

Guidelines and Protocol for Diagnosis and Management

Philadelphia Department of Public Health

Infants and children under the age of two years

- **Encourage breastfeeding for at least 6 months or more.**
- If mothers choose to bottle feed, encourage mothers to resist the urge to overfeed their babies. Ask moms not to add anything (e.g., rice cereal) to the bottle other than milk.
- Plot weight-for-age, length-for-age, and weight-for-length.
- Overweight is defined as weight-for-length greater than the 95th percentile.

Intervention

- The earlier the intervention the greater the chance of success.
 - Review current feeding practices.
 - Educate parent with regard to standard age specific feeding goals and caloric needs of growing infant. (Use handouts such as “Feeding Your Infant in the First Year of Life.”)
 - Help parents to appreciate the tremendous power they have to mold their child’s behaviors with respect to eating and food choices and that these learned behaviors can have a great impact on their children’s future weight.
 - Encourage parents to limit television watching as much as possible, even if the children mainly watch educational programs.
 - Consider a nutrition consult, and/or referral to a tertiary care center if the rate of weight gain continues to be excessive.

Children and Adolescents age 2-18 years

- BMI should be calculated at all annual physicals
- If the child cannot stand for stature measurement, continue to use weight-for length charts to assess risk of or presence of overweight.
- If the child can stand, start measuring stature
- If stature can be measured, then BMI should be calculated, and BMI for age/sex should be plotted.
- Keep in mind that premature or delayed sexual maturation may alter interpretation of BMI. Muscular, athletic adolescents may have a BMI>85% due to a bigger muscle mass without being overweight or obese. Abdominal girth or triceps fold may be used to further distinguish in this situation.

- **Remember that adolescents are at greatest risk for the development of adult obesity**

Classification of weight status:

Normal Weight – BMI for age and sex between 5% - 84%

Failure to Thrive -- BMI for age and sex below 5%

Overweight -- BMI for age and sex between 85% - 94%

Obese -- BMI for age and sex between 95% - 98%

Severe Obesity -- BMI for age and sex >99%

Intervention

- ***Children and adolescents 2-18 y/o with BMI between the 85th-94th percentile should be considered overweight.***
- - Review family history of:
 - Obesity
 - Ask if anyone had an MI or stroke prior to age 50
 - Diabetes Mellitus
 - Hypertension
 - Hyperlipidemia
 - Review history in terms of complications of obesity such as:
 - Asthma/ SOB with exertion.
 - Obstructive Sleep Apnea; daytime somnolence, frequent nighttime awakening, poor school performance/difficulties with attention, snoring with or without pauses in breathing
 - Limp/joint pain/Slipped Capital Femoral Epiphysis; particularly pain in knee, thigh or groin all of which can be result of referred pain from the hip.
 - Polycystic Ovarian Syndrome; irregular menses, hirsutism, acanthosis nigricans
 - Pseudotumor Cerebri; headache, vomiting, visual changes
 - Hypertension
 - Verify BP
 - Laboratory Evaluation
 - Fasting lipid profile
 - Fasting glucose
 - Random glucose and random cholesterol may be ordered if the child is unable to return for fasting labs.
 - Assess family's level of concern about weight

- ***Children and adolescents 2-18 y/o with BMI at or above the 95th percentile should be considered obese.***
 - Review family history as noted above.
 - Medical history/review of systems as noted above.
 - Verify BP
 - Laboratory Evaluation
 - Fasting lipid profile, fasting glucose, AST, ALT
 - Fasting insulin and OGTT, Hb-A₁C(if clinically warranted)
 - TSH (when clinically appropriate)
 - Dietary assessment
 - Quantity, quality, and frequency of food intake
 - Physical Activity Assessment
 - Assess level of activity vs. inactivity (# hours watching TV, playing video games, computer use etc.)
 - Family Readiness
 - Assess family's level of concern about weight

Weight Management

Infants and children up to age 2

- Weight loss not generally recommended in this age group unless the excess weight is causing motor delays. In this rare situation patient should be referred to a pediatric tertiary care facility.

Children age 2 to <7 years of age

- **Weight maintenance** is the goal for children who are overweight (BMI 85% - 94%) and for those who are obese (BMI 95% - 98%) with no identifiable obesity-related medical disorders,
- **Weight loss** is recommended if the patient is obese (BMI >95%) and has obesity-related disorders and/or positive family history.
 - *Proceed with great caution, supervise closely and refer to nutritionist*
 - Recommended weight loss at 1-2 lb/month to reduce BMI to below 85%.

Children age 7-18

- **Weight maintenance** for overweight children and adolescents (BMI 85% - 94%) without positive family history of risk factors or obesity-related medical disorders.
- **Weight loss** for overweight children and adolescents (BMI 85% - 94%) with positive family history of risk factors or obesity-related medical disorders at a rate of 1-2 lb/mo.
- **Weight loss** for those who are obese (BMI 95% - 98%) but no complications at a rate of 1-2 lb/mo. Goal of weight loss should be reduction of BMI to below 85th percentile.
- **Weight loss** for those with severe obesity (BMI >99% or BMI>40). *Some patients with significant risk factors may need a weight loss of 4 – 8 pounds per month under supervision of a doctor or referral to a weight management center.*
 - *Goal of weight loss should be reduction of BMI to below 85th percentile.*
 - *Patients with severe obesity should be referred to obesity clinic and should have nutrition consult.*

