

BRIDGE Session #2

Improving Liver Health Outcomes in Cirrhosis Part II



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BRIDGE “ground rules”

Try your best to be on time



Encourage attendance at all 6 sessions-- no penalty for missed sessions



For Q&A: Please focus questions on behavioral aspects of liver health



During group discussion **Please provide support, not advice (unless asked)**



Participation by all members is encouraged

Mute during didactics



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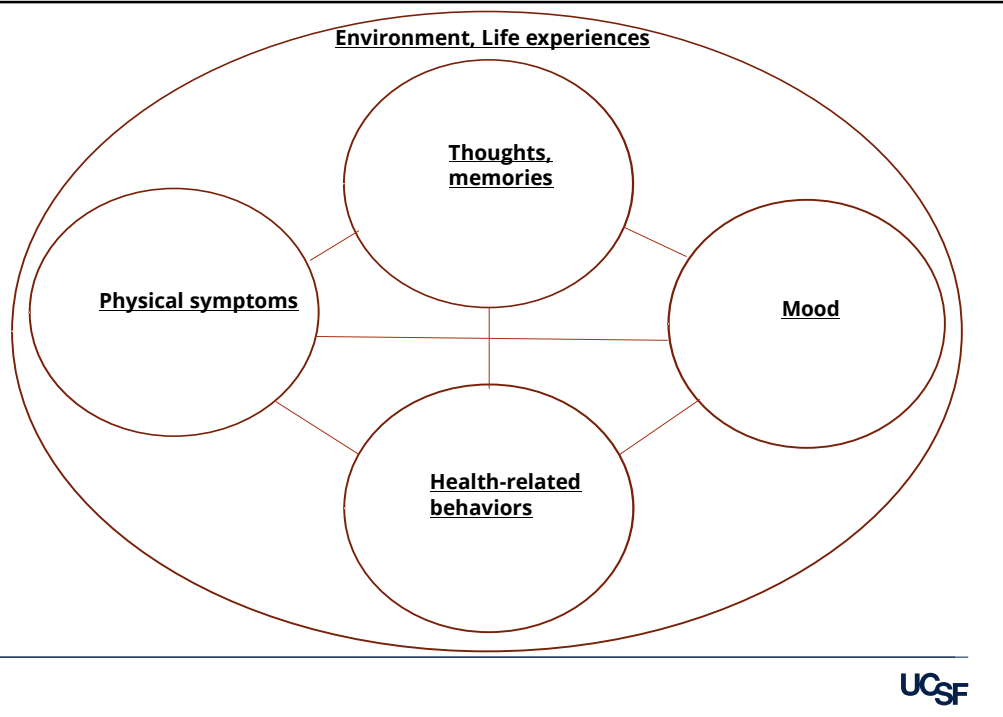
PAUSE.

NOTICE.

Hot thoughts?

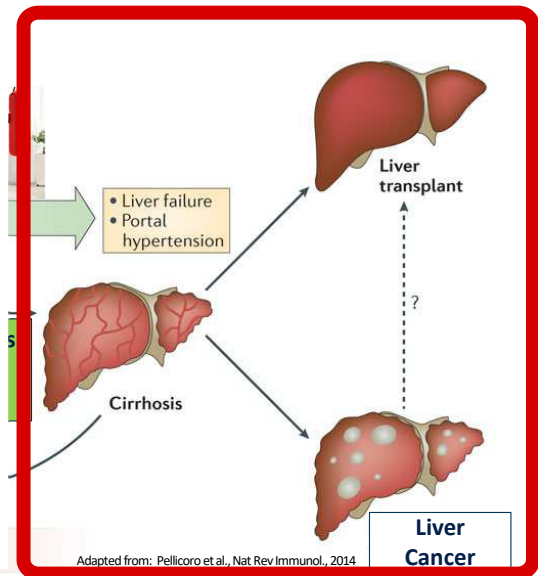
CHOOSE.

