MI-04 Depression and anxiety without pharmaceuticals: exercise, light, sleep, behavioural activation, St John's wort and community

HEALING after the FALL, research library, MI-04

Researched 10 October 2026 by Claude Opus agent for THRIVING after the FALL, Book Four. Library document, unverified.

Scope and the short answer

Depression and anxiety will be the commonest complaints a healer meets after the Fall, tangled with grief, hunger, cold and fear that are reasonable responses to a hard world (THRIVING library, MI-01). This report grades the trialled non-pharmaceutical treatments. MI-02 holds who delivers care and how. This report holds what the care consists of. Suicide beyond screening and immediate safety belongs to MI-09, and sleep is touched here only where it bears on mood.

The short answer. Four things have trial evidence that would satisfy a sceptic: a standardised St John's wort extract in mild to moderate depression, behavioural activation delivered by people without professional training, exercise, and bright light in the morning. None of them beats an antidepressant, and none has been shown to do worse in mild to moderate illness. None of them has been shown to help a severe, psychotic or suicidal depression enough to carry it alone. The garden tea of St John's wort is not the drug that was tested, and it has never been tested for depression at all. The Amish and Hutterite communities did not abolish mood disorder. The village should screen by voice, look for the bodily mimics, give everyone activity, daylight and company, give behavioural activation to those who score high, and know the few emergencies.

1. Finding the patient: screening by voice, the mimics and the emergencies

The tools. The PHQ-9 asks nine questions about the last two weeks, each scored 0 to 3. In its validation among 6,000 primary-care and obstetric patients, a score of 10 or more had a sensitivity of 88 per cent and a specificity of 88 per cent for major depression, and scores of 5, 10, 15 and 20 marked mild, moderate, moderately severe and severe depression (Kroenke 2001). The GAD-7 does the same for anxiety in seven questions. Among 2,740 primary-care patients a cut point of 10 gave 89 per cent sensitivity and 82 per cent specificity for generalised anxiety disorder, and scores given to an interviewer agreed well with self-report (Spitzer 2006). Both were built to be read and ticked by the patient. Read aloud, the PHQ-9 can fail badly in another language and culture: in Cameroon an interviewer-administered version caught 27 per cent of cases, and in Malawi between 23 and 68 per cent, while the Shona Symptom Questionnaire, built from local idioms of distress, caught about 75 to 84 per cent by voice (THRIVING library, MI-02). The lesson for the village is that the questions must be asked in fixed words, in the patient's own idiom, and checked against a few known cases before the scores are trusted.

Asking about suicide is safe. A review of the evidence found that asking about suicidal thoughts does not induce them and may reduce them (Dazzi 2014). Item 9 of the PHQ-9 asks about thoughts of being better off dead or of self-harm. Any answer above zero triggers the safety steps in Protocol 1 and the fuller assessment that MI-09 will set

out.

The mimics. A healer without a laboratory will see bodily illness presenting as sadness, and the brief names three. Pellagra brings dermatitis on sun-exposed skin, diarrhoea and, later, dementia, and it returns in spring after a winter on maize. It is treated with nicotinamide 100 mg three times a day and protein-rich food (THRIVING library, HY-08). Hypothyroid adults are slow and cold, with a swelling thyroid where iodine is short (THRIVING library, HY-08). Iron-deficiency anaemia brings fatigue and breathlessness, and B12 deficiency brings tingling hands and feet, an unsteady gait and memory loss, with nerve signs alone in about a quarter of cases (THRIVING library, HY-08). Hunger itself is a cause: the Minnesota semi-starvation volunteers of 1944 to 1945 became depressed, irritable and obsessed with food, and recovered when fed (THRIVING library, MI-01). Add alcohol, heavy and daily, which both mimics and worsens depression, and grief in its first months, which is not an illness [VERIFY: no source read here for alcohol as a mimic]. Before any course of treatment the healer should ask about diet, look at skin, tongue, nails, conjunctivae and neck, and ask about drink.

Emergencies. A small number of depressed patients will die or be disabled without more than the village has. They are listed under Red flags. The commonest the village will meet are the person with a plan, the means and a time, the person who has stopped eating and drinking, and the person whose depression turns into, or comes from, mania.

2. St John's wort (*Hypericum perforatum*, flowering tops)

The plant. Perforate St John's wort is a perennial of dry grassland, verges and waste ground across Europe and western Asia, now naturalised on most continents. The part used is the flowering top, cut in flower around midsummer (EMA assessment report 2018). Three features identify it. Held to the light, the leaves show many translucent dots, which give the name perforatum. The round stem carries two raised lines running down it. The five bright yellow petals carry black dots, mostly at or near their margins (NatureSpot, Missouri Plants). Its commonest confusion is imperforate St John's wort, *Hypericum maculatum*, which has a square, four-ridged stem and leaves with few or no translucent dots (NatureSpot). That confusion lowers the dose rather than poisoning anyone. A forager who cuts tall yellow flowers in July without looking at the leaves could also take ragwort, *Jacobaea vulgaris*, whose daisy-like heads look nothing like Hypericum close up but grow in the same places, and which carries the pyrrolizidine alkaloids that destroy the liver [VERIFY: inference, no record of this confusion found]. PH-01 gives the botany and garden context (THRIVING library, PH-01).

The tradition on its own terms. In European folk practice the plant belongs to Midsummer. Bunches were hung over doors and windows on St John's Eve to keep out evil spirits and lightning, and the red stain that the crushed flowers leave was read as the blood of the Baptist (THRIVING library, PH-01, TR-15). Medieval and early modern herbalists called it *fuga daemonum*, the devil's flight, and gave it for melancholy and for wounds [VERIFY: name and attribution from secondary recollection, primary not read]. The logic is protective and expulsive: the plant drives out what has entered and closes what is open. The infused red oil went on wounds, burns and bruises. The tea and the tincture were taken "to strengthen the nerves", for low mood, anxiety and nervous restlessness, and the EMA's committee records exactly these as the long-standing folk uses, with tea at 2 g twice daily cited from Irion in 1955 (EMA assessment report 2018). In German-speaking pharmacy the plant passed from folk use into the clinic.

