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Online Quiz

Test Your Knowledge: Ten Questions on Depression in Adults

This quiz is related to the Perspective in the June issue of *PLoS Medicine* (DOI: 10.1371/journal.pmed.0030220).

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Question 1. What proportion of people seen in primary care settings has a major depressive disorder?

- ○ About 1%
- ○ About 5%–10%
- ○ About 20%–30%

Question 2. According to projections from the Global Burden of Disease Study, by 2020 where will depression rank in the list of the most common causes of disability worldwide (as measured by disability-adjusted life-years)?

- ○ Second, after cardiovascular disease
- ○ Third, after cardiovascular disease (first) and road traffic injuries (second)
- ○ Fourth, after cardiovascular disease (first), road traffic injuries (second), and cerebrovascular disease (third)

Question 3. Which one of the following best reflects the evidence on selective serotonin reuptake inhibitors (SSRIs) for treating depression in adults?

- ○ There is good evidence that they are more effective than tricyclic antidepressants (TCAs)
- ○ They are likely to be equally as effective as TCAs and monoamine oxidase inhibitors (MAOIs)
- ○ Although there is public concern that abruptly stopping SSRIs is associated with withdrawal symptoms, there is no research evidence to show that such symptoms occur

Question 4. Which one of the following best reflects the clinical evidence on cognitive therapy for treating mild to moderate depression?

- ○ In RCTs, cognitive therapy was found to be much less effective than TCAs and phenelzine
- ○ Several systematic reviews have found that cognitive therapy significantly improves depressive symptoms, but further RCTs are needed to show that the results are generalizable
- ○ Cognitive therapy is no better than giving no treatment in older adults (over 55 years of age)

Question 5. Which one of the following best reflects the evidence on St. John's wort for treating mild to moderate depression?

- ○ A systematic review of RCTs found that St. John's wort was less effective than TCAs
- ○ A systematic review of RCTs found that St. John's wort was less effective than SSRIs
- ○ A systematic review found that St. John's wort was more effective than placebo
- ○ There is good evidence of the effectiveness of St. John's wort in older adults

Question 6. Which one of the following interventions is best proven in RCTs to be effective at inducing remission in people with mild to moderate depression?

- ○ Interpersonal psychotherapy (IPT)
- ○ Problem solving therapy (PST)
- ○ Befriending
- ○ Exercise

Question 7. Which one of the following is true about monoamine oxidase inhibitors (MAOIs)?

- ○ They are more effective than TCAs at treating severe depressive disorders
- ○ They are frequently used in primary care because of their safety profile
- ○ They can interact with SSRIs to cause the serotonin syndrome

Question 8. Which of the following best reflects the evidence on combining antidepressant drugs with psychological therapies for treating mild to moderate depression?

- ○ There is no evidence that combining these treatments is superior to either antidepressants alone or psychological therapy alone
- ○ Based on the best available evidence, combining these treatments is likely to be superior to either treatment alone

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Question 9. Which one of the following best reflects the evidence on the benefits of electroconvulsive therapy (ECT) for hospitalized patients with severe depression?

- ○ ECT is less effective than antidepressant drugs at improving symptoms over three to 12 weeks
- ○ ECT is no more effective than simulated ECT (in which the patient receives all the procedures of ECT, including anesthetic, but not the electric current)
- ○ Bilateral ECT is more effective at improving symptoms than unilateral ECT
- ○ Low dose ECT is more effective than high dose ECT at improving symptoms
- ○ Treatment three times a week is more effective than twice a week

Question 10. Which one of the following best reflects the evidence on the harms of electroconvulsive therapy (ECT) for moderate to severe depression?

- ○ ECT is more likely to cause memory loss six months after treatment than simulated ECT
- ○ Bilateral ECT is more likely to cause transient memory loss than unilateral ECT
- ○ Low dose ECT is more likely to cause transient memory loss than high dose ECT

Answer 1. About 5%–10%

About 5%–10% of people seen in primary care settings has a major depressive disorder [1,2].