Alternative thoughts based on evidence



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Cirrhosis may regress with removal of liver injury

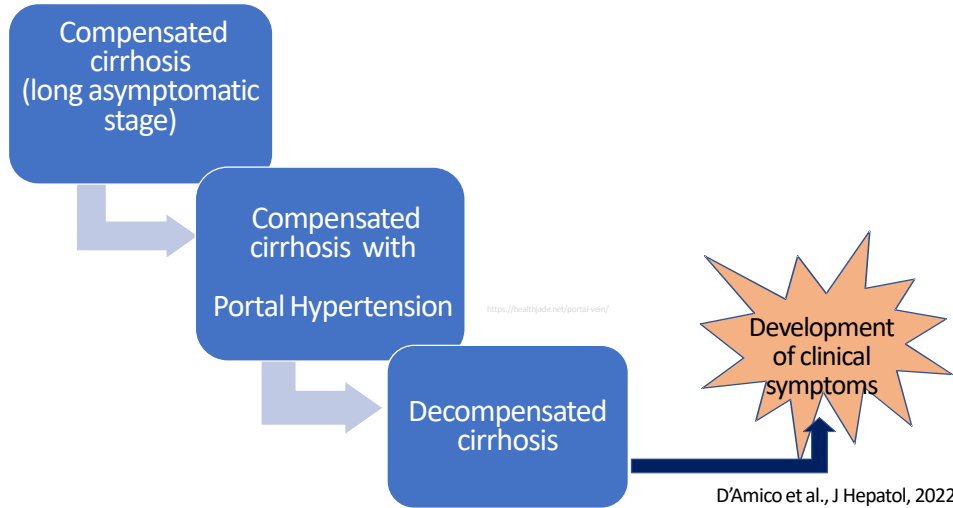


Adapted from: Pellicoro et al., Nat Rev Immunol, 2014

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Stages of cirrhosis are highly variable

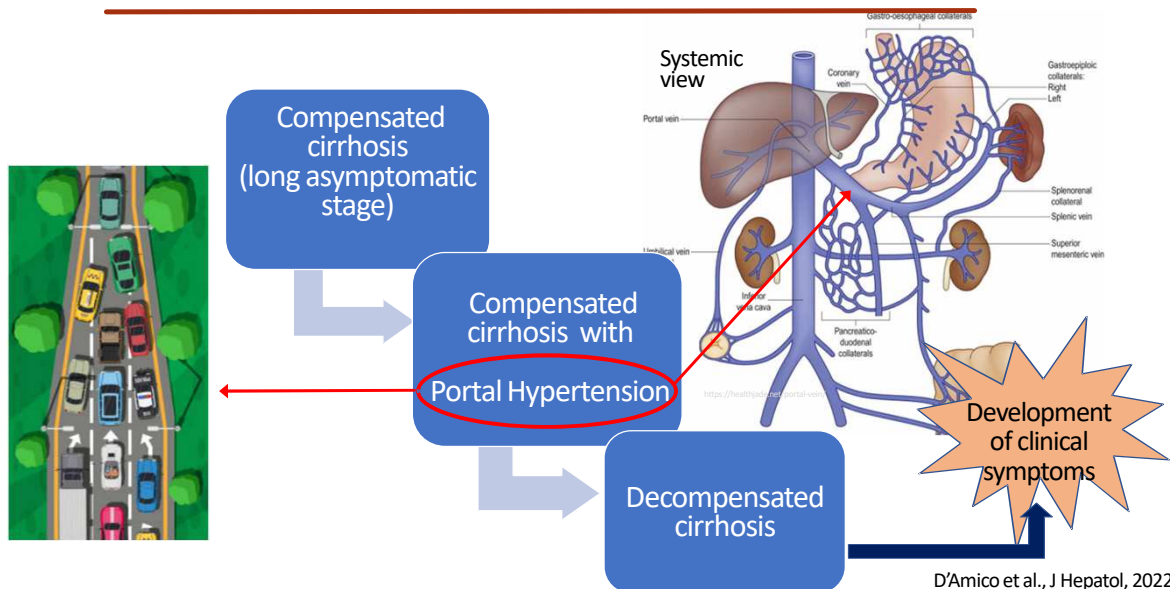


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Portal Hypertension drives progression



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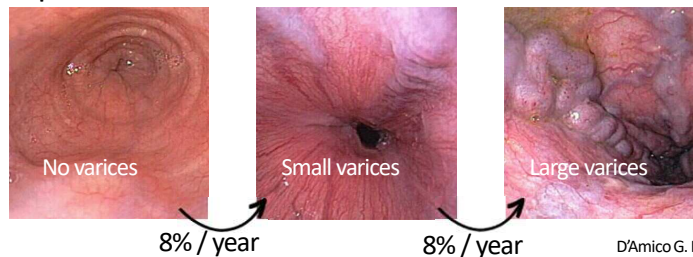
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Esophageal Varices & why do they matter?