The record: what the trials show. The Cochrane review by Linde, Berner and Kriston pooled 29 trials of 5,489 patients with major depression, 18 against placebo and 17 against standard antidepressants. Against placebo the response rate ratio was 1.28 (95 per cent CI 1.10 to 1.49) in nine larger, more precise trials, and 1.87 (1.22 to 2.87) in nine smaller ones. Against tricyclics it was 1.02 (0.90 to 1.15, five trials) and against SSRIs 1.00 (0.90 to 1.11, twelve trials). Patients stopped for side effects far less often than on older antidepressants (odds ratio 0.24, 0.13 to 0.46) or SSRIs (0.53, 0.34 to 0.83). Two warnings sit in the abstract: trials from German-speaking countries were significantly more favourable, and the results apply only to the extracts tested (Linde 2008). A later review for the US Agency for Healthcare Research and Quality found 35 studies and 6,993 patients, a response ratio against placebo of 1.53 (1.19

to 1.97) with high heterogeneity (I squared 79 per cent), equivalence with antidepressants (1.01, 0.90 to 1.14) and fewer adverse events (odds ratio 0.67). It found no data on severe depression (Apaydin 2016).

The negative trials matter as much. In 200 American outpatients with a Hamilton score of 20 or more, 900 to 1,200 mg a day for eight weeks did no better than placebo, with remission in 14.3 per cent against 4.9 per cent (Shelton 2001). In the National Institutes of Health trial of 340 patients, full response came in 23.9 per cent on hypericum, 24.8 per cent on sertraline and 31.9 per cent on placebo, so neither active drug beat placebo (Hypericum Depression Trial Study Group 2002). Defenders of the herb point out that the trial lacked assay sensitivity: if sertraline also failed, the trial could not tell an effective drug from an ineffective one. In minor depression, 810 mg a day and citalopram 20 mg both failed against placebo, and 60 per cent of participants reported "side effects" before taking any pill (Rapaport 2011). In a German trial of 324 outpatients, the extract Ze 117 at 250 mg twice daily matched imipramine 75 mg twice daily over six weeks, bringing the Hamilton score from 22.4 to 12.0 against 22.1 to 12.75, with adverse events in 39 against 63 per cent and withdrawals for adverse events in 3 against 16 per cent (Woelk 2000).

What modern science infers. The extract probably works in mild to moderate depression about as well as an antidepressant with fewer side effects, and its effect over placebo in larger and non-German trials is small. If placebo response is around 40 per cent, a response ratio of 1.28 implies roughly one extra responder for every nine treated [VERIFY: own arithmetic, assumed control rate]. Two candidate active substances are named. Hypericin and pseudohypericin (naphthodianthrones, 0.03 to 0.4 per cent of the herb) give the red colour and the photosensitivity. Hyperforin (a phloroglucinol, 0.2 to 4 per cent, falling as the dried herb ages) drives the interactions (EMA assessment report 2018). Woelk's Ze 117 contains almost no hyperforin and still matched imipramine (Woelk 2000, Mueller 2004), which suggests that the antidepressant action does not need hyperforin [VERIFY: inference from two sources, not tested directly]. Onset is expected within four weeks (EMA monograph 2022).

The trial extracts and their doses. The EMA grants well-established use, for mild to moderate depression, only to dry extracts. A methanol 80 per cent extract (drug-extract ratio 3 to 7:1) at 300 to 600 mg one to three times daily, 600 to 1,800 mg a day. An ethanol 80 per cent extract (3 to 6:1) at 900 mg once daily. An ethanol 50 to 68 per cent extract (2.5 to 8:1) at 500 to 1,200 mg a day. Not under 18 (EMA monograph 2022). The brief's lead of 600 to 900 mg a day matches the commonest trial doses: 900 to 1,200 mg in Shelton, 810 mg in Rapaport and 500 mg of Ze 117 in Woelk. The two sources differ at the top: the monograph allows up to 1,800 mg, while the trials that defined the effect mostly sit at 500 to 900 mg. The Pharmacopoeia herb must contain at least 0.08 per cent total hypericins (EMA assessment report 2018). Commercial products tested in the United States held between 1.7 and 38.5 per cent of their label claim (THRIVING library, PH-01).

What a garden tea or tincture delivers. This is the brief's first key question, and the record answers half of it. For "temporary mental exhaustion", not depression, the EMA registers traditional preparations with no efficacy claim: herbal tea of 1.5 to 2 g in 150 ml of boiling water two to three times daily (3 to 6 g of herb a day), tincture 1:5 in ethanol 50 to 70 per cent at 1 to 1.5 ml three times daily, or tincture 1:10 in ethanol 45 to 50 per cent at 2 to 4 ml three times daily, with advice to consult if symptoms last beyond two weeks (EMA monograph 2022). Irion's older figure of 2 g of herb twice daily for mild depression and emotional balance, 2 to 4 g a day, agrees closely with the tea dose (EMA assessment report 2018). Water extracts the flavonoids and about a third of the pseudohypericin, but only about 16 per cent of the hypericins in one study and only about 1 per cent of the hyperforin in another (EMA assessment report 2018). In the Rostock digoxin study, two cups of tea from 1.75 g delivered 0.04 mg of hyperforin a day, against 28.9 mg from the trial extract LI 160, roughly one seven-hundredth (Mueller 2004, via EMA assessment report 2018).

So the tea is safe from the interactions, but it is a different, weaker preparation whose antidepressant effect has never been tested. Because the hyperforin-free Ze 117 extract worked, the tea's failure to carry hyperforin does not by itself rule out an effect, but its hypericin dose is also low [VERIFY: inference]. An ethanol tincture extracts lipophilic hyperforin far better than water does, so a strong home tincture may carry enough to induce enzymes while its antidepressant content stays unknown [VERIFY: inference from solubility, no assay of home tinctures found]. Hyperforin

also degrades as the herb dries and ages (EMA assessment report 2018). No study has compared a home tea or tincture with a trial extract for depression, and PH-01 named this as the most answerable question a district infirmary could take on (THRIVING library, PH-01). The honest grade: extract A, tea and tincture D for depression.

The harms.

