

A woman with blonde hair, wearing a white lab coat with a pink stethoscope, is shown in profile from the chest up. She is holding a large, dark, rectangular sheet or chart in front of her. The background is a solid blue color. The text is overlaid on the image.

Pediatric Endocrinology Program Development: Bone Age & GH Testing

Jay Cohen, MD, FAAP, FACE
The Endocrine Clinic, PC
Memphis, TN

Endocrinology Program Development:

- ◀ Bone Age Determinations
- ◀ Provocative Stimulation Testing
 - ◀ DEXA Bone Density
 - ◀ Thyroid Ultrasound
- ◀ Fine Needle Aspiration Biopsy
- ◀ NCV: nerve conduction velocities
- ◀ PFT for inhaled insulin therapy
- ◀ Active clinical research division

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Objectives

- Understand how to develop an “in house” bone age program
- Understand how to develop a spreadsheet for each stimulation test you perform for billing, coding and documentation.
- Understand how to develop a procedure sheet for each stimulation test you perform.
- Understand how to communicate results with insurance companies, families & consultative physicians with documentation.

Bone Age Determination in the Endocrinologist Practice



Bone Age Reimbursement

- Our charges: CPT code 76020 (includes physician & technical component)
- Medicare allowable:
- Average insurance payment:
- We perform approx. 240 per year:

- \$125.00
- \$26.00
- \$42.67
- Income: \$10,241.00

Bone Age Expenses

- Processor cleaning (\$50/mo.):
- Supplies (xray film, file jackets):
- Maintenance (premix, fixer):
- Average technical costs:

- \$600 per year
- \$130 per year
- \$400 per year
- \$750 per year

Therefore, the total cost per year to perform BA: \$1,880

Bone Age Practice Revenue

- One time costs: Machine: \$7,900 and Processor: \$2,800
- Income- Expenses = yearly practice revenue
- $\$10,241 - \$1,880 = \$8,361$ yearly positive real profit
- This assumes about 4.8 bone age films per week!

Bone Age Issues

- You do **NOT** need a lead lined shielded room because of the low amount of radiation
- This small size device can be in a closet
- Podiatry xray device is satisfactory
- room needed to process the x-rays; room must be able to be dark & have a drain (ours is a floor drain)
- Employee (s) [nurse or tech] takes a several week course and is certified; wears safety badge

Advantages to performing Bone Age determinations "In-House"

- Patient service is extraordinary
 - No wait 1 hour to sign in at radiology
 - No drive to another location or take more time off to reschedule
 - You get the results the SAME day! [takes 10 minutes]
- Patient and family education is face-to-face
- Reimbursement is universal: NO denials
- Quality of bone age reading is consistent
- Revenue generation

Bone Age Coding

- Global code: CPT: 76020
- Does NOT require a board certified radiologist
- MD component only: CPT: 76020-26
- "films were directly visualized; this reading is an independent interpretation"

Provocative GH Testing in the Endocrinologist Practice

To successfully perform a GH stimulation test you need 4 forms before the patient comes in to the clinic:

- ✓ 1. stim test waiver sheet
- ✓ 2. GH stim test coding sheet
- ✓ 3. insulin/arginine worksheet
- ✓ 4. The Endocrine Clinic Provocative Stimulation Testing Form

Why do you need these forms before the patient comes in to the clinic?

- ✓ 1. You and your staff are prepared for the visit the day before the testing & have calculated the correct doses of meds & have all tubes ready.
- ✓ 2. You have the supplies.
- ✓ 3. The family is called to remind them about the visit and the NPO status.
- ✓ 4. Documentation. Documentation. Documentation.

STIM TEST WAIVER

This is notification to you that the following codes **may not be covered by your insurance policy**. These charges are necessary, valid, and billable charges.

The codes are as follows:

99358- PROLONGED SERVICE- FIRST HOUR: \$100.00

99359- PROLONGED SERVICE- PER UNIT EACH 30 MINUTES:
\$50.00

J1642- HEPARIN SODIUM PER UNIT \$20.00

J3490- UNCLASSIFIED MEDICATION (ARGININE) PER UNIT:
\$100.00

J7051- SALINE FLUSHES PER UNIT \$20.00

These charges can be billed to the patient if **non-covered by plan**.

If my insurance company denies these codes as **non-covered by policy**, I will be responsible for payment of these charges.

