

UTAH PREVENTIVE CARE RECOMMENDATIONS

PEDIATRIC AGES 0-10

SCREENING

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GENERAL INSTRUCTIONS

Refer to the [AAP 2020 Recommendations](#) for Pediatric Preventive Health Care.

FAMILY/SOCIAL HISTORY

Take a careful family history including risk factors such as obesity, hypercholesterolemia, exposure to second-hand smoke, asthma, mental illness and hearing loss, etc. Take a social history at each visit.

MEDICAL HISTORY

Update at each visit.

NUTRITIONAL HISTORY

Ask about dietary practices at each visit.

PHYSICAL EXAM

At each visit with infant totally unclothed, older child undressed and suitably draped.

BLOOD PRESSURE

Measure by auscultation or oscillometer starting at age 3 years in the right arm using standard measurement practices and an appropriate cuff size for the child's upper arm. If the child has atypical

aortic arch anatomy, use the left arm. Measure BP annually in healthy children, not at every health encounter. For those with obesity, renal disease, diabetes, aortic arch obstruction or coarctation, or those taking medications known to increase BP, measure BP at every health encounter.

Use [Simplified Table of Screening BP values](#) by Age to determine those children requiring further evaluation. The Simplified table is based on the 90th percentile BP for age and sex for children at the 5th percentile of height and is only to be used to identify those needing further evaluation, not to be used for diagnosing elevated BP or HTN.

If the child needs further evaluation based on the Simplified Table, then use the expanded AAP BP Percentile Tables for [boys](#) and [girls](#) according to age, sex and height

Definitions of BP Categories and Stages For children age 1-13 years

- Normal BP: <90th percentile
- Elevated BP: $\geq 90^{\text{th}}$ percentile to <95th percentile or 120/80 mm Hg to < 95th percentile (whichever is lower)
- Stage 1 HTN: $\geq 95^{\text{th}}$ percentile to <95th percentile + 12 mm Hg or 130/80 mm Hg to 139/89 mm Hg (whichever is lower)
- Stage 2 HTN: $\geq 95^{\text{th}}$ percentile + 12 mm Hg or $\geq 140/90$ mm Hg (whichever is lower)

If the initial BP is elevated, providers should perform two additional BP measurements at the same visit and average them to define BP category. When BP is measured using an oscillometer, and the average of the three oscillometric readings is $\geq 90^{\text{th}}$ percentile, then two auscultatory measurements should be taken and averaged to define the BP category.

Treat children with elevated blood pressure according to [AAP Clinical Practice Guideline for Screening and Management of High Blood Pressure in Children and Adolescents](#).

LIFESTYLE

Assess lifestyle behaviors such as physical activity, nutrition, sleep, and social support which put children at risk for weight concerns and chronic illnesses using Intermountain's [Lifestyle and Health Risk Questionnaire for Children and Adolescents](#).

Assess child's physical activity using the pediatric physical activity vital sign (PPAVS-days per week of at least 60 minutes of moderate to vigorous physical activity or play) at each visit.

Refer to Intermountain Healthcare's [Lifestyle and Weight Management for Children and Adolescents Care Process Model \(CPM\)](#) for additional information on a team based approach and resources for evaluating and counseling adolescents regarding lifestyle behaviors.

BODY MEASUREMENT HT/WT, HEAD CIRCUMFERENCE

Measure height and weight with each preventive care visit, and plot measures to height and weight growth charts.

- [Length for age and Weight for age percentiles, Birth - 24 Month Boys](#)

- [Length for age and Weight for age percentiles, Birth -24 Month Girls](#)
- [Stature and Weight for age, 2-20 Year Boys](#)
- [Stature and Weight for age, 2-20 Year Girls](#)
- [Weight-for-Stature Percentiles, Boys](#)
- [Weight-for-Stature Percentiles, Girls](#)

Measure head circumference with each visit up through age 2, plot to head circumference growth charts.

