# Information registration form in the registration system of assessment and treatment of fatty liver in Iranian children

-Information of the responsible expert		
Center Code:		
Name:		
University or affiliated organization:		
Address:		
Province City Phone Number:		
Email Address		
-Patient details in the first referral session:		
•Patient code Date of birth Date of first visit to the doctor:		
•Age at first visit Gender Race Ethnicity:		
•Mother's education level:		
•Degree of sexual maturity:		
•Other diseases:		
Obesity Diabetes Insulin resistance Dyslipidemia other diseases (name of disease(		
In case of illness, the drugs and treatment methods used at present should be mentioned:		
Initial evaluation:		
•Height (cm): Weight (kg): Hip circumference (cm): Waist circumference (cm)		
Abdominal fat content (waist to waist ratio)		
Body composition:		
•Blood pressure		

Low normal high grade 1 hypertension grade 2 hypertension

• Percentage of weight for height in children <2 years

Below the 3rd percentile

Between the 3rd and 15th percentiles

Between the 15th and 50th percentiles

The 50th percentile

Between the 50th and 85th percentiles

Between the 85th and 97th percentiles

Above the 97th percentile

- Body mass index and its z score
- BMI:

Less than 18.5 18.5 to 24.9 25 to 29.9 30 to 34.9 35 to 39.9 More than 40

Z score:

Below -3 - 3- to 2 - 2- to 1- 1- to 0 0 to 1+ 1+ to 2+ 2+ to 3+ above 3+

• Percentage of waist circumference in children ≥ 2 years

50th percentile below 50th percentile above 50th percentile

Percentage of height

50th percentile below 50th percentile above 50th percentile

• Family history: (can be more than one case)

First-degree relatives

Non-alcoholic fatty liver

Cirrhosis

Type 2 diabetes

Gestational diabetes

Cardiovascular disease (especially hypertension)

Premature cardiovascular disease or death (such as heart attack or stroke)

Hypothyroidism

Cushing's syndrome

Pseudohypoparathyroidism

Hypothalamic obesity after craniopharyngeal surgery Obesity surgery 2

Dislipidemia

obesity

apnea

Duration of breastfeeding in infancy:

Non-breastfeeding mother under 6 months 6 to 12 months 12 to 18 months 2 years

Duration of exclusive breastfeeding in infants:

Rapid weight gain under the age of 1: Yes, no

- Early onset of childhood obesity (BMI <85th percentile between 24 and 54 months): Yes No
- Hours of sleep during the day
- Family financial situation: poor, average, good, excellent
- Maternal gestational diabetes: Yes, no
- Poor maternal nutrition during pregnancy: Yes, no

## • Birth weight

- Endocrine disorders:
- Cushing's syndrome Pseudohypoparathyroidism Hypothalamic obesity after craniopharyngeal surgery Hypothyroidism Leptin deficiency Growth hormone deficiency Other disorders (to be mentioned)
- Genetic Syndromes: Prader-Willi Syndrome Bardet-Biedl Syndrome Other Syndromes (to be named)
- History of drug use:
- Drug abuse: Yes, no

If yes, type of drug:

## Complications

 Complications and disabilities associated with non-alcoholic fatty liver: (one or more options may be available)

Feeling tired and lethargic Obesity General weakness

Decreased appetite confusion and impaired concentration insulin resistance

Polycystic ovary Other complications (to be mentioned)

- Clinical signs: (one or more options may be available)
- Symptoms associated with obesity include:

Persistent snoring and puffiness polyuria polydipsia morning headache

Blurred vision headache vaginitis or fungal discharge in girls

Hyperactivity and lack of concentration in early childhood Acne Abdominal pain Irregular period

Hirsutism Pelvic pain | Musculoskeletal symptoms Purple stria

Acanthosis nigricans Dysmorphic disorders Hypogonadism Red hair

Other symptoms:

Restless sleep General fatigue and / or excessive drowsiness on the day of unexplained weight loss