- Esophageal varices (EV) are enlarged veins in the esophagus and stomach
- EV may be small, medium or large sized.
 - Large sized varices with high risk for bleeding
- People with cirrhosis should be considered for an upper endoscopy to prevent bleeding
- Treatment: “Banding” with/without a beta blocker medication
 - Nadolol, propranolol, carvedilol



D'Amico G. Portal Hypertension in the 21st Century, 2004

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Symptoms of Decompensated Cirrhosis?

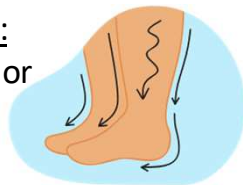
- Gastrointestinal Bleeding: most often from varices
 - Black or bloody stools/emesis



- Hepatic encephalopathy: Foggy thinking, change in sleep patterns or confusion



- Fluid retention/ascites: fluid in legs, abdomen or chest cavity



- Other organ systems may be affected such as:
 - Kidneys
 - Bones: osteoporosis
 - Muscle wasting
 - Fatigue



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Blood tests may (or may not) change over time

Liver function tests:

Normal liver function tests

Mild abnormalities may occur

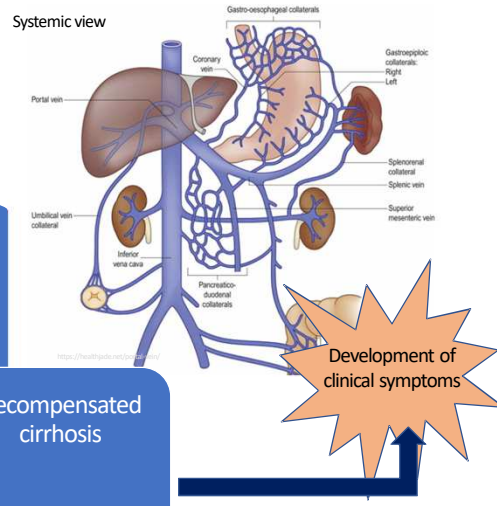
More abnormal:

- ↓ Albumin
- ↑ Bilirubin
- ↑ INR

Compensated cirrhosis (long asymptomatic stage)

Compensated cirrhosis with Portal Hypertension

Decompensated cirrhosis



D'Amico et al., J Hepatol, 2022

What is the MELD 3.0 Score and why does it matter?

Model for End stage Liver Disease

- An objective way to measure liver function
- Calculation of bilirubin, creatinine, INR, and sodium
- MELD ranges from 6-40
- Higher MELD indicates worse liver function
- MELD of ≥ 15 may be a consideration for liver transplant evaluation
- Highest MELD = highest priority to receive liver transplant

Age added to the liver transplant waiting list, years

For candidates not yet on the waiting list, select based on the candidates' age as of today.

Creatinine mg/dL [↕](#)

Total bilirubin mg/dL [↕](#)

INR

Sodium mEq/L [↕](#)

Albumin g/dL [↕](#)

Had dialysis twice, or 24 hours of CVVHD, within a week prior to the serum creatinine test

No Yes

<https://www.mdcalc.com/calc/10437/model-end-stage-liver-disease-meld>

What can I do to improve liver health outcomes?

Keeping up with your care

Regular follow up with Hepatology or GI provider for:

- Laboratory monitoring and screening for clinical symptoms
- Liver Cancer screening (discussed in session I)
- Endoscopy if indicated, to check for varices



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What can I do to improve liver health outcomes?