Enzyme induction. Hyperforin activates the pregnane X receptor and induces CYP3A4, CYP2B6, CYP2C9, CYP2C19 and P-glycoprotein. The monograph forbids combining extracts, and traditional preparations delivering more than 1 mg hyperforin a day, with coumarin anticoagulants such as warfarin, ciclosporin, tacrolimus, sirolimus, everolimus, HIV protease inhibitors and non-nucleoside reverse transcriptase inhibitors, irinotecan and imatinib, and advises caution with benzodiazepines, methadone, simvastatin and digoxin (EMA monograph 2022). Indinavir exposure fell by 57 per cent and its trough by 81 per cent (Piscitelli 2000, via THRIVING library, TR-15). Two Zurich heart-transplant patients rejected their hearts when their ciclosporin fell (Ruschitzka 2000, via THRIVING library, TR-15). In eleven kidney-transplant patients, 600 mg of extract cut ciclosporin exposure by 46 per cent within days (Bauer 2003, via EMA assessment report 2018). A kidney-transplant patient's ciclosporin fell on a herbal tea mixture containing Hypericum (Alscher 2003, via EMA assessment report 2018), so the tea is not entirely innocent. In the Rostock study of 96 volunteers, tea, juice, oil, Ze 117 and 0.5 to 1 g of powdered herb did not alter digoxin, while LI 160 cut its exposure by about a quarter and 4 g of powder (21 mg hyperforin) did the same, so the interaction follows the hyperforin dose (Mueller 2004). A systematic review of 31 studies found that all 19 giving more than 10 mg of hyperforin a day induced CYP3A, and the three giving under 4 mg did not (Whitten 2006). Enzyme activity returns to normal within about a week of stopping (EMA monograph 2022).

Contraception. With a low-dose pill, intermenstrual bleeding rose from 35 per cent of cycles to between 77 and 88 per cent, and unwanted pregnancies have been reported (Pfrunder 2003, Schwarz 2003, via THRIVING library, TR-15). The monograph advises additional contraception (EMA monograph 2022). Salvaged pills may be the most valuable drug a village holds (THRIVING library, PH-01).

Serotonin syndrome. The monograph reports it "very rarely" with SSRIs such as sertraline and paroxetine and with buspirone, with sweating, fast heart, diarrhoea, fever, agitation, disorientation, tremor and muscle jerks (EMA monograph 2022). Case reports are commonly traced to Lantz and colleagues in 1999, which I did not read [VERIFY], and TR-15 found no well-documented case with the plant alone (THRIVING library, TR-15).

Light. Fair-skinned people can develop sunburn-like reactions in strong sun. In volunteers 1,800 mg a day for 15 days raised UVA sensitivity, but skin hypericin at standard doses stayed far below phototoxic levels (EMA monograph 2022, EMA assessment report 2018). Patients should cover up in strong midday sun.

Mania. A systematic review of herb-associated mania found 35 case reports, with St John's wort the commonest single herb in 14, seven of them also on antidepressants, and causality weak throughout (Bostock 2018). Any antidepressant can tip bipolar depression into mania, and there is no reason to think this plant is the exception.

Pregnancy, children and overdose. Not recommended in pregnancy or breastfeeding because of animal reproductive toxicity, although 54 pregnant users in one cohort had malformation rates similar to controls (EMA monograph 2022, Moretti 2009 via EMA assessment report 2018). Not under 18 for the extracts. Taking up to 4.5 g of dry extract a day for two weeks plus a single 15 g dose caused seizures and confusion, and after a massive overdose the patient should be kept out of ultraviolet light for one to two weeks (EMA monograph 2022). Common minor effects are stomach upset, allergic rash, fatigue and restlessness.

3. Exercise

Tradition. Robert Burton's *Anatomy of Melancholy* of 1621 named idleness the greatest cause of melancholy, prescribed good food and exercise, laughter, reading, friends and music, and closed with the advice "be not solitary, be

not idle" (Burton 1621, secondary summaries). Most traditions that name melancholy prescribe work, walking or dance as part of its cure [VERIFY: generalisation, not systematically searched].

The record. Cooney and colleagues pooled 35 trials of 1,356 patients for a standardised mean difference of -0.62 (-0.81 to -0.42) against control, a moderate effect. In the six trials with adequate allocation concealment, intention-to-treat analysis and blinded assessment, 464 patients, it shrank to -0.18 (-0.47 to 0.11), small and not significant. Against psychological therapy (-0.03) and antidepressants (-0.11) there was no difference (Cooney 2013). The 2026 update has 73 trials and at least 4,985 adults. Across 57 trials and 2,189 participants the effect against control was -0.67 (-0.82 to -0.52), and in the seven trials at low risk of bias, 447 participants, it was -0.46 (-0.88 to -0.04), still smaller but now significant. Against psychological therapy the difference was 0.03 (moderate certainty) and against medication -0.11 (low certainty). Long-term follow-up was rare and very uncertain. Adverse events were uncommon: musculoskeletal injuries and worsening depression among exercisers (Clegg 2026). Schuch argued the opposite way, that correcting for publication bias raised the effect to 1.11 (Schuch 2016). A network meta-analysis of 218 trials and 14,170 patients found walking or jogging (Hedges' g -0.62), yoga (-0.55), strength training (-0.49), mixed aerobic exercise (-0.43) and tai chi or qigong (-0.42) all beat active controls, with effects proportional to intensity, but only one trial was at low risk of bias and confidence was low to very low (Noetel 2024).

Blumenthal's trials at Duke tested exercise against sertraline head to head. In 1999, 156 adults aged 50 or more were randomised to supervised aerobic exercise, sertraline or both for 16 weeks, and all three groups improved equally, although medication worked faster at first (Blumenthal 1999). The exercise was three supervised sessions a week of about 30 minutes of walking or jogging at 70 to 85 per cent of heart-rate reserve after a ten-minute warm-up [VERIFY: protocol from secondary summary]. At ten months, those who had remitted with exercise relapsed less than those who had remitted on medication, and continuing to exercise during follow-up halved the odds of being depressed (odds ratio 0.49) (Babyak 2000). Secondary sources give relapse as 8 per cent after exercise against 38 per cent after medication [VERIFY]. In the SMILE trial of 202 adults, remission came in 45 per cent with supervised group exercise, 40 per cent with home exercise, 47 per cent with sertraline and 31 per cent with placebo pill, and the overall difference narrowly missed significance ($p = 0.057$) because placebo response was high (Blumenthal 2007).

Inference. Exercise helps depression by a small to moderate amount in the best trials, about as much as a pill or a therapist, and it lasts better if people keep doing it. It costs nothing and harms almost no one, but depressed people struggle to start, and both Duke trials supervised the sessions.