Feeling of discomfort in the right upper abdomen, delayed growth, nausea, diabetes

- Mental health problems:
- Obesity-related issues:

Absence or refusal from school being bullied by peers in terms of weight and appearance

Sexual activity Persistent anxiety Depression Drug use

- Self-harm Family behavior (family attitude towards weight and obesity): positive negative
- Eating Disorders: Anorexia Nervosa (Restrictive, Overeating Cleansing) Nervous Disorders Severe Hyperphagia Other Disorders (Name It)
- Other problems:

Confusion and lack of concentration, sudden anger, aggression

• Barriers to proper nutrition:

Consumption of foods with high energy density Large size of food Availability of unhealthy foods in schools and society Stimulating factors in the environment such as fatigue stress, loneliness or watching TV or playing computer games, etc.)

#### Diet check:

• Cereals: (according to Krauss's definition) Specify its type (whole or refined)

8 serving per day and more 5 to 7 units 1 to 4 serving no consumption

Dairy: (according to Kraus definition) to determine its type (low fat, medium, high fat)

4 serving and more per day 1 to 3 serving no consumption

- Fruits: (as defined by Krauss)
- 4 serving and more per day 1 to 3 serving no consumption
  - Vegetables: (as defined by Krauss)
- 4 serving and more per day 1 to 3 serving no consumption
  - Fat: (as defined by Krauss)
- 10 serving per day and more 5 to 9 serving 1 to 4 serving no consumption
  - Red meat: 5 to 7 times a day 3 to 5 times a week 1 to 3 times a week no consumption

## Dietary supplements used:

- Protein supplement dose duration of use
- Multivitamin-mineral supplement Dosage Duration of use
- Supplement B complex Dose Duration of use
- Supplement B12 Dose Duration of injection sublingual
- Calcium supplement dosage Duration of use
- Vitamin D supplement Dosage Duration
- Vitamin C supplement Dosage Duration
- Iron supplement dosage Duration of use
- W3 Fatty Acid Supplement Dosage Duration
- -Barriers to proper physical activity: screen time more than 2 hours a day the presence of chronic disease or disability, etc
- -Laboratory information collected in less than 1 year from the first referral and after:

Date of test Number of days since the first visit Fasting status

## Laboratory factors evaluated in the patient's blood:

- Fasting blood sugar
- bilirubin
- Fasting triglyceride ALT
- ALT / AST AST
- Fasting LDL Cholesterol
- GGT
- Fasting total cholesterol
- A1C hemoglobin
- Amylase ALK-P
- Non-HDL cholesterol (can be non-fasting)
- Serum calcium

- Serum T3 phosphate
- T4
- Albumin
- TSH
- BUN
- 25 Hydroxyvitamin D
- creatine
- Zinc level

# Treatment method used to treat non-alcoholic fatty liver:

- a. Initial advice on proper nutrition and physical activity
- B. Structural weight management includes
  - recording time watching TV and computer games
  - recording three days of food and beverage consumption
  - participating in planned and supervised physical activities for 1 hour a day
  - suggesting appropriate motivations to reinforce purposeful behaviors by parents Use a specific diet plan with meals and snacks specified by a nutritionist
- c. Adjusting calorie intake

Maintaining a maximum weight loss of 0.45 kg per month Weight loss of a maximum of 0.45 kg per week

Weight loss of a maximum of 0.9 kg per month

d.Medication: Orlistat (dose), metformin (dose), vitamin E (dose), UDCA (dose), Liver gol (dose), other drugs......

e.Surgery

#### Information collected in each visit:

- Service date:
- Hours set for non-alcoholic fatty liver treatment (program intensity)
- Number of days since the first visit:
- Meeting format (single counselor or multiple counselors in individual or group meeting):
- Expertise of the person:
- Insurance status:
- Height (cm):
- Weight (kg):
- Hip circumference (cm):
- Body composition:
- blood pressure:

