

# ADULT PATIENTS

Patient Lifestyle Education Materials



GLOBAL NASH/  
MASH COUNCIL

# Step into health: walk your way to a healthy liver

## Reducing sitting & screen time



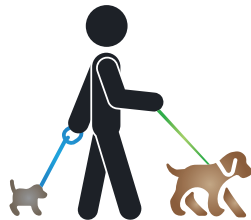
It is important to interrupt prolonged sitting time (every 45 minutes) with short bouts of exercise or activity: *2 - 3 minutes of stretches, 1 leg squats, & jumping*



## Be as active as you can



EVERYDAY ACTIVITIES ALSO MAKE A DIFFERENCE!



HOBBIES CAN PROMOTE PHYSICAL ACTIVITY

## Exercise/activity

(Source: <https://www.cdc.gov/physicalactivity/basics/age-chart.html>)

### Adults (18-64 years)

Important to keep moving and reduce sitting time  
≥15-30 Min everyday:

- Aim to sweat, get heart rate up so that you can only talk for short periods while exercising

≥2 Days/week of activities that strengthen muscles:

- Aim to perform body weight, resistance band, free weight, or weight machine exercises for your upper and lower body for several reps in a controlled and safe manner

Also recommended:

- Stretching, one leg standing for 60 seconds and yoga or Pilates

### Adults (≥65 years)

Focus on daily activity/exercise to reduce sitting time  
≥15-30 Min/ daily to improve:

- Mobility/walking
- Balance
- Flexibility
- Strength

Specific recommendations-

≥2 Days/week for muscle strengthening:

- Strengthening of upper and lower limbs (using body weight or resistance band)

Nice to add

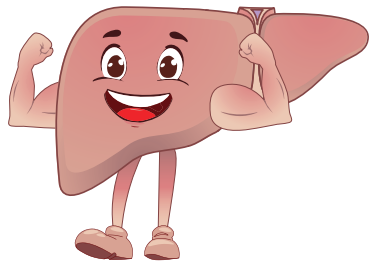
- Sessions with instructors for yoga & Pilates

## The liver will be grateful

Physical activity improve liver and overall health

- ✓ Reduction of liver fat independence of weight loss
- ✓ Improved liver enzymes
- ✓ Maintenance of weight loss
- ✓ Improved fitness and exercise tolerance
- ✓ Decreased belly fat

Please note that these are general recommendations and should not be considered a substitute for personalized advice from a professional



# General lifestyle recommendation for patients with MASLD

## Reduce weight

- Target  $\geq 5\%$  reduction from your current weight

## Be active

- Make small changes to your daily routine, like using stairs instead of the elevator and walking from place to place
- Cut down on screen time to reduce sitting time
- Boost your physical activity
- Remember, every extra step you take counts!