4. Light, dark and sleep

Tradition and record. The lamp-lit northern winter and its gloom are old knowledge, but light as a treatment is modern. Golden and colleagues found that only 13 per cent of light-therapy studies met their criteria. Bright light in seasonal depression gave an effect size of 0.84 (0.60 to 1.08, eight trials), dawn simulation 0.73 (0.37 to 1.08, five trials), and bright light in non-seasonal depression 0.53 (0.18 to 0.89, three trials). Added to antidepressants it did nothing measurable (-0.01, five trials) (Golden 2005). In 122 patients with non-seasonal depression, 10,000 lux for 30 minutes early each morning for eight weeks reduced the depression score by 13.4 points, against 8.8 for fluoxetine, 16.9 for both and 6.5 for placebo. Remission came in 43.8, 19.4, 58.6 and 30 per cent, and the number needed to treat for the combination was 2.4 for response and 3.5 for remission (Lam 2016).

The village has no lightbox but has the sky. Outdoor light under an overcast sky is roughly 1,000 lux, falling to 100 on a very dark day, while full daylight out of direct sun is 10,000 to 25,000 lux and a room away from windows 25 to 300 lux (Wikipedia, Lux, secondary). In Basel in 1996, people with winter depression who walked outdoors for an hour each morning for a week remitted in 50 per cent of cases, against 25 per cent with half an hour of dim artificial light at 2,800 lux (Wirz-Justice 1996). In bipolar depression, patients already on antimanic drugs who sat in 7,000 lux at midday remitted in 68.2 per cent against 22.2 per cent with dim red light, with no switches into mania, but rapid cyclers and mixed states were excluded (Sit 2018). There is no evidence here that light is safe in bipolar illness without the antimanic drugs the village will lack.

Sleep. Insomnia predicts later depression, with a pooled odds ratio of 2.60 (1.98 to 3.42) across 21 longitudinal studies (Baglioni 2011). Paradoxically, a night's total sleep deprivation brings a response in 45 per cent of depressed patients in controlled studies, whatever the type of depression or medication (Boland 2017). The effect is widely reported to vanish after the next sleep [VERIFY: not read in the abstract], and the method is known to risk triggering mania in bipolar illness [VERIFY]. It is not a village treatment. The village can protect sleep with a fixed rising time, morning light, work by day, a dark quiet sleeping place, and relief of the pain, cold and hunger that keep people awake.

Inference. Morning daylight is the cheapest antidepressant on the list. An hour's outdoor morning walk joins light, exercise and company in one prescription.

5. Behavioural activation and talk

What it is. Depression shrinks a life: the depressed person withdraws, does less, gets less reward and feels worse. Behavioural activation reverses the spiral in small, scheduled steps: record what one does and how it feels, name what matters, plan small activities that serve those values, do them whatever the mood, and review each week. It needs no literacy beyond a diary kept by marks.

The record. Ekers and colleagues pooled 26 trials and 1,524 participants. Against controls the effect was -0.74 (-0.91 to -0.56, 25 comparisons, 1,088 people), and against medication -0.42 (-0.83 to 0.00, four comparisons, 283 people), with no sign of publication bias but low quality and short follow-up (Ekers 2014). In Seattle, among 241 adults, behavioural activation matched antidepressant medication in the more severely depressed and both beat cognitive therapy (Dimidjian 2006).

The COBRA trial is the strongest support for lay delivery in a rich country. In Devon, Durham and Leeds, 440 adults with depression were randomised to behavioural activation from junior mental-health workers, graduates with no professional therapy training, or cognitive behavioural therapy from qualified therapists. The juniors had five days of training, a competence check with further training if needed, and an hour of supervision every fortnight. Sessions lasted an hour, up to 20 over 16 weeks, with a mean of 11.5, and a third of patients received fewer than eight. At twelve months the PHQ-9 was 8.4 in both arms, a difference of 0.1 (-1.3 to 1.5) against a non-inferiority margin of 1.9. Behavioural activation cost £974.81 per patient against £1,235.23, about a fifth less [VERIFY: own arithmetic]. Serious adverse events were few: three patients in the activation arm (two overdoses, one self-harm) and eight in the therapy arm. Seventy-eight per cent of participants were on antidepressants, and the trial excluded the acutely suicidal, anyone with an attempt in the previous two months, bipolar illness, psychosis and drug or alcohol dependence (Richards 2016). In Goa, the Healthy Activity Program, six to eight sessions of 30 to 40 minutes from lay counsellors trained in a three-week workshop and a six-month internship, cut depression scores and raised remission in severe depression (Patel 2017, via THRIVING library, MI-02).

Relapse. Depression returns in many who recover [VERIFY: rate not read]. Mindfulness-based cognitive therapy, eight group sessions for people in remission, cut relapse over 60 weeks with a hazard ratio of 0.69 (0.58 to 0.82) against no such therapy and 0.79 (0.64 to 0.97) against active treatments including antidepressants, across nine trials and 1,258 patients (Kuyken 2016). It needs a trained teacher and is a district skill.

Supervision or the paid role. MI-01 and MI-02 disagree on which is the active ingredient of lay care (THRIVING library, MI-01, MI-02). COBRA cannot decide it: its workers were both paid NHS employees and supervised every fortnight. The trials read for this report never separated the two. The village should keep both until a test does [OWNER: whether lay activation workers are paid in kind, and who supervises them].

6. Community: what the Amish and Hutterite data really show

On their own terms. The Hutterites, Anabaptist communal farmers of the North American prairies, called depression *Anfechtung*, temptation or assault by the devil, which falls on good people as a trial, carried little stigma and was met by the colony with care rather than exclusion (Eaton and Weil 1955, secondary summary [VERIFY]). The Old

Order Amish of Lancaster County live in close-knit church districts without cars, mains electricity or alcohol, with the whole community gathering for barn-raisings, funerals and weddings. Both are the nearest living picture of the village of 300 this book imagines.

The record. In 1953 to 1955 Eaton and Weil surveyed the Hutterites for mental disorder. A secondary source reports 199 cases among 8,542 people, about 1 in 43 lifetime, with about three-quarters of the 53 psychoses classed as manic-depressive [VERIFY: primary not read]. Torrey's reanalysis with modern criteria put schizophrenia at 0.9 and bipolar disorder at 0.6 per 1,000 (Torrey 1995). In Manitoba claims from 102 colonies in 1992 to 1997, schizophrenia ran at 1.2 per 1,000 a year and psychoses and affective psychoses were lower than in the province, but neurotic disorders were higher among Hutterites (Nimgaonkar 2000).