- •Changing the treatment method used to treat non-alcoholic fatty liver: Yes, no
- •If the answer is yes, specify the treatment of choice:
- -Initial advice in the field of proper nutrition and proper physical activity
  - Structural weight management including: recording time watching TV and computer games, recording three days of food and beverage consumption, participating in planned and supervised physical activities for 1 hour a day, suggesting appropriate motivations to reinforce purposeful behaviors by Parents, use a specific diet plan with meals and snacks specified by a nutritionist
  - Adjust calorie intake to: maintain a maximum weight loss of 0.45 kg per month Weight loss of a maximum of 0.45 kg per week Weight loss of a maximum of 0.9 kg per month
  - Medication: Orlistat (dose), metformin (dose), vitamin E (dose), UDCA (dose), Liver gol (dose), other drugs.......
  - Surgery

## Special information for selected surgical patients

- o Patient details:
- Age: Gender:
- Height (cm): Weight (kg): Body mass index:
- Duration of proper diet and physical activity (with or without medication):
  - Percentage of weight loss caused by following a proper diet and physical activity (with or without medication)
  - Degree of maturity (Tanner)Other problems and diseases:
  - Obesity
  - Type 2 diabetes
  - o Moderate to severe sleep apnea
  - o False brain tumor
  - High blood pressure
  - Insulin resistance
  - Glucose intolerance
  - Significant disturbance in daily life activities or poor quality of life
  - o Dyslipidemia
  - Sleep apnea with apnea index -Hypopenia> 15%

•Surgical	l proced	lure:
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Sleeve Bypassed Liver transplant Other methods (specify the type......)

Radiological examinations:

- Gallstones
- o Bone mineral density using dual-energy Xrayabsorptiometric method
- Ultrasound of the liver
- Ultrasound of the spleen

- Nutrition counseling if fatty liver is diagnosed
- -Date
- -Type of intervention:
  - o Balanced and healthy diet Weight loss Weight loss Training self-control techniques
  - o 1000 kcal diet 10 days before surgery
  - Use of dietary supplements and its type
  - o Advice on diet plan immediately after surgery and how to improve it
- Management of nutrition after surgery
  - Step 1: Liquid-free liquids

Duration of energy consumption (kcal / day) Protein (g / day) Fluids (cc / day) Number of servings per day

Step 2: Complete fluids with high protein

Duration of energy consumption (kcal / day) Protein (g / day(

Fluids (cc / day) Number of servings per day

Step 3: Foods with smooth texture and liquids

Duration of energy consumption (kcal / day) Protein (g / day(

Fluids (cc / day) Number of servings per day

Step 4: Soft foods

Duration of energy consumption (kcal / day) Protein (g / day(

Fluids (cc / day) Number of servings per day

Step 5: Return to normal diet

Energy (kcal / day) Protein (g / day) Fluids (cc / day) Number of servings per day

- Dietary supplements used:
- Protein supplement dose duration of use
- Multivitamin-mineral supplement Dosage Duration of use
- Supplement B Complex Dose Duration of use
- Supplement B12 Dose Duration of injection sublingual

- Calcium supplement dosage Duration of use
- Vitamin D supplement Dosage Duration
- Vitamin C supplement Dosage Duration
- Iron supplement dosage Duration of use
- Supplement on dose duration of use
- W3 Fatty Acid Supplement Dosage Duration
- •Evaluation of laboratory parameters after surgery
- Date:
- -Type of test:

CBC, liver enzymes, iron, ferritin, TIBC, erythrocyte transcatolase activity, plasma PLP, serum folate, erythrocyte folate, homocysteine, urinary / serum B12, plasma retinol, methyl malonic acid, ionized calcium, 25-hydroxyvit Serum, phosphorus, plasma vitamin C, plasma alpha tocopherol, serum zinc, serum magnesium, serum copper, serum albumin.

- Assess the success of surgery
- -Percentage reduction of the patient's overweight to his ideal weight:.

Reassessment of laboratory parameters

-blood pressure

Obstructive sleep apnea.