Lifestyle

- Lifestyle factors to prevent further injury from steatosis (fatty liver)
 - Alcohol abstinence: no amount of alcohol is safe in cirrhosis
 - Maintain a healthy weight: healthy diet, physical activity
 - Control metabolic factors: Diabetes, high blood pressure, abnormal lipids



- Avoid liver toxic substances/medicines/supplements



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What about medications that I take?



For Pain management:

Inform all your health care providers that you have cirrhosis so that they can prescribe medications appropriately

Acetaminophen (Tylenol) is SAFE for the liver in doses up to 2000mg/day in divided doses

TYLENOL ✓

NSAIDS (ibuprofen, Motrin, Advil) can worsen kidney status and increase bleeding risk so generally not recommended

Avoid medicines/supplements that may cause liver toxicity

Opioid medications or sedatives (benzodiazepines) can worsen hepatic encephalopathy and should be avoided or minimized

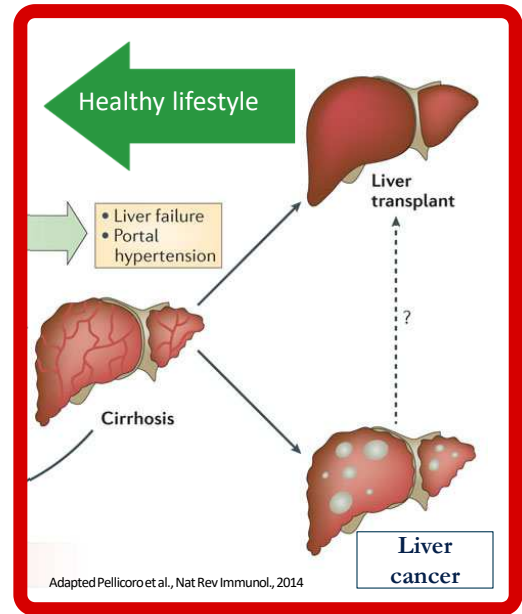


Herbals and supplements may be liver toxic



- Ask your liver provider if you'd like to start any herbals or supplements
- You can check NIH LiverTox website: <https://www.ncbi.nlm.nih.gov>

Cirrhosis can stabilize with healthy lifestyle



General Dietary/ Lifestyle Recommendations

Recommended

- Fresh fruits and vegetables
- nuts, seeds, legumes
- whole grains, rich in fiber
- Lean protein sources, fish



Recommended Activity

- mental well being management
- aerobic exercise: cardio, walking, running, swimming etc.
- resistance exercise
- reduce sedentary behavior - don't sit too much