The Amish Study counted 112 active cases of mental illness among about 12,500 Old Order Amish in 1976 to 1980, 71 per cent of them major affective disorder. Alcoholism, drug abuse and antisocial personality, which inflate rates elsewhere, were almost absent, and unipolar depression struck men and women equally (Egeland and Hostetter 1983). Of the 112 cases, 34 per cent had bipolar I or II illness and 37 per cent unipolar depression (Egeland 1983, as summarised by Gill 2016). When Gill and colleagues compared 155 Amish and Mennonite patients with 155 matched outsiders, the symptoms of mania and depression were the same, alcohol use disorder was rarer among the Anabaptists, and where it was present it went with more depressive episodes and admissions (Gill 2016). Of 28 Amish with bipolar I illness, 79 per cent had first been diagnosed with schizophrenia by hospitals that misread their culture (Egeland, Hostetter and Eshleman 1983). Twenty-six Amish suicides between 1880 and 1980 were counted, 92 per cent in people with major affective disorder, clustered in four family lines (Egeland and Sussex 1985). Cases were found through key informants and records, so mild depression handled at home may have been missed.

Inference. Close community, faith and the absence of alcohol did not abolish severe mood disorder. They seem to have removed the alcohol-driven and sociopathic share, kept the sexes equal, and left bipolar illness and familial suicide in place. The low rate of unipolar depression among the Amish, roughly 0.3 per cent active over five years [VERIFY: own arithmetic], may reflect real protection or simply under-counting. The Hutterite data cut both ways, with fewer psychoses but more anxiety and neurotic illness, perhaps from the same close watch that gives support. Community is protective, but not a treatment for the severely ill, and it can be a cage for the anxious.

Social prescribing. Bickerdike and colleagues reviewed 15 UK evaluations of social prescribing, referral to community activities. All were at high risk of bias, most drew conclusions their data could not support, and the evidence was insufficient (Bickerdike 2017). Joining people to work parties, choirs and meals is good, but it is not proven treatment.

7. Other plants with trials

The rule from PH-01 holds throughout: a trial grade belongs to the preparation tested, not to the plant (THRIVING library, PH-01).

Saffron (*Crocus sativus*, dried stigmas). Tradition: a Persian and Mediterranean spice and medicine for the heart and spirits, given to gladden [VERIFY: traditional claim from general knowledge, ethnobotanical source not read]. Record: five early trials, all from Iran, gave an effect of 1.62 against placebo and no difference from antidepressants (Hausenblas 2013). Marx and colleagues pooled 23 studies for effects of 0.99 in depression and 0.95 in anxiety against placebo, with publication bias and almost no trials outside Iran (Marx 2019). The usual trial dose is 30 mg of stigma a day, often as 15 mg twice daily [VERIFY: single secondary source]. Doses under 1.5 g a day are reported non-toxic, 5 g toxic and about 20 g possibly lethal, with bleeding, vomiting and dizziness at high doses [VERIFY: secondary summary of a 2015 review]. Lookalike: autumn crocus, *Colchicum autumnale*, flowers purple in autumn like saffron crocus and is lethal, with 28 cases and two deaths in France in 2020 to 2022 (THRIVING library, PH-01). PH-01 advises not growing it at all. Saffron is grade B: positive but regionally concentrated and biased. Its cost in labour is high, since every stigma is picked by hand [VERIFY: yield per flower not found].

Lavender oil (*Lavandula angustifolia*, distilled flower oil). Tradition: a calming bath and pillow herb of the Mediterranean and of English gardens. Record: Silexan, an oral lavender oil capsule usually at 80 mg a day, beat placebo in five trials of 1,213 patients with anxiety disorders, with a responder ratio of 1.34 and no more adverse events, but the sponsor's staff were among the authors (Dold 2023). In 6 weeks it matched lorazepam in generalised anxiety, with the Hamilton anxiety score falling by about 45 per cent on both (Woelk and Schläfke 2010). A distilled home oil is not a standardised capsule, and swallowing essential oils in unmeasured amounts is dangerous [VERIFY: no toxicity source read for home oil]. Harm: eight boys with breast growth and four girls with early breast development have been linked to topical lavender and tea tree oils since 2007, all regressing when the oils stopped, with causation unproven (Braunstein 2023). Grade A for Silexan, D for home oil.

Kava (*Piper methysticum*, peeled root). Tradition: the shared water drink of Fiji, Tonga, Samoa, Vanuatu and much of Oceania, used to welcome guests, settle disputes and mark occasions, with ceremonial forms held under restriction and not described here (THRIVING library, TR-15, SY-04). Record: Pittler and Ernst found 11 trials of 645 participants, and in six trials kava extract cut the Hamilton anxiety score by 5.0 points (1.1 to 8.8) more than placebo (Pittler and Ernst 2003). The brief's lead of 3.9 points could not be found in the version read. An aqueous extract helped in 75 people with generalised anxiety over six weeks (Sarris 2013), but the larger 16-week trial of 171 people found no benefit, more liver test abnormalities, and complaints of memory and tremor (Sarris 2020). Harm: European solvent extracts were linked to liver failure and Germany banned kava in 2002, with counts of transplants and deaths varying between reviews [VERIFY: sources conflict] (THRIVING library, TR-15). Grade X for extracts, D for the water drink (THRIVING library, TR-15).

Lemon balm (*Melissa officinalis*, leaf). Tradition: a monastery garden herb to gladden the heart and calm nerves. Record: a meta-analysis of few, heterogeneous trials found effects on anxiety of -0.98 (-1.63 to -0.33) and on depression of -0.47 (-0.73 to -0.21) (Ghazizadeh 2021). PH-01 gives the traditional tea at 1.5 to 4.5 g in 150 ml one to three times daily, not under 12 (THRIVING library, PH-01). Grade B, safe.

Passionflower (*Passiflora incarnata*, aerial parts). A Cochrane review found only two trials of 198 people and could draw no conclusion (Miyasaka 2007). Grade D. Valerian and chamomile, covered in PH-01, are C for sleep and anxiety.