- [Head circumference for age and Weight for length percentiles, Birth - 24 Month Boys](#)
- [Head circumference for age and Weight for length percentiles, Birth - 24 Month Girls](#)

Calculate Body Mass Index (BMI) and plot BMI to age on CDC growth chart.

- [BMI Table 20-45lbs and Percentiles for Age](#)
- [BMI Table Over 45lbs](#)
- [BMI for age, 2-20 Year Boys](#)
- [BMI for age, 2-20 Year Girls](#)

BMI for age equal to or above the 85th percentile is considered overweight, and BMI for age equal to or above the 95th percentile is considered to be obese.

Use Intermountain Healthcare's [Lifestyle and Weight Management for Children and Adolescents Care Process Model \(CPM\)](#) as a guide for the evaluation and treatment of patients with a \geq 85th BMI-for-Age percentile

Key areas of evaluation include activity level, sedentary behavior, nutrition, sleep, social support, family style, and environmental stress.

The CPM contains various tools to assist in the evaluation and treatment of overweight and obesity:

- A [Lifestyle and Health Risk Questionnaire](#) for patients ages 3 through 18 years
- The [Rx to LiVe](#) prescription sheet provides recommendations centered around 8 evidence-based behaviors as well as provides sections for goals, referrals and follow-up dates
- Intermountain's Behavior Change Framework was used to inform the questions in the [Making a Healthy Change](#) worksheet that can help families plan simple steps toward more effectively meeting their goals
- Referral to a dietitian at an Intermountain Healthcare facility for medical nutrition therapy (either one-on-one counseling or group class) is advised
- Tracking and reporting progress are important steps in making a change. Give patients an [8 to LiVe By Track It!](#) tracker.
- Patient education tools include the Intermountain Healthcare [LiVe Well website](#), the [8 to LiVe by Habit Builder](#), and the [8 to LiVe by booklet](#), the [Traffic Light Eating Plan](#) fact sheet, the [LiVe Well Move More for kids](#) fact sheet, and the [LiVe Well, Sleep Well](#) fact sheet. Patient education tools are available in English and Spanish.
- Order Intermountain Healthcare educational materials through [iPrint Store](#), or contact Clinical Education Services at (801) 442-2963

Refer patients to a dietitian at an Intermountain Healthcare facility for medical nutrition therapy (either one-on-one counseling or group class is advised), and to behavioral health specialists as needed.

SLEEP

Assess hours of daily sleep.

Screen child for snoring as an indicator for obstructive sleep apnea syndrome (OSAS). Other findings associated with OSAS include habitual snoring with labored breathing, observed apnea, restless sleep, enuresis, and daytime neurobehavioral abnormalities or sleepiness. When OSAS is suspected, refer to a sleep specialist for further testing

CHOLESTEROL

Assess risk of hyperlipidemia at ages 2, 4, 6, 8, and 10 years. Screen children determined to be at High risk with a fasting lipid profile.

High risk:

- Children who have a parent with a total cholesterol level of 240 mg/dl or greater
- Children with a family history of premature cardiovascular disease (i.e. a parent or grandparent with documented cardiac or vascular disease at age 55 years or younger)
- Children with risk factors for coronary disease (i.e. high blood pressure, smoking, diabetes, overweight – BMI $\geq 85^{\text{th}}$ percentile)
- Children whose family history is not obtainable

The NHLBI, AAP and AHA recommend that all children between ages 9 to 11 years be screened once with a fasting or non-fasting total cholesterol and HDL, specifically to identify indication of familial hyperlipidemia ([AAP Report](#)). Because this screening is recommended by AAP, it is considered a CHEC requirement for children insured by Medicaid. Various experts have objected to this recommendation as overly aggressive due to concerns about treatment in this population, and over-diagnosis in a well population ([Link to contradictory view point](#)).

See the [Assessment and Follow-up of Lipoprotein Analysis](#) chart for further classification, treatment and testing.

Treat children with a diagnosis of familial hyperlipidemia or refer them to regional specialists. Consider genetic tracking. [Clinical criteria for diagnosing familial hyperlipidemia](#) are included.