**Philadelphia Department of Public Health
CHILDHOOD OBESITY FLOW SHEET**

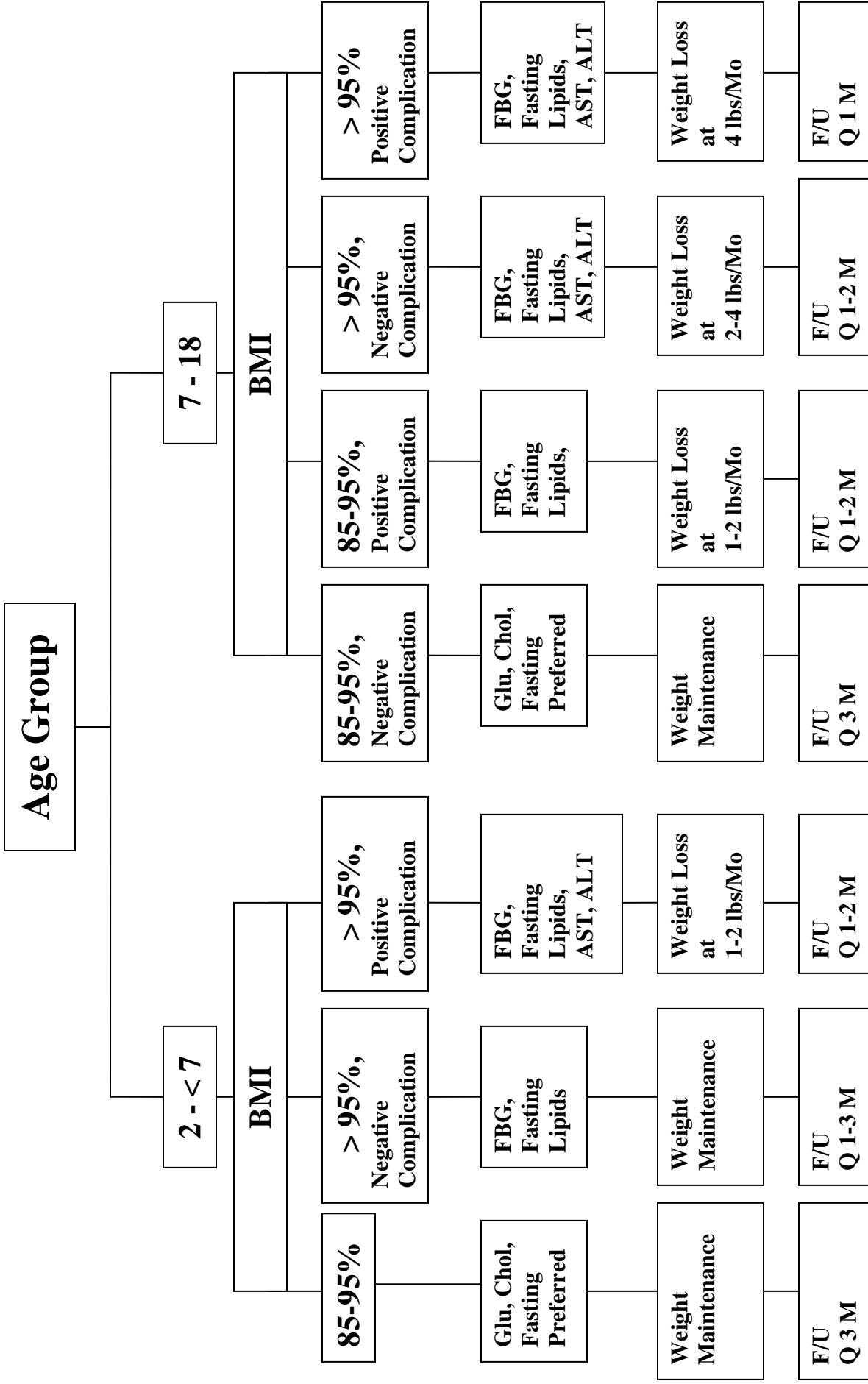
Name:

DOB:

MR #:

<u>Personal History</u>		<u>Family History</u>	
Diabetes Mellitus	Yes <input type="checkbox"/> No <input type="checkbox"/>	Diabetes Mellitus	Yes <input type="checkbox"/> No <input type="checkbox"/>
Hypertension	Yes <input type="checkbox"/> No <input type="checkbox"/>	Heart Disease <50	Yes <input type="checkbox"/> No <input type="checkbox"/>
Dyslipidemia	Yes <input type="checkbox"/> No <input type="checkbox"/>	Hyperlipidemia	Yes <input type="checkbox"/> No <input type="checkbox"/>
S/O PCOS	Yes <input type="checkbox"/> No <input type="checkbox"/>	Hypertension	Yes <input type="checkbox"/> No <input type="checkbox"/>
Snoring / Sleep Apnea	Yes <input type="checkbox"/> No <input type="checkbox"/>	Stroke <50	Yes <input type="checkbox"/> No <input type="checkbox"/>
Joint Problems	Yes <input type="checkbox"/> No <input type="checkbox"/>	Obesity	Yes <input type="checkbox"/> No <input type="checkbox"/>
Frequent Headaches	Yes <input type="checkbox"/> No <input type="checkbox"/>	Asthma	Yes <input type="checkbox"/> No <input type="checkbox"/>
Asthma	Yes <input type="checkbox"/> No <input type="checkbox"/>	Other Condition	_____

Date							
Weight							
Height							
BMI							
BMI %ile							
BP							
BP%ile							
Physical Activity min/day							
# Oz soda & juice/day							
# Serv frt & veg/day							
Motivational Stage (1 – 5)							
Lab date:							
Fasting – yes / no							
Total Cholesterol							
HDL Cholesterol							
LDL Cholesterol							
Triglycerides							
Glucose							
Insulin							
AST / ALT							
Hgb:							
Other:							
Recreational Program Referral							
Nutrition Referral							
Return Visit							
Reviewer's Name							



Protocol for Lab evaluation and weight management of overweight and at-risk overweight children and adolescents 2-18 y/o.
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