## Eat healthy

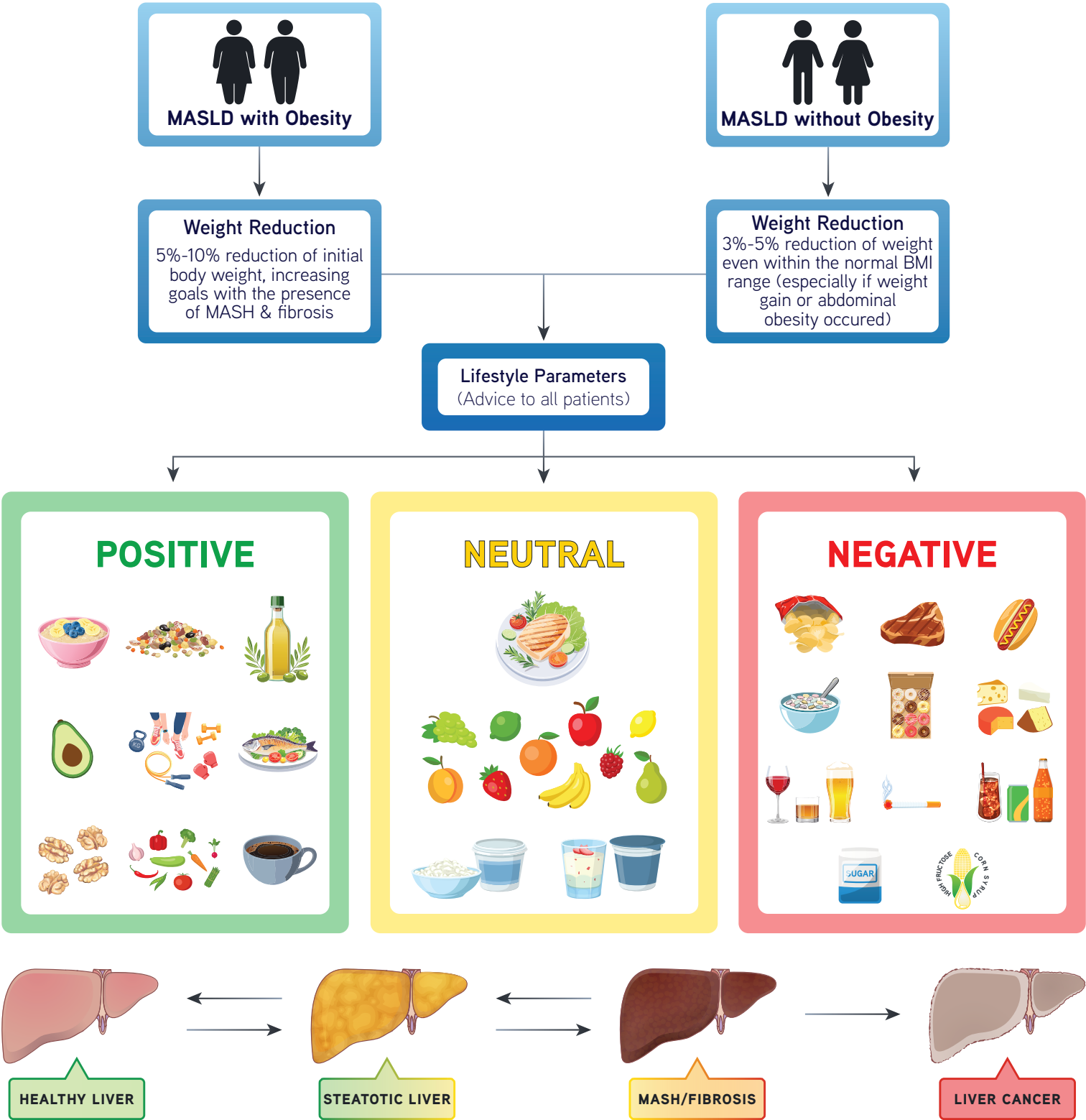
- Eat slowly, without screens
- Read carefully food labeling indicating the list of ingredients and the nutritional value. Select foods with a short ingredients list and with the fewest preservatives and additives
- Avoid ultra-processed food
- Avoid all types of sugar sweetened beverages

## Get support

- Join structured diet and exercise programs with long-term support
- Set realistic and achievable goals for weight reduction and lifestyle change
- Seek advice from clinical dietitians and physical activity experts
- If necessary, consult with psychologists or behavior change experts for support
- Utilize digital health tools, such as apps tracking steps or meals, to enhance lifestyle adherence

## Reduce stress levels

- Find time to do what you like and make you calm
- You can practice stress reduction techniques (breathing, mindfulness, etc)
- Try to sleep 7-8 hours/ night and avoid screens 2 hours before bedtime
- Avoid smoking or go to smoking cessation programs
- Avoid drinking alcohol



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# Recommended nutritious grocery list

## Vegetables (≥5 per person/day)

- Fresh, colorful vegetables
- Green leafy vegetables
- Frozen vegetables without additives



## Beverages

- No need 😊, there is water at home
- You can buy carbonated water, coffee, tea, green tea, herbal infusions



## Fruits (≤3 per person/day)

- Fresh, colorful fruits
- Berries
- Frozen fruits without additives



## Unsaturated fats

- Olive oil
- Avocado
- Almonds, walnuts/pecans/Brazil nuts (up to 2 a day), hazelnuts
- Flax seeds chia/natural sunflower/pumpkin seeds
- Raw tahini
- Natural peanut butter



## Protein

### Vegetarian/vegan

- Legumes (dry, frozen): Lentils, dry peas, chickpeas, various beans (white/red/speckled, etc.), Soybeans, red beans, lupine
- Tofu, seitan, dried soy flakes without additives



### Dairy products

- Cheese (up to 5% fat content)
- Natural bio yogurt (unsweetened, 1.5-5% fat)
- Milk (1%-3% fat)



### Animal sources

- Fresh or frozen fish without additives
- Chicken, chicken breast, turkey, turkey breast
- Tuna in water or olive oil, sardines
- Eggs



## Bread and cereal

- Whole grains: Quinoa, buckwheat, oats, basmati rice, bulgur, whole wheat pasta
- Rice noodles, bean noodles, pasta from legume flour
- Starchy vegetables: Sweet potato, corn, potato
- Whole wheat bread without preservatives
- Spelled flour/whole wheat flour/rye flour
- Chestnuts



## Spices and herbs

- Crushed tomatoes/tomato paste without additives
- Lemon, vinegar
- Dry spices, e.g., paprika, turmeric, curry, cumin, cinnamon, pepper, nutmeg, thyme, oregano
- Fresh herbs, e.g., coriander, parsley, basil, mint, dill, oregano, thyme (consider growing them in a garden)
- Ginger