ANEMIA

Screen for Hematocrit (HCT) or Hemoglobin (Hb) in Preterm, or Low-birth-weight infants or formula-fed infants not receiving iron fortified formula at 4 months of age

Screen other infants for HCT or Hb at 12 months of age

Annual screening of HCT or HB can be considered between 15 months and 5 years of age for children at risk for iron deficiency because of:

- Special health needs
- Low-iron diet (non-meat diet)
- Environmental factors (poverty or limited access to food)
- Migrant children
- Recently arrived refugee children

Refer to tables listing [anemia cut points](#), [high altitude correction factors](#), and examples of Utah [local altitudes](#). (For ages <12 months, use age 1 year cut point).

DENTAL

Take a dental history and perform complete oral inspection on a regular basis.

Advise visit to dentist on regular basis. Establish a dental home at one year of age.

Apply Fluoride varnish to the primary teeth of infants and children starting at the age of primary tooth eruption up to the age of 5 years. Limited evidence exists about the optimal time between varnish applications and show no difference in a 6-month compared to a 1-year interval between varnish applications.

Treat with Fluoride supplementation as listed below:

Daily dose of Fluoride by age:

Age	Concentration of Fluoride in Local Water Supply (ppm)		
	<0.3 ppm	0.3 – 0.6 ppm	>0.6 ppm
Birth – 6 months	0	0	0
6 months – 3 years	0.25 mg	0	0
3 – 6 years	0.50 mg	0.25 mg	0
6 – 10 years	1.00 mg	0.50 mg	0

A 2.2 mg sodium fluoride (NaFI) tablet contains one mg Fluoride.

The [Utah Department of Health Oral Health Program](#) documents concentrations of [Fluoride in local water supplies](#). If more detailed information is needed about your location the department may be contacted at (801) 538-9177.

CONGENITAL HEART DEFECT

Screening for critical congenital heart disease using pulse oximetry should be performed on newborns, after 24 hours of age, but before hospital discharge.

HEREDITARY/METABOLIC

Perform metabolic screenings in the newborn period according to state law. Utah Newborn Screening Rules are available at the [Utah Newborn Screening Program website](#). The number of screenings has been increased to include 39 disorders.

Questions can be answered by the Primary Children's Medical Center metabolic clinic at 801-585-2457.

DEVELOPMENT/BEHAVIOR

Surveillance in the developmental areas of communication, gross motor, fine motor, problem solving and social/emotional behavior should be conducted at each well-child visit.

Developmental screening should be conducted at 9, 18 and 30 months of age using a validated developmental screening tool, such as The Survey of Well-being of Young Children (SWYC)TM.

Perform autism screening at 18 and 24 months and at any visit when a parent raises a concern. Use the Modified Checklist for Autism in Toddlers ([M-CHAT-R/F](#)) with children ages 16 to 30 months.

If concerns are identified in either surveillance or screening, consider referring the child to the [Help Me Grow program](#) for further evaluation. This program uses the Ages & Stages Questionnaires (ASQ)[®] in their [evaluation process](#), and can be contacted at 800-691-5322. Patients with developmental concerns should be connected to local early intervention programs and other resources as indicated.

PSYCHOSOCIAL

Evaluate psychosocial health at each well-visit.

Screen for maternal depression at 1-, 2-, 4- and 6-month visits.

Assessing the child's environment for toxic stress can aid in identifying triggers to developmental delay and psychosocial concerns. Consider formal assessment at 2, 9, 15, 24, 46, 48, and 60 months using the Safe Environment for Every Kid (SEEKTM) [Parent Screening Questionnaire](#) (PSQ). Links to more resources from the University of Maryland can be found at the [SEEK](#) homepage. *These links are only available within the Intermountain firewall.*

HEARING

All newborns should be screened for hearing loss before 1 months of age, and preferably before hospital discharge. Evoked otoacoustic emissions (OAE) and/or auditory brainstem response (ABR) measures should be used.

Middle ear examination by otoscopy and subjective hearing assessment at each visit.

