

- Module: BMHP5003
- Assessment: Introduction to Physiology
- Topic: Liver Cirrhosis
- Student name: Alisha Leigh Gocaj
- Student number: 2110659
- Lecture: Dr Laila Sarani

Introduction



We look at the anatomy and the physiology of the liver and understand why the liver is important in the functions it does as well as, what can be harmful.

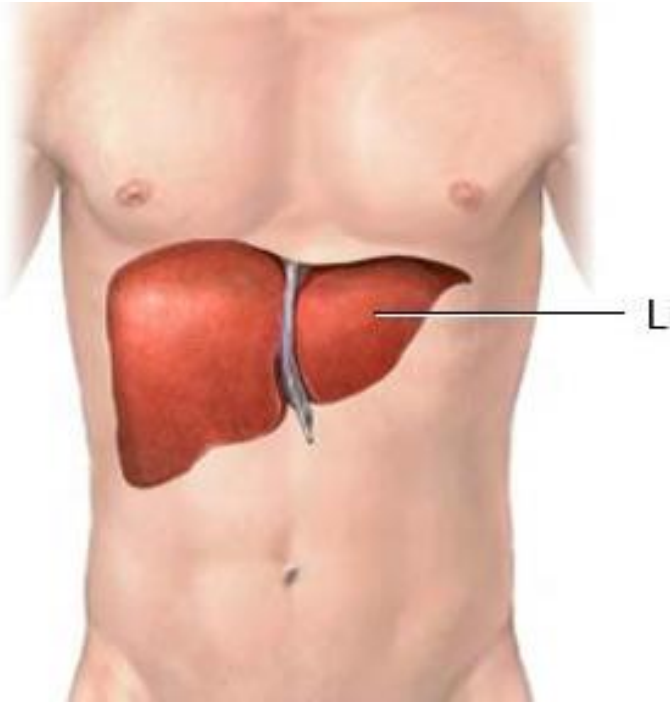


Liver cirrhosis is a disease caused by long-term neglect. This is called fibrosis which limits the function of the liver to work properly. Cirrhosis is an inflammation of the liver that damages the liver tissue and nodules (Gines,et,al. 2021.) furthermore, this can lead to liver failure if lifestyle choices are not in place.



Having a healthy lifestyle in place and information to patients can improve an individual's health and reduce individuals from developing diseases or to prolong the disease longer.

ANATOMY OF THE LIVER



- The liver is the largest vital organ in the body, weighing around 3 pounds. It accounts for one fiftieth of an adult's body weight. It is shaped like a wedge and reddish brown in color.
- It is connected by ligaments to the diaphragm walls of the abdomen.
- The liver holds 13% of the body blood supply

Figure1
(Anon,n,d.)

- The liver has 2 sides the right lobe and the left lobe however, the right lobe has 2 other minor lobes.
- Each lobe contains thousands of lobules which consist of liver cells called hepatocytes.
- The liver has 2 distinct sources that supply blood to the liver.

(UPMC/ Life changing Medicine, 2019)