8. The comparator: what pills would have done

Every one of the 21 antidepressants in Cipriani's network of 522 trials and 116,477 patients beat placebo, with response odds ratios from 1.37 for reboxetine to 2.13 for amitriptyline (Cipriani 2018). That reference is modest: placebo response is often 30 to 40 per cent. In mild to moderate depression the village's best tools, extract, exercise, light and behavioural activation, are roughly as good. What the village loses is the antidepressant's place in severe depression, in prevention for those with many relapses, and the antipsychotic and lithium that hold bipolar illness.

Evidence grades

Practice	Grade	Basis
St John's wort standardised extract, mild to moderate depression	A	Linde 2008, Apaydin 2016, negative in severe (Shelton 2001)
St John's wort tea or home tincture, depression	D	Folk use, never trialled
St John's wort with salvaged drugs	X	Interactions, transplant rejections, pregnancies
Behavioural activation, lay delivered	A	Ekers 2014, COBRA, HAP
Exercise, supervised, 3 times a week	A	Cooney 2013, Clegg 2026, Blumenthal 1999, 2007

Practice	Grade	Basis
Morning bright light, seasonal depression	A	Golden 2005, Wirz-Justice 1996
Morning bright light, non-seasonal depression	A to B	Lam 2016, three trials in Golden 2005
Sleep protection	B	Baglioni 2011 (prediction, not treatment)
Sleep deprivation as treatment	B, not for the village	Boland 2017, transient
MBCT for relapse	A	Kuyken 2016
Community, social prescribing	D	Bickerdike 2017
Saffron stigma 30 mg	B	Marx 2019, one region, bias
Lavender oil capsule (Silexan)	A	Dold 2023, sponsor involved
Home lavender oil by mouth	D	Not tested
Lemon balm	B	Ghazizadeh 2021
Kava extract	X	Sarris 2020 null, liver
Kava water drink	D	Tradition, no trial
Passionflower	D	Miyasaka 2007

Means ledger

Rung	What can be done	What it changes
Hands and knowledge alone	Ask the PHQ-9 and GAD-7 by voice, ask about suicide, look for the mimics, prescribe walking in morning daylight, keep a sleep routine, schedule activity, keep the person in company	Catches most cases and the emergencies. Exercise, light and activation each carry a moderate effect at no cost
Hearth	Feed properly, treat hunger as a cause. Lemon balm tea. St John's wort tea 3 to 6 g herb a day	Food reverses starvation depression. Teas are comfort and possibly mild effect, unproven
Garden and still	Grow St John's wort and lemon balm, dry them out of the sun, make tinctures by the 1:5 rule. A scale makes doses repeatable	Steadier dose. Tincture may carry interaction risk with unknown benefit
Village dispensary (300)	A trained activation worker, weekly sessions, supervision. A register of who takes which herb and which salvaged drug. Nicotinamide or yeast for pellagra. A watch rota	COBRA-level care for mild to moderate illness. Interaction screen. First structured outcome record
District infirmary (3,000)	A supervisor of supervisors, MBCT groups for relapse, salvaged antidepressants rationed to the severe, a test of local tea against any surviving extract, a safe room	Severe cases get the one drug, relapse is prevented, the local preparation gets a grade

Rung	What can be done	What it changes
Hospital before the Fall	Antidepressants, psychotherapy, lithium and antipsychotics, electroconvulsive therapy, inpatient care, blood tests for thyroid, B12 and iron	Treats psychotic, bipolar and suicidal depression, which the village largely cannot

Harm test

St John's wort. Harms by interaction (transplant rejection, failed antiretrovirals, shifting warfarin levels, unwanted pregnancy, rarely serotonin syndrome) whenever more than 1 mg of hyperforin a day meets a narrow-margin drug (EMA monograph 2022). Who must never receive it, and the signs of trouble, are in section 2 and Protocol 5. Response: stop the herb, keep out of strong sun, and remember that enzyme effects take about a week to wear off.

Exercise. Injuries of muscle and joint and, in a few, worsening depression (Clegg 2026). Starvation plus hard exercise is harmful: a hungry patient should be fed before being made to run [VERIFY: inference]. Those with chest pain on effort, recent illness or heart failure start with walking.

Light. Safe for almost everyone. In bipolar illness it could trigger mania without protective drugs [VERIFY: inference, Sit 2018 excluded unprotected patients].

Behavioural activation. Harm comes from missing suicide and severe illness. COBRA recorded overdoses and self-harm in both arms (Richards 2016). A worker without supervision and an escalation route is the hazard.

Community. A village that talks spreads secrets, and close communities may push the sick to work or church, or read illness as sin [OWNER: confidentiality rule for mental-health records and what a worker may tell family or elders].

Saffron, lavender, kava. Autumn crocus confused for saffron kills. Lavender oil on children's skin is suspected of hormonal effects. Kava extracts injure the liver weeks to months after starting, with jaundice as the sign (THRIVING library, TR-15).

Red flags

These patients will die or be disabled without what the village cannot fully give. Act anyway.

1. **A plan, the means and a time for suicide, or a recent attempt.** Do not leave the person alone. Remove ropes, blades, firearms, stored poisons and salvaged medicines from reach, as Sri Lanka's restriction of pesticides showed means restriction saves lives (Gunnell 2007, via THRIVING library, MI-02). Set a watch rota [OWNER: who may be asked to watch and for how long]. MI-09 holds the rest.
2. **Refusal of food and fluids for more than two days, or a person who has stopped moving and speaking.** This may be severe depression or catatonia, which kills through dehydration and clots [VERIFY: no source read for the two-day threshold]. Give fluids by mouth patiently, turn and move the person, and send for district help.
3. **Depression with delusions or voices**, such as belief in guilt, ruin or rotting organs. Psychotic depression carries a high suicide risk and does not respond to activation alone [VERIFY]. The library's psychosis report should hold the detail.
4. **Mania or a mixed state**: little sleep without tiredness, rapid speech, spending, grandiosity, or agitation with despair. Stop St John's wort and any antidepressant, protect from harm, reduce stimulation.
5. **Depression after childbirth with confusion, sleeplessness or strange beliefs**, which may be postpartum psychosis [VERIFY: not researched here]. Never leave mother and baby alone.

6. **Sudden confusion, fever, a new headache, weakness on one side, or fits.** This is not depression. Treat as physical illness.
7. **Heavy drinking with despair, or shaking and sweating after stopping**, where withdrawal can kill (the library's withdrawal report should hold the detail).
8. **A patient whose score rises on two visits despite treatment.** Escalate to the district.