Infants with **high risk** factors require hearing evaluation every 6 months until 3 years of age.

High risk factors include:

- Parental concern;
- Family history of hereditary childhood hearing loss;
- Syndromes known to include hearing loss;
- Mechanical ventilation at birth;
- Post-natal infections associated with hearing loss;
- Head trauma;
- Neurodegenerative disorders;
- Pulmonary hypertension;
- ECMO (extracorporeal membrane oxygenation)
- Recurrent otitis media;
- Hyperbilirubinemia requiring exchange transfusion;
- In utero infection (such as cytomegalovirus, rubella, syphilis, herpes, or toxoplasmosis);

Children insured by Medicaid should be screened by age appropriate visual response audiometry (VRA), conditional orientation response (COR), play audiometry, OAE, or ABR once between the ages of 6 months – 4 years, and should have objective bilateral puretone screening under earphones once between ages 4 –21 years of age.

Refer to the [Utah Department of Health Newborn Hearing Screening Guidelines](#) and to [definitions of the various hearing tests](#) listed above.

SPEECH

Speech should be evaluated in conjunction with development and hearing.

Provider should evaluate need to refer children for speech and hearing evaluation if any of the following findings are observed:

- The child is not talking at all by age 18 months
- Hearing impairment is suspected
- The child is embarrassed or disturbed by his own speech
- The child's voice is monotone, extremely loud, largely inaudible, or of poor quality
- There is noticeable hyper-nasality or lack of nasal resonance
- The parent(s) express concern about the child's speech and/or hearing development
- The child fails the screening test
- Recurrent otitis media
- Speech is not understandable at age four years

Speech and language services are available statewide through the Utah Baby Watch Early Intervention Program (1-800-966-4226) which serves children until 3 years of age; therefore, referral prior to age 3 years is recommended. [Baby Watch](#) is administered through local county and school district programs.

Early intervention programs can also be accessed through the [Help Me Grow Program](#).

VISION

Birth to 3 years of age eye evaluation should include:

1. Examination of eyelids and orbits for symmetry and function.
2. Penlight evaluation of conjunctiva, sclera, cornea, and iris.
3. Ocular motility.
4. Eye muscle balance by corneal light reflex or unilateral cover test.
5. Pupils; and
6. Red reflex

Instrument-based screening is an option for testing for optical alignment and visual acuity in children ages 18 to 24 months.

3 years of age and above exam should include:

1. Points 1-6 above; and
2. Visual acuity testing at each visit starting at age 3 using optotypes when child is cooperative, or alternatively, with an instrument-based screener. (Repeat in 6 months if unsuccessful).
3. At each visit ages 3 to 5 years, screen for ocular alignment using an instrument based screener, corneal light reflex test (Hirschberg) or random-dot-E stereo test (Fly stereo test for younger children) to detect strabismus or amblyopia.
4. Ophthalmoscopy once after age 4 to evaluate the optic nerve and retinal vasculature.
5. Color discrimination for all boys 5 years and older insured by Medicaid (Utah State Requirement).

Refer children with identified concerns to a pediatric ophthalmologist when available.

LEAD

Test all children at ages 12 and 24 months or anytime there is a concern for lead poisoning especially under age 6 years. Medicaid enrolled children between 24-72 months must be tested if they have not previously been tested

Children ages 6 months-16 years who are adoptees or refugees from foreign countries may be at increased risk and should be tested upon entry into the U.S.

Blood samples may be collected by venipuncture or capillary stick.

In Utah, all blood lead levels are required to be reported to the Utah Dept. of Health Environmental Epidemiology Program (UDOH/EEP) regardless of level or age of patient. If your office uses an outside clinical lab to conduct your blood lead analysis, the clinical lab will report directly to the UDOH/EEP. If your office is using an onsite, point of care machine, for your blood lead analysis (i.e., using the LeadCare II machine), it is your responsibility to report your test results to the UDOH/EEP.

Additional resources are available from the [Utah Lead Coalition](#)

MENTAL HEALTH

Clinicians should be alert to signs of depression during each visit – Refer to [Symptoms of Major Depression](#) for more information.