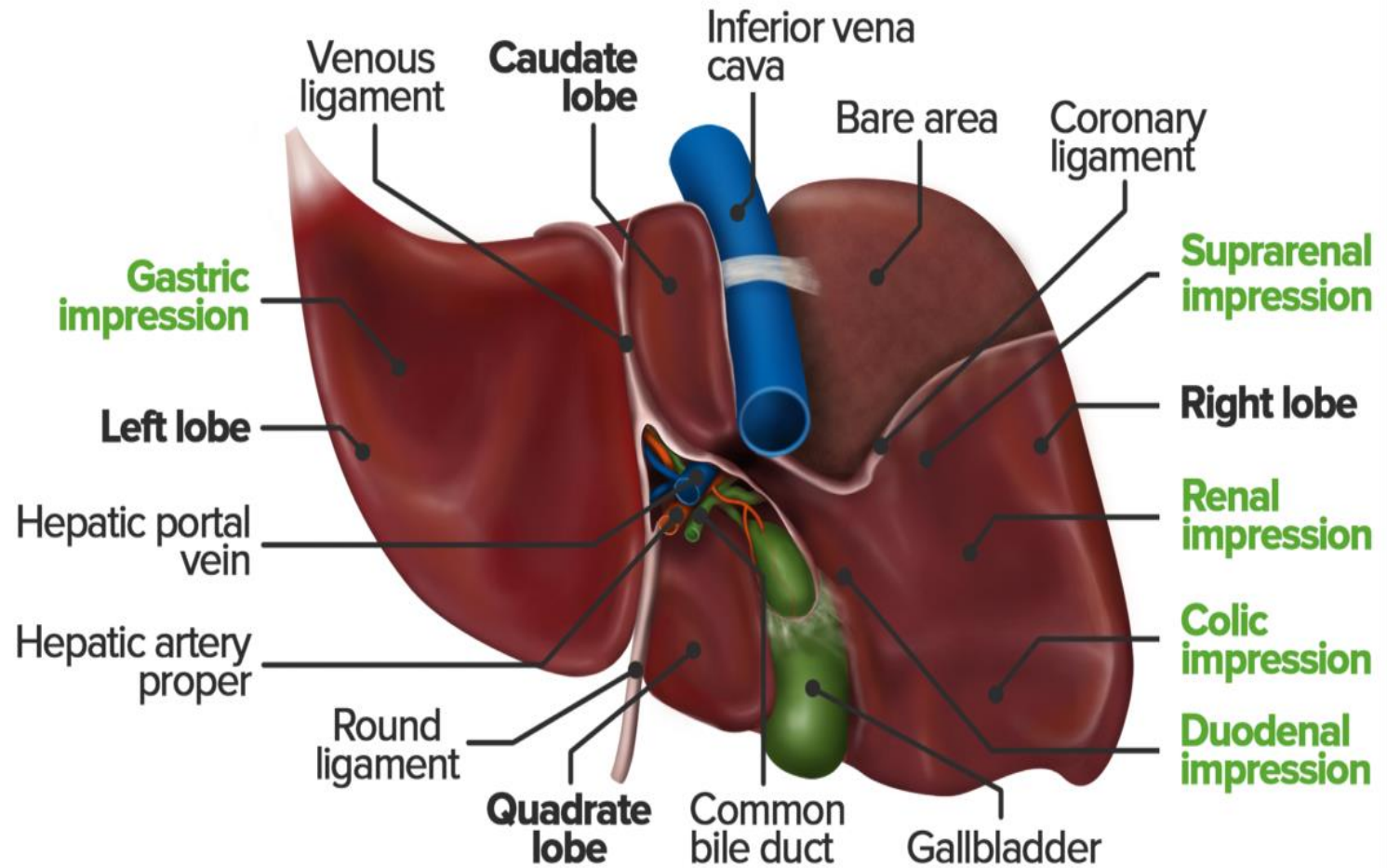
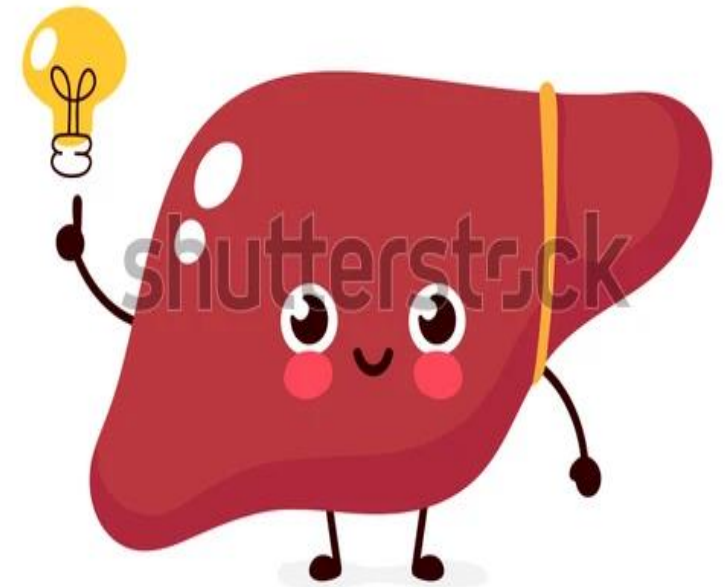


Figure 2 (Lecturio,2020)

PHYSIOLOGY OF THE LIVER

- The liver controls chemical levels in the blood and excretes bile to remove waste from the liver.
- The liver filters the blood that leaves the stomach and the intestines furthermore, it processes the blood, breaks down, balances and creates nutrients, as well as metabolizing drugs.
- The liver is responsible for over 500 functions.



www.shutterstock.com · 1413754517

Figure 3 (shutterstock,n.d.)