Honest comfort: most depressions, even untreated, lift within months [VERIFY: natural history not read]. Say so. Sit with the person. Bring food. Keep them in the life of the house.

The case against

Against St John's wort. Richard Shelton's group and the Hypericum Depression Trial Study Group, both independently funded American trials, found no benefit over placebo in moderate to severe major depression (Shelton 2001, Hypericum Depression Trial Study Group 2002). Linde's own review flags that the German-speaking trials were more positive, and much of that cluster was run with the manufacturers of the extracts (Linde 2008, THRIVING library, PH-01). Apaydin found 79 per cent heterogeneity (Apaydin 2016). The plant's gentle reputation hides the worst interaction profile of any herb in the library.

Against exercise. Cooney's 2013 high-quality subset showed no significant benefit, and although the 2026 update restored a smaller one, its authors still rated certainty low, noted high risk of bias everywhere and few long-term data (Cooney 2013, Clegg 2026). Noetel's network rests on one low-risk trial (Noetel 2024). Blumenthal's SMILE could not separate active treatments from placebo (Blumenthal 2007).

Against light. Golden accepted only 13 per cent of the studies she found, and the non-seasonal evidence rests on a handful of small trials (Golden 2005).

Against behavioural activation. Ekers rated the evidence low quality with short follow-up (Ekers 2014). COBRA's patients were mostly on antidepressants, and the severely ill were excluded (Richards 2016). Activation by lay workers has never been tested in a population without a health system behind it.

Against community. Bickerdike's review found the social-prescribing literature too weak to support its claims (Bickerdike 2017). The Amish and Hutterite data show severe mood disorder intact inside close communities (Egeland and Hostetter 1983, Nimgaonkar 2000). Derek Summerfield, from the other side, warns that medicalising distress converts suffering with a social cause into an individual disorder, which the village may do with a questionnaire as readily as a hospital does with a pill (THRIVING library, MI-01).

Against the other plants. Marx found publication bias and a single country in saffron's record (Marx 2019). Silexan's evidence comes largely from its maker (Dold 2023). Sarris's own larger kava trial overturned his smaller positive one (Sarris 2020).

Against the whole toolkit. Placebo response of 30 to 40 per cent means that much of what any village treatment achieves is attention, hope and time, which is easily mistaken for proof that a remedy works.

10-line summary

1. Screen with the PHQ-9 and GAD-7 in fixed words in the local idiom, cut point 10, and check them against known cases before trusting them.
2. Always ask about suicide. Asking does not plant the idea.
3. Rule out hunger, pellagra, anaemia, hypothyroidism, B12 deficiency and drink before calling it depression.
4. Behavioural activation from briefly trained workers equalled CBT from therapists at a fifth less cost.
5. Exercise helps moderately and as much as a pill or therapy, but less in the best trials.
6. Morning daylight, an hour outdoors, treats winter depression and probably more.
7. Standardised St John's wort extract equals antidepressants in mild to moderate depression and fails in severe.

8. The garden tea carries about one seven-hundredth of the trial extract's hyperforin and has never been tested for depression.
9. St John's wort defeats salvaged contraceptives, warfarin, antiretrovirals and transplant drugs, and must never join an antidepressant.
10. Close communities kept severe mood disorder and familial suicide. Community helps, but does not treat the severely ill.

Open questions

- Does a home tea or tincture of St John's wort, at a measured dose, relieve depression? Never tested.
- How much hyperforin does a home ethanol tincture carry, and does it induce enzymes?
- Is the active ingredient of lay care the supervision, the pay or the relationship? MI-01 and MI-02 disagree and no trial separates them.
- Does exercise help people who are hungry and already labour all day?
- Is outdoor light safe and useful in bipolar depression without antimanic drugs?
- Were the low Amish rates of unipolar depression real or an artefact of key-informant case-finding?
- What relapse rate should a village expect after a course of activation with no maintenance treatment?

Sources to read in full

1. Linde, Berner and Kriston 2008, Cochrane, St John's wort for major depression.
2. EMA HMPC monograph and assessment report on *Hypericum perforatum*, 2022 and 2018.
3. Richards and colleagues 2016, the COBRA trial, Lancet.
4. Clegg and colleagues 2026, Cochrane, Exercise for depression.
5. Lam and colleagues 2016, JAMA Psychiatry, light, fluoxetine or both.
6. Mueller and colleagues 2004, Clinical Pharmacology and Therapeutics, dose and preparation against digoxin.
7. Egeland and Hostetter 1983 and Egeland and Sussex 1985, the Amish Study.
8. Kroenke and colleagues 2001, the PHQ-9.

At the bedside after the Fall

Household. The minimum: notice withdrawal and despair, ask the suicide question plainly, feed them, get them outdoors an hour each morning walking or working beside someone, keep small daily tasks they value, and lock up salvaged medicines and poisons. Needs: this book, a lockable box, a routine. First failure to expect: the family lets the person stay in bed "to rest", and withdrawal deepens.

Village of 300. At a rate of a few per cent at any time [VERIFY: prevalence not read], a village will carry perhaps 10 to 20 people with significant depression or anxiety at once. The minimum: two trained activation workers with five days of training, a competence check and fortnightly supervision, as in COBRA. A screening card with the PHQ-9 and GAD-7 in fixed local words. A register of herbs and salvaged drugs per person, so that no woman on the pill gets St John's wort. A morning walking group. A small St John's wort and lemon balm bed, dried and labelled with harvest date. A watch rota for those at risk. Needs: one literate worker, a notebook, scales to 0.1 g, labelled jars, a quiet room. First failure to expect: the activation worker carries every case alone, burns out and stops [OWNER: workload limit and payment for activation workers].

District of 3,000. The minimum: a supervisor for the village workers, MBCT groups for people with repeated relapses, a reserved supply of salvaged antidepressants for severe depression [OWNER: who decides who gets them], a safe room for those at high suicide risk, and an outcome record across villages so that local preparations can be graded. A district can run the trial PH-01 asked for: St John's wort tea against lemon balm tea in mild depression, scored blind by PHQ-9 at four and eight weeks. Needs: a nurse or doctor, a lockable store, a filing system. First failure to expect: the severe and psychotic cases arrive late, after villages have tried teas for weeks.

