

# Non-alcoholic fatty liver disease and diabetes

CPD

## Online CPD activity

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Participants should read the article "Non-alcoholic fatty liver disease and diabetes" by Lam and Babu (2015) published in *Diabetes in Practice* volume 4 issue 2 (which can also be found at <http://bit.ly/1HUMkko>) before answering the multiple choice questions below. There is ONE correct answer to each question. After submitting your answers online, you will be immediately notified of your score. A pass mark of 70% is required to obtain a certificate of successful participation; however, it is possible to take the test a maximum of three times. A short explanation of the correct answer is provided. Before accessing your certificate, you will be given the opportunity to evaluate the activity and reflect on the module, stating how you will use what you have learnt in practice. The CPD centre keeps a record of your CPD activities and provides the option to add items to an action plan, which will help you to collate evidence for your annual appraisal.

**1. What is the threshold fat content of the liver, above which non-alcoholic fatty liver disease (NAFLD) is defined? Select ONE option only.**

- A. 1%
- B. 5%
- C. 10%
- D. 25%
- E. 33%

**2. Which is the COMMONEST liver disease in Western countries? Select ONE option only.**

- A. Alcoholic liver disease
- B. Autoimmune liver disease
- C. Chronic hepatitis B infection
- D. Chronic hepatitis C infection
- E. NAFLD

**3. According to Targher et al (2007), what is the prevalence of NAFLD in people with type 2 diabetes? Select ONE option only.**

- A. 10%
- B. 30%
- C. 50%
- D. 70%
- E. 90%

**4. Which of the following is SPECIFIC to nonalcoholic steatohepatitis (NASH) but not NAFLD? Select ONE option only.**

- A. A finding of normal liver function tests
- B. An absence of physical symptoms
- C. Liver cell inflammation
- D. The presence of deranged liver function tests
- E. The presence of fat in liver cells

**5. A 49-year-old obese, Caucasian man has type 2 diabetes. A liver ultrasound has shown he has a "fatty liver". Which of the following is an ADDITIONAL risk factor for the development of NASH? Select ONE option only.**

- A. Blood pressure 130/80 mmHg
- B. First-degree relative with obesity
- C. HDL-cholesterol 2 mmol/L
- D. Serum triglycerides <1.7 mmol/L
- E. Waist circumference 90 cm

**6. Which of the following drugs, if any, is recognised as a potential cause of a fatty liver? Select ONE option only.**

- A. Aspirin
- B. Flucloxacillin
- C. Losartan
- D. Naproxen
- E. Tamoxifen
- F. None of the above

**7. Which of the following liver function test results MOST likely represent NAFLD? Select ONE option only.**

|   | ALT    | AST                  | AlkPhos         | GGT             |
|---|--------|----------------------|-----------------|-----------------|
| A | Normal | Normal               | Normal          | Normal          |
| B | Normal | Normal               | Raised          | Normal          |
| C | Normal | Raised               | Raised          | Slightly raised |
| D | Raised | Significantly raised | Slightly raised | Raised          |
| E | Raised | Slightly raised      | Normal          | Raised          |

ALT= alanine aminotransferase; AST=aspartate aminotransferase; AlkPhos=alkaline phosphatase; GGT=gamma-glutamyl transpeptidase.

**8. According to Armstrong et al (2012), what approximate percentage of ASYMPTOMATIC people with NAFLD have ADVANCED liver fibrosis? Select ONE option only.**

- A. <1%
- B. 8%
- C. 16%
- D. 32%
- E. 64%

**9. A 55-year-old woman has type 2 diabetes, NAFLD and a BMI of 25 kg/m<sup>2</sup>. Which of the following is the most appropriate non-invasive investigation to assess her liver for fibrosis? Select ONE option only.**

- A. Biopsy
- B. CT scan
- C. Magnetic resonance spectroscopy
- D. Transient elastography
- E. Ultrasound

**10. According to current evidence, which of the following, if any, is the MOST effective drug treatment for NASH? Select ONE option only.**

- A. Exenatide
- B. Metformin
- C. Pioglitazone
- D. Sitagliptin
- E. Vitamin E
- F. None of the above

Armstrong MJ, Houlihan DD, Bentham L et al (2012) Presence and severity of non-alcoholic fatty liver disease in a large prospective primary care cohort. *J Hepatol* 56: 234–40

Targher G, Bertolini L, Padovani R et al (2007) Prevalence of nonalcoholic fatty liver disease and its association with cardiovascular disease among type 2 diabetic patients. *Diabetes Care* 30: 1212–8