PHYSIOLOGY LIVER FUNCTIONS

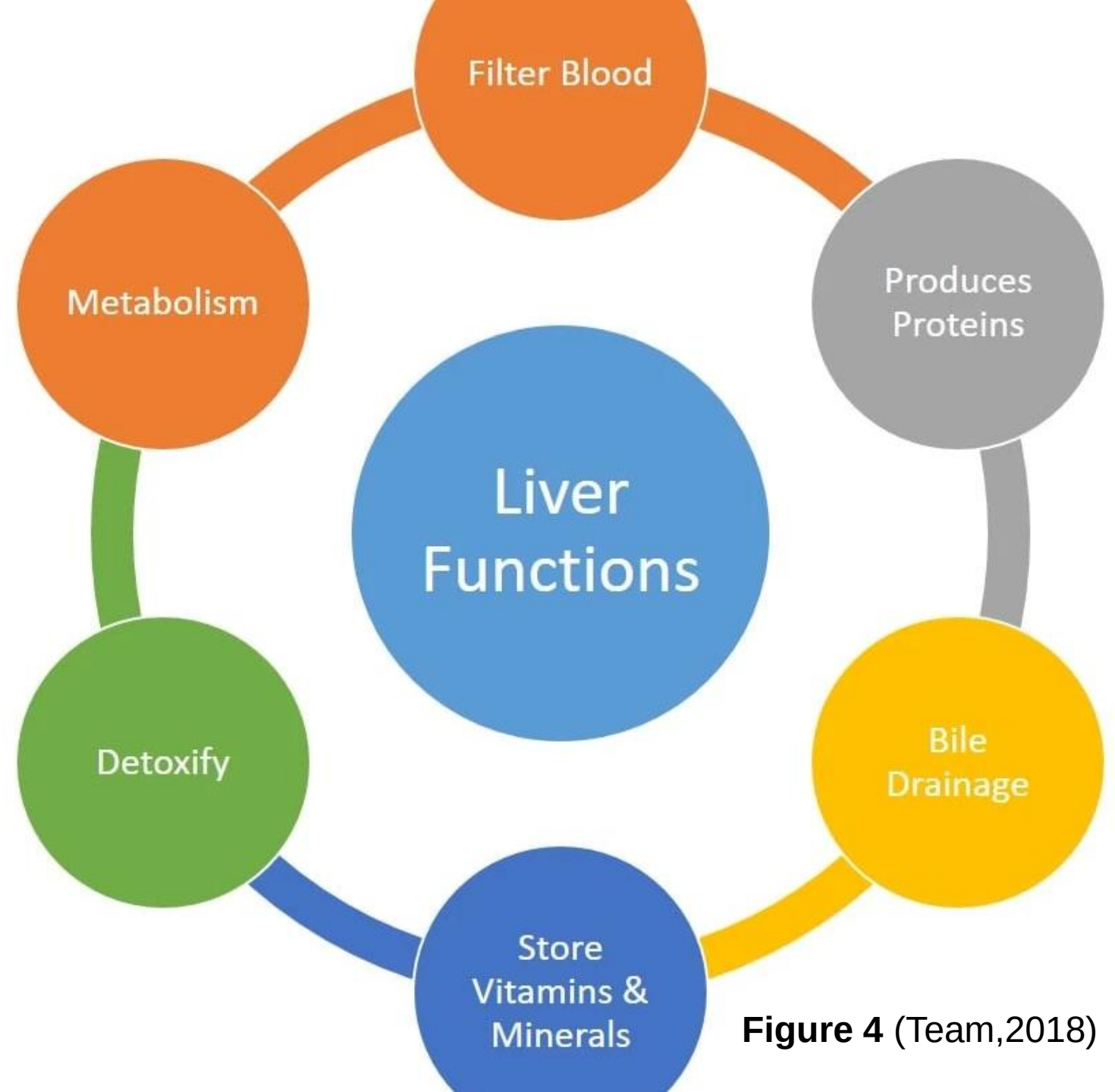
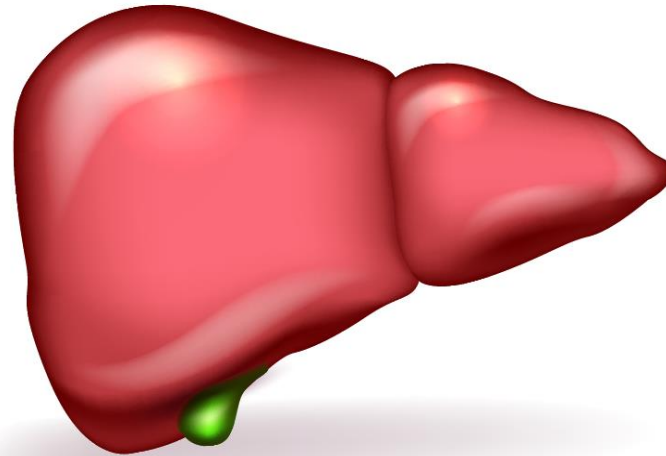