**YOUR CHOICES IN THE GROCERY AFFECT  
YOUR FAMILY'S CONSUMPTION AND HEALTH!**

# Ultra-processed food

## Why are ultra-processed foods and drinks bad for us?




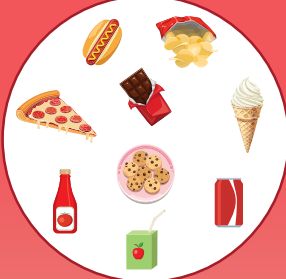
- Ultra-processed foods (UPF) and drinks are common in Western diets
- They have low nutritional value, contain additives, and go through many processes to become the final product
- They often have high amounts of unhealthy ingredients like saturated fats, high-fructose corn syrup, additives, and preservatives
- In their package, there are some harmful plastics like endocrine-disrupting chemicals (EDCs)

Grinshpan LS. et al., *JHEP Reports*, 2024

## What is the practical way to identify if a product is ultra-processed?

UPF contains characteristic ingredients of no or rare culinary use in your kitchen, for example:

- Hydrolyzed proteins
- Fructose, high-fructose corn syrup
- Hydrogenated oil
- “Cosmetic additives”- flavors, colors, emulsifiers
- Palm oil
- UPF tends to be high in energy, salt, sugars (mainly fructose or high fructose corn syrup), and fat (in particular saturated fatty acids), with low nutritional value
- UPF is usually very easy to use, ready to eat/heat, durable, and hyper-palatable
- UPF is packed in plastics and cans
- Usually, UPF contains more than 5 ingredients

NOVA Food Classification			
UNPROCESSED OR MINIMALLY PROCESSED FOODS	PROCESSED CULINARY INGREDIENTS	PROCESSED FOODS	ULTRA-PROCESSED FOODS
<p>Foods which did not undergo processing or underwent minimal processing techniques, such as fractioning, grinding, pasteurization &amp; others</p> 	<p>These are obtained from minimally processed food &amp; used to season, cook, &amp; create culinary dishes</p> 	<p>These are unprocessed or minimally processed foods or culinary dishes which have been added processed culinary ingredients. They are necessarily industrialized</p> 	<p>These are food products derived from foods or parts of foods, being added cosmetic food additives not used in culinary</p> 
Legumes, vegetables, fruits, starchy roots & tubers, grains, nuts, eggs, chicken, & milk	Salt, sugar, vegetable oils, butter & other fats	Bottled vegetables or meat in salt solution, fruits in syrup or candied, bread, cheeses, purées or pastes	Cookies, ice cream, shakes, ready-to-eat meals, soft drinks & other sugary drinks, hamburgers, & nuggets

Adopted from Oliveira P., *Frontiers in Nutrition*, 2022

## Practical recommendation to reduce UPF consumption

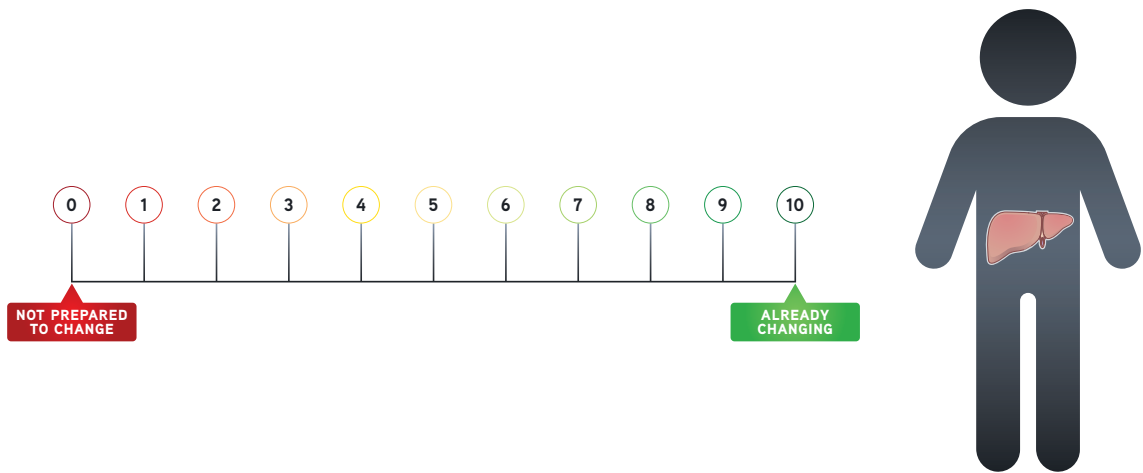
- Drink water instead of sugary drinks
- Check food labels; choose items with shorter ingredient lists
- Include more unprocessed foods in meals and snacks (like veggies, fruits, yogurt, nuts, and eggs)
- Consider baking or buying homemade bread and pastries
- Cut down on processed snacks and sweets
- Cut down on processed meat (sausages, pastrami, salami, hamburger)

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# Your journey with MASLD

## 1 Assessing your readiness to change

On a scale of 0 (not prepared at all) to 10 (already changing), where are you now in terms of your preparation to make a change in your lifestyle to lower the burden of your condition?