Patient or Guardian: _____

Date: _____

Witness: _____

GH STIM. TEST CODING SHEET

- 99211 LIMITED OFFICE VISIT

- 99354 PROLONGED ATTENDANCE, 1st HOUR (FACE-TO-FACE)

- 99355 PROLONGED ATTENDANCE **EACH ADDITIONAL** 30 MINUTES PHYSICIAN (FACE-TO-FACE) **x 4 (BILL THIS CODE 4 TIMES)**

- 99358 PROLONGED ATTENDANCE, FIRST HOUR. PHYSICIAN **NOT** FACE-TO-FACE [then 99359] (USE THIS **INSTEAD** OF 99354, 99355 IF **NO** MD PRESENT)

- 36415 VENIPUNCTURE
- J2912 INJECTION, SODIUM CHLORIDE
- J1820 INJECTION, INSULIN, UP TO 100 UNITS

GH STIM. TEST CODING SHEET

- J3490 ARGININE

•80428 **GROWTH HORMONE STIMULATION PANEL**

(GROWTH HORMONE - 83003 X 4)

•80435 **GROWTH HORMONE DEFICIENCY PANEL**

(GLUCOSE - 82947 X 5)(GROWTH HORMONE – 83003 X 5)

•80434 **INSULIN TOLERANCE PANEL** (CORTISOL – 82533 X 5)(GLUCOSE – 82947 X 5)

- 82533 CORTISOL – EACH ADDITIONAL
- 82948 GLUCOMETER – EACH ADDITIONAL
- 83003 GROWTH HORMONE – EACH ADDITIONAL

ARGININE/INSULIN WORKSHEET

Name: _____

Chart #: _____

Date & Arrival Time: _____

MD: _____

Height: _____

Weight: _____

BP: _____

P: _____

R: _____

Heparin well location: _____

Arginine (5cc/kg): 5 x _____ kg. = _____ ml.

Insulin (1 unit/cc):

0.05 units/kg.: 0.05 x _____ kg = _____ units

0.0625 u/kg.: 0.0625 x _____ kg = _____ units

0.075 u/kg.: 0.075 x _____ kg = _____ units

ARG./INS. WORKSHEET (cont.)

INTERVAL

TIME	TIME	BG	OTHER, INCL. VITALS
------	------	----	---------------------

- | | | | |
|-----------------------------------|-------|-------|--|
| <input type="checkbox"/> 0 min. | _____ | _____ | Draw baseline; infuse arginine |
| <input type="checkbox"/> 30 min. | _____ | _____ | |
| <input type="checkbox"/> 45 min. | _____ | _____ | |
| <input type="checkbox"/> 60 min. | _____ | _____ | Offer bathroom break before 90' |
| <input type="checkbox"/> 90 min. | _____ | _____ | Give insulin; list symptoms |
| <input type="checkbox"/> 100 min. | _____ | _____ | |
| <input type="checkbox"/> 110 min. | _____ | _____ | |
| <input type="checkbox"/> 120 min. | _____ | _____ | |
| <input type="checkbox"/> 130 min. | _____ | _____ | Etc. |

Apple Juice/D5 given: _____. Discharged at: _____

THE ENDOCRINE CLINIC: PROVOCATIVE STIMULATION TESTING CENTER

Endocrinology and Diabetes of Adults and Children

Endocrinologists:

Address:

PHONE:

FAX:

WEB:

Pt.: _____
MR#: _____

DOB: _____
Date: _____

Stimulation test(s): _____

Patient arrived fasting in the office at _____ with _____.

Baseline vital signs were obtained:

Ht: _____ cm./ _____ in., Wt.: _____ kg./ _____ lb., B/P: _____, P: _____, R: _____

A heparin well was inserted into the _____ with a _____ gauge Jelco quick cath on the _____ attempt. Baseline labs were drawn:

THE ENDOCRINE CLINIC: PROVOCATIVE STIMULATION TESTING CENTER

Endocrinology and Diabetes of Adults and Children

Endocrinologists:

Address:

PHONE:

FAX:

WEB:

Pt.: Jacob C.

DOB: 5/20/00

MR#: 123456

Date: 11/5/04

Stimulation test(s): (1) Arginine HCL 10% Rx#734179 70 ml over 30 min.; NS exp.5/1/05,
Lot#04-208- JT. NDC 00741966-07. (2) Reg Human Insulin 1 unit IV exp. 11/1/05
Control# 65E18u; NS Exp.5/1/05 Lot# 04-674-DK NDC 00741966-07

Patient arrived fasting in the office at 0820 with mother.