Figure 4 (Team,2018)

HOW CIRRHOSIS EFFECTS THE LIVER

- Having high blood pressure in the veins supplying the liver (portal hypertension) cirrhosis slows the normal flow of blood through the liver therefore, increases pressure in the vein that transports blood from the intestines and spleen to the liver.
- Caused by neglecting the liver causing liver damage such as; Scarring known as Fibrosis. (Mayo Clinic, n.d.)

NORMAL LIVER



LIVER WITH CIRRHOSIS

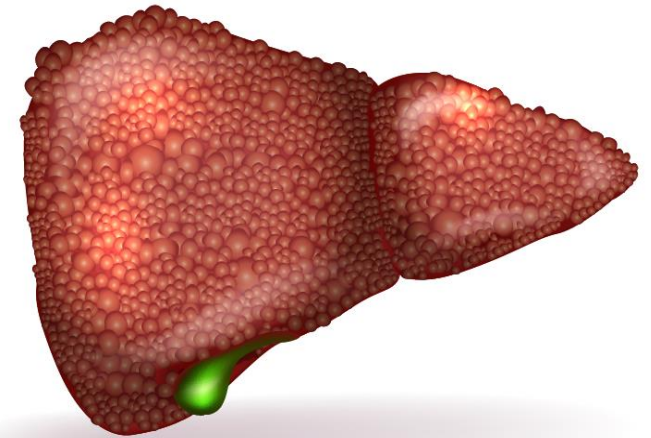


Figure 5 (British Liver Trust, 2012)

QUESTIONNAIRE

- This patient is A 44 year old white British male with hepatitis B and early onset cirrhosis.
- He is a current smoker and smokes 30 a day furthermore, patient A consumes more the 20 units of alcohol a week which is above NHS recommendation according to (NHS,2021) its recommended not to drink no more the 14 units a week.
- Patient A has little appetite but snacks on unhealthy food and not much exercise however, he does walk to the shops and helps with the chores at home.
- He currently is not working as, he has been suspended due to poor performance at work. Patient A has low mood, tiredness, and no motivation.

HEALTH RISKS

Damage to the liver can weaken the immune system, this can make patient A more prone to infections.

Liver damage due to misuse of alcohol can increase the risk of liver cancer

High cholesterol by bad eating habits such as, fatty foods therefore can increase patient A risks for angina, heart attack, and even heart failure (nhs,2017)

RECOMMENDATIONS

Bupa healthy eating and Cancer Research UK

- ✓ Diet
- ✓ Maintaining a healthy weight can help reduce the risk of liver disease and could help lessen the severity.
- ✓ Keep energy levels up
- ✓ Helps with mental well being
- ✓ Sleep better
- ✓ Limit alcohol intake
- ✓ Reduce smoking



CONCLUSION

- So in conclusion the liver plays a vital role in the body however, if this is neglected it can cause severe liver diseases such as cirrhosis.
- As discussed in this presentation applying healthy lifestyle choices to an individuals health and everyday life such as, a balanced diet, exercise, limit alcohol intake, and to reduce smoking can prevent such disease from happening or to prolong the diseases from getting worse thus, lengthen an individuals lifespan.

