	62	63	64	65	66	66	
	95 th	106	107	109	111	113	114	115	/	66	67	67	68	69	70	71	
5	90 th	104	105	106	108	110	112	112	/	65	65	66	67	68	69	69	
	95 th	108	109	110	112	114	115	116	/	69	70	70	71	72	73	74	
6	90 th	105	106	108	110	111	113	114	/	67	68	69	70	70	71	72	
	95 th	109	110	112	114	115	117	117	/	72	72	73	74	75	76	76	
7	90 th	106	107	109	111	113	114	115	/	69	70	71	72	72	73	74	
	95 th	110	111	113	115	116	118	119	/	74	74	75	76	77	78	78	
8	90 th	107	108	110	112	114	115	116	/	71	71	72	73	74	75	75	
	95 th	111	112	114	116	118	119	120	/	75	76	76	77	78	79	80	

Blood Pressure for Boys Age 1 – 17 Years [Pediatrics 79:1, 1987]

28

Percentiles Age (y)	Height BP	Systolic BP								Diastolic BP							
		5%	10%	25%	50%	75%	90%	95%	5%	10%	25%	50%	75%	90%	95%		
1	90 th	94	95	97	98	100	102	102	/	50	51	52	53	54	54	55	
	95 th	98	99	101	102	104	106	106	/	55	55	56	57	58	59	59	
2	90 th	98	99	100	102	104	105	106	/	55	55	56	57	58	59	59	
	95 th	101	102	104	106	108	109	110	/	59	59	60	61	62	63	63	
3	90 th	100	101	103	105	107	108	109	/	59	59	60	61	62	63	63	
	95 th	104	105	107	109	111	112	113	/	63	63	64	65	66	67	67	
4	90 th	102	103	105	107	109	110	111	/	62	62	63	64	65	66	66	
	95 th	106	107	109	111	113	114	115	/	66	67	67	68	69	70	71	
5	90 th	104	105	106	108	110	112	112	/	65	65	66	67	68	69	69	
	95 th	108	109	110	112	114	115	116	/	69	70	70	71	72	73	74	
6	90 th	105	106	108	110	111	113	114	/	67	68	69	70	70	71	72	
	95 th	109	110	112	114	115	117	117	/	72	72	73	74	75	76	76	
7	90 th	106	107	109	111	113	114	115	/	69	70	71	72	72	73	74	
	95 th	110	111	113	115	116	118	119	/	74	74	75	76	77	78	78	
8	90 th	107	108	110	112	114	115	116	/	71	71	72	73	74	75	75	
	95 th	111	112	114	116	118	119	120	/	75	76	76	77	78	79	80	

Blood Pressure for Boys Age 1 – 17 Years [Pediatrics 79:1, 1987]

28

Percentiles Age (y)	Height BP	Systolic BP								Diastolic BP							
		5%	10%	25%	50%	75%	90%	95%	5%	10%	25%	50%	75%	90%	95%		
1	90 th	94	95	97	98	100	102	102	/	50	51	52	53	54	54	55	
	95 th	98	99	101	102	104	106	106	/	55	55	56	57	58	59	59	
2	90 th	98	99	100	102	104	105	106	/	55	55	56	57	58	59	59	
	95 th	101	102	104	106	108	109	110	/	59	59	60	61	62	63	63	
3	90 th	100	101	103	105	107	108	109	/	59	59	60	61	62	63	63	
	95 th	104	105	107	109	111	112	113	/	63	63	64	65	66	67	67	
4	90 th	102	103	105	107	109	110	111	/	62	62	63	64	65	66	66	
	95 th	106	107	109	111	113	114	115	/	66	67	67	68	69	70	71	
5	90 th	104	105	106	108	110	112	112	/	65	65	66	67	68	69	69	
	95 th	108	109	110	112	114	115	116	/	69	70	70	71	72	73	74	
6	90 th	105	106	108	110	111	113	114	/	67	68	69	70	70	71	72	
	95 th	109	110	112	114	115	117	117	/	72	72	73	74	75	76	76	
7	90 th	106	107	109	111	113	114	115	/	69	70	71	72	72	73	74	
	95 th	110	111	113	115	116	118	119	/	74	74	75	76	77	78	78	
8	90 th	107	108	110	112	114	115	116	/	71	71	72	73	74	75	75	
	95 th	111	112	114	116	118	119	120	/	75	76	76	77	78	79	80	

Blood Pressure for Boys Age 1 – 17 Years [Pediatrics 79:1, 1987]

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Percentiles Age (y)	Height BP	Systolic BP								Diastolic BP							
		5%	10%	25%	50%	75%	90%	95%	5%	10%	25%	50%	75%	90%	95%		
1	90 th	94	95	97	98	100	102	102	/	50	51	52	53	54	54	55	
	95 th	98	99	101	102	104	106	106	/	55	55	56	57	58	59	59	
2	90 th	98	99	100	102	104	105	106	/	55	55	56	57	58	59	59	
	95 th	101	102	104	106	108	109	110	/	59	59	60	61	62	63	63	
3	90 th	100	101	103	105	107	108	109	/	59	59	60	61	62	63	63	
	95 th	104	105	107	109	111	112	113	/	63	63	64	65	66	67	67	
4	90 th	102	103	105	107	109	110	111	/	62	62	63	64	65	66	66	
	95 th	106	107	109	111	113	114	115	/	66	67	67	68	69	70	71	
5	90 th	104	105	106	108	110	112	112	/	65	65	66	67	68	69	69	
	95 th	108	109	110	112	114	115	116	/	69	70	70	71	72	73	74	
6	90 th	105	106	108	110	111	113	114	/	67	68	69	70	70	71	72	
	95 th	109	110	112	114	115	117	117	/	72	72	73	74	75	76	76	
7	90 th	106	107	109	111	113	114	115	/	69	70	71	72	72	73	74	
	95 th	110	111	113	115	116	118	119	/	74	74	75	76	77	78	78	
8	90 th	107	108	110	112	114	115	116	/	71	71	72	73	74	75	75	
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E&M Codes	I	II	III	IV	V	30
OutPt New	99201	99202	99203	99204	99205	
OutPt Consult	99241	99242	99243	99244	99245	
Established patient	99211	99212	99213	99214	99215	
InPt Consult	99251	99252	99253	99254	99255	
Time	5 min	10 min	15 min	25 min	40 min	
Hx PI	1-3	1-3	4+	4+	4+	
ROS		Pertinent	2-9	10+	10+	
Fam/Soc			1-2	3	3	
Exam Affected	Limited	Limited	Extended			
Exam Single	1+	6+	12+			
Exam Multiple	1+	6+	12+	9+/ x 2 ea.	9+/ x 2 ea	
InPt New	99221	99222	99223			
InPt Daily	99231 (15m)	99232 (25m)	99233 (35m)			
InPt D/C	99238	99239 (>30m)				
Modifiers						
21 - Prolonged E&M	25 - Separate E&M on day of proc.		57 - Decision for surgery			
22 - Unusual procedure	26 - Professional component		58 - Staged, related procedures			
24 - Unrelated E&M, same MD	53 - Discontinued		63 - Procedure on infant			

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OutPt New	99201	99202	99203	99204	99205	
OutPt Consult	99241	99242	99243	99244	99245	
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Hx PI	1-3	1-3	4+	4+	4+	
ROS		Pertinent	2-9	10+	10+	
Fam/Soc			1-2	3	3	
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Exam Affected	Limited	Limited	Extended			
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