Clinician should also be aware of signs of attention deficit or anxiety disorders.

Intermountain Healthcare has put together a [Mental Health Integration Child & Adolescent Baseline Evaluation Packet](#) that includes useful tools for evaluating children, adolescents and their families for mental health concerns. (Note – the link to the packet can only be accessed within the intermountain.net website firewall). [The Patient Health Questionnaire – Child \(PHQ-C\)](#) can be used as an initial screening tool to identify signs and symptoms of depression.

ABUSE

If family violence or child abuse is suspected:

- For a list of requirements refer to the [State of Utah Child Abuse Reporting Requirements](#).
- For referral, contact Primary Children's Hospital Safe and Healthy Families at (801) 662-3600.
- For more information, refer to the documents, "[Identifying and Responding to Domestic Violence, Consensus Recommendation for Child and Adolescent Health](#)" August 2004, endorsed by the American Academy of Pediatrics, and "[Evaluation of Suspected Child Physical Abuse](#)" June 2007, American Academy of Pediatrics.

MUSCULOSKELETAL

Check hip motion in all well-child visits up to age 3 years.

Breech presentation infants: imaging with an ultrasonographic examination at 6 weeks of age or with radiograph of the pelvis and hips at 4-6 months of age is recommended.

Check gait and leg alignment at 12-15 months when infant starts walking, and at 18 months, 3, 4, and 6 years.

Evaluate spine for scoliosis in the early adolescent years, twice for girls at ages 10 and 12 for girls and once for boys at age 13 or 14.

SEXUAL DEVELOPMENT

Evaluate Tanner Stage at each well-child visit, starting at age 3. [See Tanner Stage diagrams](#).

TUBERCULOSIS

Test children at **high risk** with Tuberculin Skin Test (TST) using the Mantoux Technique or with an Interferon Gamma Release Assay (IGRA) tuberculosis blood test.

High risk includes children:

- Born in Africa, Asia, Latin America or Eastern Europe

- Who have traveled to and stayed with friends or family members in Africa, Asia, Latin America or Eastern Europe for ≥ 1 week consecutively
- Exposed to someone with suspected or known TB disease (also report to health department)
- With close contact with a person who has a positive TB skin test
- Who spend time with persons who have been incarcerated, homeless, use illicit drugs or has HIV

TST should be read 48 to 72 hours after placement by a trained health care provider. Results should be recorded as millimeters of induration.

Definition of Positive Tuberculin Skin Test (Mantoux technique)

Induration ≥ 5 mm

Child or adolescent in close contact with a known or suspected infectious case of TB

Child or adolescent with suspected TB disease:

- Finding on chest radiograph consistent with active or previously active TB
- Clinical evidence of TB disease

Child or adolescent who is immunosuppressed (eg, receiving immunosuppressive therapy or with immunosuppressive condition [eg, HIV infection])

Induration ≥ 10 mm

Child or adolescent at increased risk of disseminated disease:

- Those < 4 years old
- Those with concomitant medical conditions (eg, Hodgkin's disease, lymphoma, diabetes mellitus, chronic renal failure, or malnutrition)

Child or adolescent with increased risk of exposure to cases of TB disease:

- Those who were born in, who travel to, or whose parents were born in a country with a high prevalence of TB cases
- Those frequently exposed to adults with risk factors for TB disease (eg, adults who are HIV-infected or homeless, users of illicit drugs, those who are incarcerated, or migrant farm workers)

Induration ≥ 15 mm

Children ≥ 4 years old with no known risk factors

(Modified from AAP. *Red Book: 2003 Report of the Committee on Infectious Diseases*. 25th ed. Elk Grove Village, IL: AAP; 2003:642-660)

For evaluation and treatment of positive TB test, refer to Recommendations of Pediatric Tuberculosis Collaborative Group ([Pediatrics 2004;114:1175-12-1](#))

URINALYSIS

Universal screening of children by urinalysis is not recommended.