Not recommended

- ALCOHOL

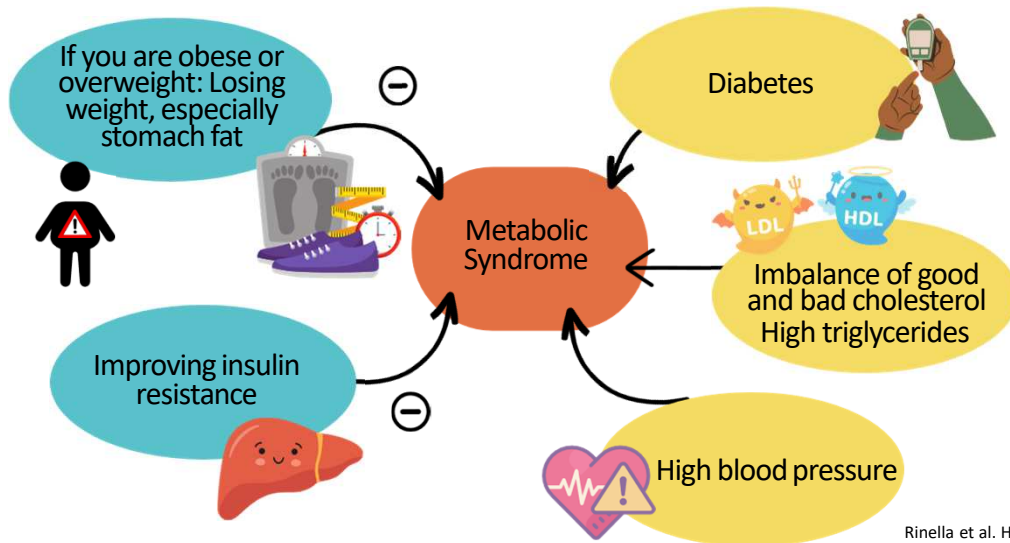


Minimize

- Ultra-processed foods
- Sugary foods and beverages
- Saturated fats



Lasting weight loss improves Metabolic Syndrome



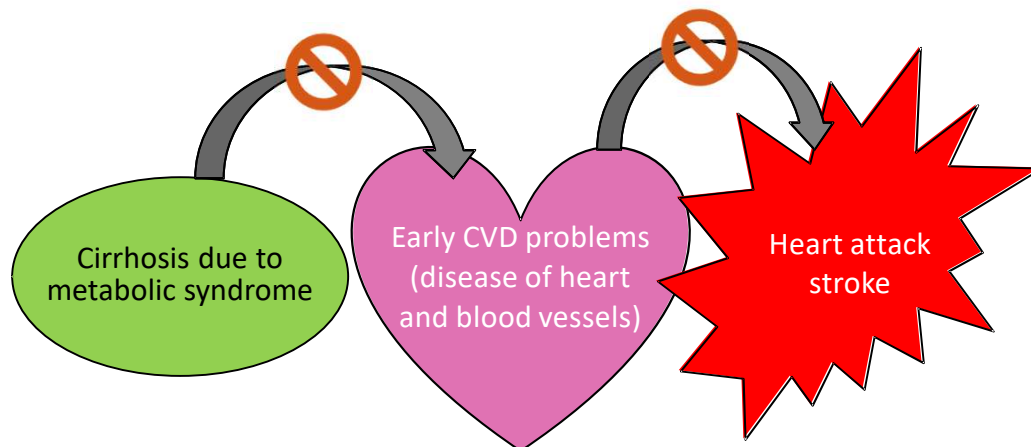
Rinella et al. Hepatology 2023;
Arnett et al. J Am Coll Cardiol., 2019

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Improving Metabolic Syndrome Decreases Cardiovascular Disease (CVD) Risk



Rinella et al. Hepatology, 2023

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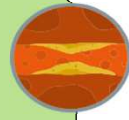
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Are treatments for metabolic syndrome safe for the liver?

Abnormal cholesterol/triglycerides:

- Statins are safe for use in liver disease and rarely associated with liver toxicity
- Statins improve cardiovascular outcomes, decreased all-cause mortality, and liver cancer



Diabetes

- Metformin can promote weight loss, may improve liver enzymes, possible anti-cancer effects
- GLP-1 containing regimens (semaglutide/tirzepatide) or SGLT-2i promote weight loss, protect kidneys and improve CV outcomes.



Obesity

GLP1-RA (semaglutide or tirzepatide) may improve MASLD through weight loss



Hypertension

- Aggressive management reduces risk for CVD
- Carvedilol is anti-hypertensive choice for people with cirrhosis



Rinella et al. Hepatology, 2023, Arnett et al. J Am Coll Cardiol., 2019

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Medications and Clinical Research Studies?

- Vitamin E is prescribed for MASLD
 - Anti-oxidant that helps protect liver cells
- Medications for steatohepatitis and to reverse liver fibrosis are currently being studied in people with cirrhosis
- UCSF has research studies
 - If you are interested in being part of a research study, you can discuss with your hepatology provider



Sanyal A et al. NEJM 2010

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Research Studies at UCSF for people with cirrhosis