Protocols

Protocol 1. Screening and immediate safety

- ☐ Sit privately. Ask the nine PHQ-9 questions in the same words every time, about the last two weeks. Score each 0 (not at all), 1 (several days), 2 (more than half the days), 3 (nearly every day).
- ☐ Add up. 0 to 4 none, 5 to 9 mild, 10 to 14 moderate, 15 to 19 moderately severe, 20 to 27 severe (Kroenke 2001).
- ☐ Ask the seven GAD-7 questions the same way. 10 or more suggests an anxiety disorder (Spitzer 2006).
- ☐ If item 9 is above 0, ask directly: are you thinking of killing yourself? Do you have a plan? The means? A time? Have you tried before?
- ☐ Any plan with means: do not leave alone, remove means, start the watch rota, send for the district. See Red flags and MI-09.
- ☐ Check the mimics: diet in the last three months, rash on sun-exposed skin, pale conjunctivae and nails, swelling in the neck, slowness and cold, tingling feet, daily drink, recent bereavement.
- ☐ Treat any deficiency first or alongside (THRIVING library, HY-08).
- ☐ Record score, date and plan. Re-score every two weeks.

Protocol 2. Behavioural activation course

- ☐ Sessions: weekly, 30 to 60 minutes, 6 to 12 sessions (HAP used 6 to 8 of 30 to 40 minutes, COBRA averaged 11.5 of 60 minutes).
- ☐ Week 1: explain the spiral of withdrawal. Ask the patient to mark each hour of the next week with what they did and how they felt, 0 to 10.
- ☐ Week 2: review the record. Name three things the patient values (family, craft, faith, land).
- ☐ Weeks 2 to 4: plan two or three small activities a day that serve those values, starting with the easiest. Write them in a schedule.
- ☐ Each week: review what was done, not how the patient felt beforehand. Praise doing. Break failed tasks into smaller steps.
- ☐ Weeks 4 onwards: add harder tasks and tasks that solve a real problem.
- ☐ Re-score PHQ-9 every two weeks. If no fall of at least 5 points by week 6, or any rise on two visits, tell the supervisor [VERIFY: threshold is own inference].
- ☐ Supervision: at least an hour every two weeks.

Protocol 3. Exercise prescription

- ☐ Three sessions a week, 30 to 45 minutes each, for at least 12 to 16 weeks (Blumenthal 1999, 2007).
- ☐ Ten minutes of gentle warm-up, then brisk walking, jogging, digging or dancing hard enough to breathe faster but still speak in short sentences, then five minutes of easy walking [VERIFY: talk-test translation of 70 to 85 per cent heart-rate reserve].
- ☐ Exercise in company, outdoors, in the morning where possible. Feed the hungry first.
- ☐ Stop and seek help for chest pain, fainting or breathlessness out of proportion.
- ☐ Keep exercising after recovery: continuing roughly halved the odds of depression at ten months (Babyak 2000).

Protocol 4. Morning light and sleep

- ☐ Within the first hours after rising, spend 30 to 60 minutes outdoors, facing the open sky, not looking at the sun (Lam 2016 used 30 minutes of 10,000 lux, Wirz-Justice 1996 a one-hour walk).
- ☐ Daily, for at least one to four weeks before judging.
- ☐ Rise at the same time every day, including after bad nights.

- ☐ In anyone with past mania or elation, use light only with watchfulness and stop at the first sign of reduced need for sleep.
- ☐ Do not use deliberate sleep deprivation in the village.

Protocol 5. St John's wort

- ☐ Only for mild to moderate depression (PHQ-9 5 to 14) without suicidal plans, psychosis or past mania.
- ☐ Interaction screen. Never give to anyone taking or possibly taking: contraceptive pills, implants or injections, warfarin, digoxin, antiretrovirals, transplant drugs, cancer drugs, epilepsy drugs [VERIFY: epilepsy drugs are an inference from CYP induction], or any antidepressant. Not in pregnancy, breastfeeding or under 18.
- ☐ Identify: translucent dots in leaves held to the light, two raised lines on the round stem, black dots at petal edges.
- ☐ Harvest flowering tops at full flower, dry in shade, store dark and dry, label with date, use within a year [VERIFY: storage period own inference, hyperforin falls with age].
- ☐ Tea: 1.5 to 2 g dried herb in 150 ml boiling water, two to three times a day, 3 to 6 g a day (EMA monograph 2022, Irion via EMA assessment report 2018). Steep about 10 minutes [VERIFY: steeping time not sourced].
- ☐ Tincture 1:5 in 50 to 70 per cent ethanol: 1 to 1.5 ml three times a day. Treat a tincture as able to interact.
- ☐ If a salvaged standardised extract exists: 600 to 900 mg a day, divided or once daily as labelled, maximum 1,800 mg (EMA monograph 2022).
- ☐ Tell the patient: cover skin in strong sun, report breakthrough bleeding, rash, elation, agitation or fever.
- ☐ Review at two weeks for harms and at four to six weeks for effect. Stop if no fall in PHQ-9 by six weeks.
- ☐ After stopping, effects on other drugs last about a week. Keep using extra contraception for that time.
- ☐ Always alongside Protocols 2 to 4.

Numbers to carry

1. **PHQ-9 of 10 or more**: probable depression, sensitivity and specificity 88 per cent (Kroenke 2001). GAD-7 of 10 or more: probable anxiety disorder (Spitzer 2006).
2. **Any yes on suicide** means plan, means and time must be asked that day.
3. **St John's wort extract 600 to 900 mg a day**, onset within 4 weeks, review at 6 weeks.
4. **Tea 1.5 to 2 g herb per cup, 2 to 3 cups a day**, never tested for depression.
5. **About 1/700**: the hyperforin in two cups of tea against one day of trial extract (Mueller 2004).
6. **77 to 88 per cent**: cycles with breakthrough bleeding on the pill with St John's wort, against 35 per cent without (Pfrunder 2003).
7. **Three times a week, 30 to 45 minutes**: exercise that equalled sertraline (Blumenthal 1999).
8. **One hour outdoors each morning**: half of winter depressions remitted in a week (Wirz-Justice 1996).
9. **Five days of training and an hour of supervision every two weeks** made junior workers as good as therapists (Richards 2016).
10. **30 to 40 per cent**: placebo response in depression trials. Expect it, and do not mistake it for proof.

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