## 2 Your health and the infodemic



### What is the infodemic?

It is too much information, including misleading information, that can cause confusion and harm people's health

On the Internet and social media, false and misleading information tends to spread very quickly

There are many "Herbal and Dietary Supplements" that can cause liver damage  
Before consuming them, we recommend consulting with your hepatologist or nutritionist



### SEEING IS NOT ALWAYS BELIEVING!

**DO NOT** believe all the online information, as it is not always true!  
Check the reliability of your information source

#### DON'T

- Believe everything that you read on the Internet
- Follow accounts of self-claimed experts for health advice
- Buy products proclaimed as "miracle cures" for your condition
- Make decisions on your health based only on information you find online

#### DO

- Check that the information is derived from a reliable source such as a government website or scientific paper
- Follow accounts from established organizations (e.g., WHO, AHA, etc.)
- Consult with your doctor about information you find on the Internet

*STILL UNSURE WHETHER TO TRUST INFORMATION FROM AN ONLINE SOURCE?*  
Check the advice offered by the World Health Organization through this QR code



# Recommended physical activities

## Games and simple activities

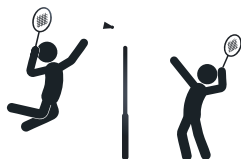
### For youth

- Playing tag, playground equipment, four square, obstacle course, playing catch with ball or playing frisbee, hula hooping, hopscotch, climbing, other group sports



### For adults

- Badminton, pickleball, golf, yard work and gardening, active home projects (painting, remodeling, organizing), volunteering, hiking, geocaching, other group sports



## Resistance activities

### For all (body weight)\*

- Upper body: push ups, pull ups, shoulder taps
- Lower body: squat, lunge, glute bridge, step up, calf raise
- Core: sit-ups, plank variations, side bends
- Yoga and pilates\*\*



### For all (can add resistance band or use light weights)

- Upper body: bicep curls, triceps extensions, lateral/front raises, chest press, seated or bent-over rows, band pull a-parts
- Lower body: clamshells, lateral band walks, leg press, romanian deadlift, hamstring curls, leg extensions

*\*Can also be done with a resistance band or free weights*

*\*\*Yoga and pilates have strong flexibility components as well*



## Aerobic activities

### For youth

- Skipping, running, gymnastics, jogging, swimming, dancing, jumping rope or trampoline jumping



### For adults

- Brisk walking, running or jogging, cycling, elliptical, swimming, dancing, kickboxing, interval/circuit training



## Other ways to boost activity levels

### For all

- Using walking or cycling as a mode of active transportation
- Parking farther away from your destination
- Using the stairs rather than an elevator
- Take walking breaks and stand more often
- Play with your pets



## Flexibility activities

### For all

- Upper body: chest, shoulder, and triceps stretches
- Lower body: hamstring, quadriceps, and calf stretches
- Total body flexibility: child's pose, cat-cow, prone cobra



**REMEMBER THAT EVEN SHORT BOUTS OF ACTIVITY CAN GO A LONG WAY!**

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# Recommended adapted physical activities

## Games and simple activities

### For youth

- Many activities can be played by wheelchair users
- Throwing balls, field games, racquet sports

### For adults

- Various sports can be played by wheelchair users
- Strengthening exercises and functional activities (such as sit-to-stand and forward reaching) can be done sitting
- Resistance bands can also be used



## Flexibility activities

### For all (*can use resistance bands*)

- Upper body: chest, shoulder, and triceps stretches
- Lower body: hamstring, quadricep, and calf stretches
- Total body flexibility: child's pose, cat-cow, prone cobra



## Resistance activities

### For all (*body weight*)\*

- Upper body: partial push ups on knees
- Lower body: glute bridge on bed, step *in place*, calf raise while seated
- Core: sit-ups, plank variations, side bends
- Yoga and pilates\*\*



### For all (*can add resistance band or use light weights*)

- Upper body: bicep curls, tricep extensions, lateral/front raises, chest press, seated or bent-over rows, band pull apart
- Lower body: clamshells, lateral band walks, leg press, romanian deadlift, hamstring curls, leg extensions



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