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Answer 2. Second, after cardiovascular disease

In 2020, the ten leading causes of disability-adjusted life-years (in descending order) are projected to be ischemic heart disease, unipolar major depression, road traffic accidents, cerebrovascular disease, chronic obstructive pulmonary disease, lower respiratory infections, tuberculosis, war injuries, diarrheal diseases, and HIV [1].

Reference

1. Murray CJ, Lopez AD (1997) Alternative projections of mortality and disability by cause 1990–2020: Global Burden of Disease Study. Lancet 349: 1498–1504.

Answer 3. They are likely to be equally as effective as TCAs and monoamine oxidase inhibitors (MAOIs)

Three systematic reviews found no significant difference in outcomes with three different kinds of antidepressant drug (TCAs, SSRIs, or MAOIs) [1–3].

One RCT [4], plus additional observational data [5], suggested that abrupt withdrawal of SSRIs was associated with symptoms including dizziness, rhinitis, dysmenorrhea, and somnolence.

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Answer 4. Several systematic reviews have found that cognitive therapy significantly improves depressive symptoms, but further RCTs are needed to show that the results are generalizable

Based on their analysis of the results of five systematic reviews, Butler and colleagues concluded that there was good evidence for the effectiveness of cognitive therapy for treating mild to moderate depression [1]. But they noted that the generalizability of these studies is questionable because of varying exclusion criteria in RCTs of cognitive therapy [1].

In one systematic review [2] (involving six RCTs and 883 outpatients with mild to moderate depression), the proportion of patients who went into remission was similar for psychotherapy (predominantly cognitive therapy and interpersonal therapy; 46.3%) and medication (TCAs and phenelzine; 46.4%).

One systematic review of four poor-quality RCTs found that cognitive therapy significantly improved symptoms compared with no treatment in people aged over 55 years in an outpatient or community setting [3].

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3. McCusker J, Cole M, Keller E, Bellavance F, Berard A (1998) Effectiveness of treatments of depression in older ambulatory patients. Arch Intern Med 158: 705–712.

Answer 5. A systematic review found that St. John's wort was more effective than placebo

A systematic review identified 24 RCTs that compared St. John's wort versus placebo in 2,752 people with depression. The review found that patients were more likely to respond to St. John's wort than to placebo (relative risk 1.55, 95% CI 1.42–1.7) [1].

The review identified seven RCTs that compared St. John's wort versus TCAs in 1,231 people with depression. There was no significant difference in response rate between the two treatments.

The review also identified six RCTs that compared St. John's wort versus SSRIs in 813 people with depression. There was no significant difference in response rate between the two treatments.

A systematic literature search found no RCTs or systematic reviews looking at the effectiveness of St. John's wort specifically in older adults [2].

References

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2. Butler R, Carney S, Cipriani A, Geddes J, Hatcher S, et al. (2005) Depressive disorders. Clin Evid 14: 1–7.

Answer 6. Interpersonal psychotherapy (IPT)

Two systematic reviews of RCTs involving adults with mild to moderate depression found that psychological therapies (mainly IPT and cognitive therapy) were more likely to induce remission over ten to 34 weeks than control (usual care, usual care plus placebo pill, or supportive therapy) [1,2]. These reviews did not specifically report outcomes for IPT alone. One systematic review and one subsequent RCT found that IPT was more effective than control (usual care) at inducing remission [3,4].

A systematic literature search concluded that PST was of "unknown effectiveness" in mild to moderate depression [5]. The search found one systematic review that examined psychological therapies, including four RCTs of PST [2]. The review did not specifically look at the effects of PST for moderate depression but it found no significant difference between PST and placebo in people with mild depression. One subsequent large RCT found that PST increased the proportion of people who were not depressed at six months compared with usual care, but there was no significant difference at one year [6]. Another smaller RCT found no difference in symptoms at eight or 26 weeks between PST and usual care for people presenting to general practitioners with emotional disorders (mostly depression) [7].

