

MANAGEMENT OF HIGH TRIGLYCERIDES IN CHILDREN

High triglycerides (hypertriglyceridemia) in children are becoming increasingly common, often related to obesity, poor diet, insulin resistance, and sedentary lifestyle. Early recognition and treatment are important to reduce the risk of pancreatitis and future cardiovascular disease.



WHAT ARE TRIGLYCERIDES?

Triglycerides are a type of fat found in the blood. After eating, the body converts extra calories into triglycerides and stores them in fat cells for energy use later.

NORMAL TRIGLYCERIDE LEVELS IN CHILDREN (Fasting)

AGES 0-9 YEARS

- Normal: <75 mg/dL
- Borderline: 75-99 mg/dL
- High: ≥100 mg/dL

AGES 10-19 YEARS

- Normal: <90 mg/dL
- Borderline: 90-129 mg/dL
- High: ≥130 mg/dL

CAUSES OF HIGH TRIGLYCERIDES



Lifestyle-Related Causes

- Obesity or overweight
- Excess sugar intake
- Sugary drinks and processed foods
- Sedentary lifestyle
- Excess calorie consumption



Medical Causes

- Diabetes mellitus
- Insulin resistance
- Liver disease
- Certain medications (steroids, isotretinoin, etc.)
- Hypothyroidism
- Kidney disease



Genetic Causes

- Familial hypertriglyceridemia
- Familial combined hyperlipidemia
- Rare inherited lipid disorders

SYMPTOMS

Most children have no symptoms. Severe elevations may cause:

- Abdominal pain
- Pancreatitis
- Fatty liver disease
- Skin findings (xanthomas)
- Enlarged liver or spleen



EVALUATION



Important Tests

- Fasting lipid panel
- Blood glucose or HbA1c
- Liver function tests
- Thyroid function tests
- Kidney function tests



Assess Risk Factors

- Family history of high cholesterol or heart disease
- Obesity
- Hypertension
- Diabetes

TREATMENT & MANAGEMENT

1

LIFESTYLE MODIFICATION (First-Line Therapy)



HEALTHY DIET

Encourage: Fruits, vegetables, whole grains, lean proteins, fish rich in omega-3 fatty acids, high-fiber foods

Limit: Sugary beverages, candy and desserts, white bread, refined carbohydrates, fried and fast foods, excess saturated fats



WEIGHT MANAGEMENT

Achieve gradual healthy weight loss if overweight. Family-based lifestyle changes work best.



PHYSICAL ACTIVITY

At least 60 minutes of physical activity daily. Reduce screen time.

2

MANAGEMENT OF UNDERLYING CONDITIONS

Treat contributing disorders such as:

- Diabetes
- Hypothyroidism
- Obesity
- Kidney or liver disease

3

MEDICATIONS

Medication is usually reserved for:

- ✓ Severe triglyceride elevation
- ✓ Recurrent pancreatitis
- ✓ Failure of lifestyle therapy

Possible medications:

- Omega-3 fatty acids
- Fibrates
- Statins (in selected cases)



Management should ideally involve a pediatric lipid specialist.



WHEN ARE TRIGLYCERIDES DANGEROUS?

Very high triglycerides (typically >500-1000 mg/dL) significantly increase the risk of acute pancreatitis, which is a medical emergency.



WATCH FOR WARNING SIGNS:

- Severe abdominal pain
- Nausea or vomiting
- Abdominal swelling

PREVENTION TIPS



Encourage healthy family eating habits



Promote regular exercise



Limit sugary drinks



Maintain healthy body weight



Routine pediatric checkups



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CARDIAC DIET

Eat for a Healthy Heart, Live for a Better Life

A heart-healthy eating plan can help lower blood pressure, reduce cholesterol, and support a strong, healthy heart.



✓ FOCUS ON



1 FRUITS & VEGETABLES

- Rich in vitamins, minerals, fiber and antioxidants
- Aim for a variety of colors every day



2 WHOLE GRAINS

- Choose whole grains like oats, brown rice, quinoa, and whole-wheat bread
- Help lower cholesterol and keep blood sugar stable



3 LEAN PROTEINS

- Choose fish (especially fatty fish like salmon), skinless poultry, beans, lentils, and tofu
- Build and repair tissues while supporting heart health



4 HEALTHY FATS

- Choose olive oil, nuts, seeds, and avocado
- These healthy fats support heart function
- Use in moderation



✗ LIMIT OR AVOID



HIGH-SODIUM FOODS

- Processed foods
- Canned soups
- Fast food

Too much sodium can raise blood pressure and strain your heart.



SUGARY FOODS & DRINKS

- Soda
- Candy & desserts
- Sweetened beverages

These add empty calories and increase the risk of obesity and heart disease.



SATURATED & TRANS FATS

- Fried foods
- Fatty red meat
- Butter, margarine, shortening

These can raise LDL (bad) cholesterol and increase heart disease risk.

KEY PRINCIPLES



EAT MORE FIBER

To help lower cholesterol



REDUCE SALT (SODIUM)

Helps control blood pressure



CHOOSE HEALTHY FATS

For a stronger heart



CONTROL PORTION SIZES

To maintain a healthy weight



STAY HYDRATED

Drink plenty of water daily



STAY ACTIVE

Pair healthy eating with regular activity

SAMPLE DAY (SIMPLE)



BREAKFAST

Oatmeal with berries and a sprinkle of nuts



LUNCH

Grilled chicken salad with olive oil dressing



DINNER

Baked salmon, brown rice, steamed vegetables



SNACK

A piece of fruit or a handful of nuts



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