- Are there any questions?



Figure 7 (Make a Meme,n.d.)

REFERENCES

- Anon, (n.d.). *Detoxify your liver the natural way!! – Ayurveda India – Ayurvedic Remedies | Holistic Health*. [online] Available at: <http://www.ayurvedictalk.com/detoxify-your-liver-the-natural-way/2071/> [Accessed 12 Nov. 2022]
- British Liver Trust (2012). *Cirrhosis of the liver - British Liver Trust*. [online] British Liver Trust. Available at: <https://britishlivertrust.org.uk/information-and-support/living-with-a-liver-condition/liver-conditions/cirrhosis/>. [Accessed 22 November 2022]
- Ginès, Krag, A., Abraldes, J. G., Solà, E., Fabrellas, N., & Kamath, P. S. (2021). Liver cirrhosis. *The Lancet (British Edition)*, 398(10308), 1359–1376. [https://doi.org/10.1016/S0140-6736\(21\)01374-X](https://doi.org/10.1016/S0140-6736(21)01374-X) [Assessed 23 November 2022]
- Lecturio. (2020). *Liver | Concise Medical Knowledge*. [online] Available at: <https://www.lecturio.com/concepts/liver/>. [Assessed 12 November 2022]
- Make a Meme. (n.d.). *Thank you for watching my presentation - Kermit Drinking Tea*. [online] Available at: <https://makeameme.org/meme/thank-you-for-4316e3ca3e> [Accessed 23 Nov. 2022]

REFERENCES

- Mayo Clinic. (n.d.). *Cirrhosis - Symptoms and causes*. [online] Available at: <https://www.mayoclinic.org/diseases-conditions/cirrhosis/symptoms-causes/syc-20351487#:~:text=Cirrhosis%20slows%20the%20normal%20flow>. [Accessed 22 November 2022]
- McArdle, P. (2016). *Healthy eating | Health Information | Bupa UK*. [online] Bupa.co.uk. Available at: <https://www.bupa.co.uk/health-information/nutrition-diet/healthy-eating>. [Accessed 23 November 2022]
- nhs (2017). *Alcohol-related liver disease - Complications*. [online] nhs.uk. Available at: <https://www.nhs.uk/conditions/alcohol-related-liver-disease-arld/complications/>. [Accessed 23 November 2022]
- NHS (2021). *Drink less - Better Health*. [online] nhs.uk. Available at: <https://www.nhs.uk/better-health/drink-less/#:~:text=Alcohol%20guidelines>. [Accessed 22 November 2022]
- Shutterstock. (n.d.). *Happy Cute Liver Light Bulb Charactervector Stock Vector (Royalty Free) 1413754517*. [online] Available at: <https://www.shutterstock.com/image-vector/happy-cute-liver-light-bulb-character-1413754517> [Accessed 22 Nov. 2022].

REFERENCES

- Team, B. (2018). *Liver Function Test (LFT Test): Cost, Normal Values & Results | Rs 399/-*. [online] BookmeriLab. Available at: <https://bookmerilab.com/blog/liver-function-test-lft-test/> [Assessed 20 November 2022]
- UPMC | Life Changing Medicine. (2019). *Anatomy of the Liver*. [online] Available at: <https://www.upmc.com/services/liver-cancer/liver/anatomy-liver>. [Assessed 20 November 2022]
- www.cancerresearchuk.org. (n.d.). *Risks and causes | Liver cancer | Cancer Research UK*. [online] Available at: <https://www.cancerresearchuk.org/about-cancer/liver-cancer/risks-causes#:~:text=Smoking%20increases%20your%20risk%20of>. [Accessed 23 November 2022]