The authors of the systematic literature search [5] identified one small RCT of befriending for depression [8] and concluded that the RCT "provided insufficient evidence to assess befriending in people with mild to moderate depression."

One systematic review identified 14 RCTs of exercise for mild to moderate depression and found limited evidence that exercise may improve symptoms compared with no treatment [9]. However, the review suggested that these results are inconclusive because of methodological problems with the trials (discussed in [5]).

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9. Lawlor DA, Hopker SW (2001) The effectiveness of exercise as an intervention in the management of depression: Systematic review and meta-regression analysis of randomised controlled trials. BMJ 322: 763–767.

Answer 7. They can interact with SSRIs to cause the serotonin syndrome

MAOIs should not be taken with SSRIs because of the risk of the rare, but potentially life-threatening, serotonin syndrome (http://www.mayoclinic.com/health/maois/MH00072). The *British National Formulary* states that "An SSRI or related antidepressant should not be started until 2 weeks after stopping an MAOI. Conversely, an MAOI should not be started until at least a week after an SSRI or related antidepressant has been stopped (two weeks in the case of sertraline, at least five weeks in the case of fluoxetine)" (http://www.bnf.org/bnf/bnf/current/3351.htm#; free registration required).

One systematic review found no significant difference in overall effectiveness between TCAs and MAOIs [1] for treating major depression, and a second systematic review found that MAOIs were less effective than TCAs in people with severe depressive disorders [2].

MAOIs are prescribed much less frequently than TCAs (and other related antidepressants) or SSRIs (and other related antidepressants) because of the dangers of dietary and drug interactions (http://www.bnf.org/bnf/bnf/current/3341.htm; free registration required).

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2. Thase ME, Trivedi MH, Rush AJ (1995) MAOIs in the contemporary treatment of depression. Neuropsychopharmacology 12: 185–219.

Answer 8. Based on the best available evidence, combining these treatments is likely to be superior to either treatment alone

Two systematic reviews found that a combination of antidepressants and psychological therapy improved depressive symptoms compared with either treatment alone [1,2]. The first review involved 16 RCTs and 1,842 people with depression [1]; the second review involved 17 RCTs (the total number of patients was not recorded) [2]. One subsequent poor-quality RCT found no significant difference in response rate between combination treatment with sertraline plus interpersonal therapy versus sertraline alone [3]. A second subsequent RCT found no significant difference between short term psychodynamic psychotherapy plus antidepressants and antidepressants alone [4] (though subgroup analysis found that combination therapy was more effective in people with depression and a personality disorder [5]).

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Answer 9. Bilateral ECT is more effective at improving symptoms than unilateral ECT

The most comprehensive systematic review of ECT evaluated the efficacy and safety of ECT in patients with severe depression, who were mostly hospitalized [1]. Based on 22

RCTs (1,408 people) that compared bilateral versus unilateral ECT, the review found that bilateral ECT improved symptoms compared with ECT.

The review also found that: (1) ECT significantly improved symptoms over three to 12 weeks compared with antidepressant drugs (based on 18 RCTs, 1,144 people); (2) ECT significantly improved symptoms compared with simulated ECT at the end of one to six weeks' treatment (based on six RCTs, 256 people); (3) High dose ECT significantly improved symptoms compared with low dose ECT (based on seven RCTs, 342 people); (4) there was no difference in outcomes between twice weekly treatment and three times weekly treatment.

ECT may be unacceptable to some patients, and is a short-term treatment, and so there is a general consensus that it should usually be reserved for people who cannot tolerate or who have not responded to antidepressants [2]. It may also be useful when a rapid response is needed [2].

References

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Answer 10. Bilateral ECT is more likely to cause transient memory loss than unilateral ECT

A systematic review [1] found that: (1) bilateral ECT was more likely to cause transient memory loss than unilateral ECT; (2) ECT was more likely to cause transient memory loss *immediately after* treatment than simulated ECT, but there was no significant difference in cognitive functioning at six months; (3) High dose ECT was more likely to cause transient memory loss than low dose ECT.

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