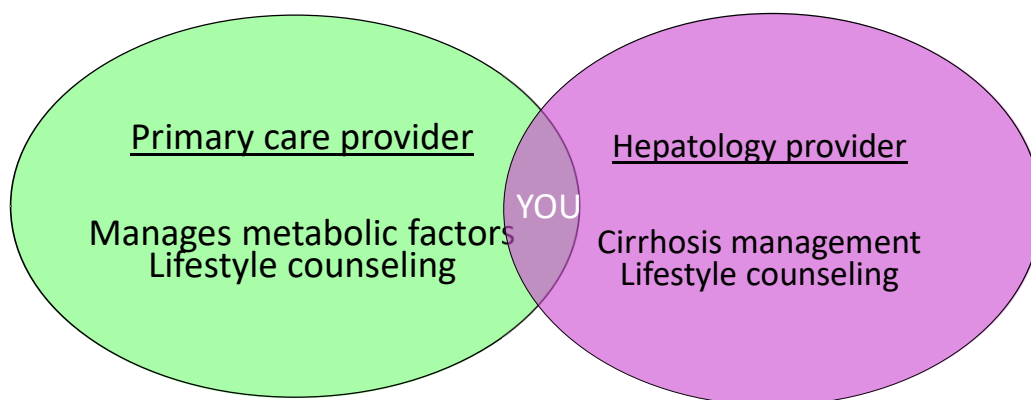
Name of study	Diagnosis	Medication	Compensation?	Principal investigator
Madrigal clinical trial Effect of resmetirom in patients with MASH cirrhosis	MASH cirrhosis	Resmetirom	Closed enrollment	Dr. Hameed
GOLDMINE study	MASLD/MASH Cirrhosis	N/A	\$50 a visit + \$50 for each MRE scan	Dr. Hameed
Liver Cirrhosis Network (LCN)	Cirrhosis due to any etiology	N/A	no	Dr. Hameed
Akero clinical trial Effect of efruxifermin in patients with MASH cirrhosis	MASH with stage 2,3 and compensated cirrhosis	efruxifermin	no	Dr. Hameed

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Collaborative care is key--with you at the center



Adapted from Brandman, CLD, 2019.

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Key Points of BRIDGE Sessions 1-2

- The clinical course of cirrhosis is highly variable, often based on type of liver disease and genetic factors



- Cirrhosis is a risk factor for liver cancer, and screening is recommended indefinitely
- Follow up with hepatology provider regularly
- Follow up with other providers to manage metabolic syndrome factors, if present

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Key Points of BRIDGE Sessions 1-2



- Cardiovascular disease is the #1 cause of death in people with cirrhosis due to MASLD and care is collaborative with your primary care provider

- There's a lot that you can do to improve liver and overall health outcomes
- No amount of alcohol is safe in cirrhosis
- Maintain healthy body weight/eating habits and regular physical activity



You are an active participant in your liver management!

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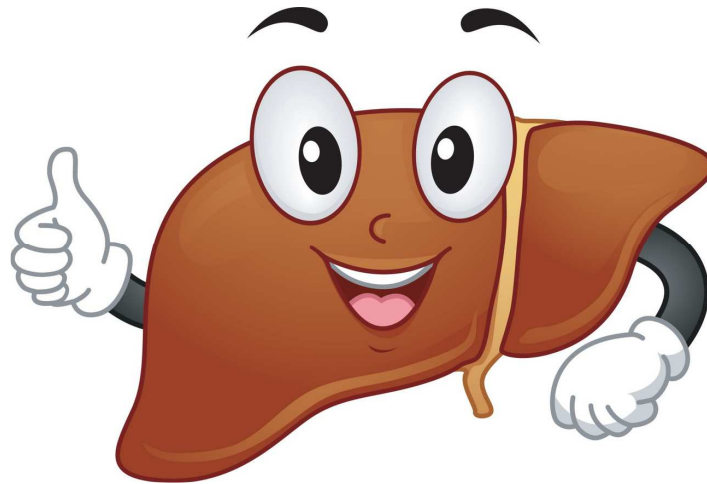
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Questions?



Clarifying the values that drive our positive health habit goals

PAUSE.

NOTICE: My values*

“What matters most to me?”

“What gives my life meaning?”

CHOOSE:

- What health habits do I want to work on?
 - Dietary habits?
 - Physical activity?
 - Sleep habits?
 - Manage stress? (ie thinking patterns, self-compassion/asking for support from others)
- On a scale of 0-10, how important is it for me to start working on this?
- Use the **BRIDGE Goal Tracker** tool to help you break your goals down into smaller actionable steps.

* Examples of values:

- Increase energy/vitality
- Feel serene/at peace
- Live longer or better
- Travel/adventure
- See kids grow
- Be role model for others

FOR NEXT TIME: BRIDGE session 3

- Come prepared with looking at and completing 1 row of the goal tracker



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