Baseline vital signs were obtained:

Ht: 93.2 cm./ 36.7 in., Wt.: 14 kg./ 31 lb., B/P: 82/54, P: 76, R: 16

A heparin well was inserted into the R. antecubital v. with a 22 gauge Jelco quick cath on the 1st attempt. Baseline labs were drawn:

THE ENDOCRINE CLINIC: PROVOCATIVE STIMULATION TESTING CENTER

Endocrinology and Diabetes of Adults and Children

Endocrinologists:

Address:

PHONE:

FAX:

WEB:

Pt.: Jacob C.

DOB: 5/20/00

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TIME:											
GLU:											
GH:											
CORTISOL:											
EVENT:											

Description of above events:

1. _____
2. _____
3. _____
4. _____
5. _____

The heparin well was discontinued with the catheter intact and the patient was discharged ambulatory from the office with the _____ at: _____.

Nurse: _____

Impression/Recommendation:

 (Signature) Date: _____ Discussed with pt. on: _____ F/U: ____ months.

CC: Dr. _____ Fax: _____

TIME:	0	30	45	60	90	100	110	120	130	150	180
GLU:	78	84	82	62	72	31	36	52	69	75	88
GH:	2.0	2.1	4.5	6.7	1.5	4.6	1.1	0.8	1.1	4.0	3.9
CORTISOL:	17.1	18.6	18.0	16.4	10.7	26.2	19.1	22.5	24.8	27.9	30.1
	①				②						
BP	83/54				74/50		88/62				
EVENT:						③	④	⑤	⑥		

Description of above events:

- | | |
|----|----|
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |

The heparin well was discontinued with the catheter intact and the patient was discharged ambulatory from the office with the _____ at: _____.

Nurse: _____

Impression/Recommendation:

 (Signature) Date: _____ Discussed with pt. on: _____ F/U: _____ months.

CC: Dr. _____ Fax: _____

TIME:	0	30	45	60	90	100	110	120	130	150	180
GLU:	78	84	82	62	72	31	36	52	69	75	88
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	①				②						
BP	83/54				74/50		88/62				
EVENT:						③	④	⑤	⑥		

Description of above events:

- | | |
|---|---|
| 1. Arginine HCL 10%: 70 ml. IV over 30 min after labs drawn | 2. REG human insulin: 1 unit in 1 ml IV over 2-3 minutes |
| 3. Sweating. Awake and conversant | 4. Continues to sweat; crying and hungry. |
| 5. Awake. Watching TV. Apple juice given. | 6. Peanut butter crackers eaten. Jacob says: "feels fine" |
- The heparin well was discontinued with the catheter intact and the patient was discharged ambulatory from the office with the _____ at: _____. Nurse: _____

Impression/Recommendation:

(Signature) Date: _____ Discussed with pt. on: _____, F/U: ____ months.

CC: Dr. _____ Fax: _____

TIME:	0	30	45	60	90	100	110	120	130	150	180
GLU:	78	84	82	62	72	31	36	52	69	75	88
GH:	2.0	2.1	4.5	6.7	1.5	4.6	1.1	0.8	1.1	4.0	3.9
CORTISOL:	17.1	18.6	18.0	16.4	10.7	26.2	19.1	22.5	24.8	27.9	30.1
	①				②						
BP	83/54				74/50		88/62				
EVENT:						③	④	⑤	⑥		

Description of above events:

1. Arginine HCL 10%: 70 ml. IV over 30 min after labs drawn
 2. REG human insulin: 1 unit in 1 ml IV over 2-3 minutes
 3. Sweating. Awake and conversant
 4. Continues to sweat; crying and hungry.
 5. Awake. Watching TV. Apple juice given.
 6. Peanut butter crackers eaten. Jacob says: "feels fine"
- The heparin well was discontinued with the catheter intact and the patient was discharged ambulatory from the office with the

_____ mom _____ at: 12:30pm . Nurse: Susan Superb Nurse, R.N.

Impression/Recommendation: Isolated GH deficiency (253.3). As a board certified pediatric endocrinologist, daily genetically GH subq recommended @ a dose of 0.3 mg/kg/wk.

_____ Dr. P. Endo _____ Date: 11/12/05. Discussed with parent on: 11/19/05. F/U: 3 months.
(Signature)

CC: Dr. _____ Dr. General Pediatrics _____ Fax: _____ 123-45678 _____



Be proud of the care you give!

- Exceed the expectations of your patients!
- Exceed the expectations of your referral physicians!
- Documentation encourages rapid, correct and optimal reimbursement.
- Planning ahead decreases staff anxiety.
- Planning ahead improves office morale!



Thank you!