

FREE CHECKLIST

Evidence-Based Longevity Checklists

Not medical advice.

These are sample recommendations, this document due to its nature of a sample, and of a checklist format does not provide:

- Peer-reviewed references
- Fundamental context
- Critical appraisal
- Comprehensivity
- Explanations
- Peer-review
- As frequent updates or checks as the official course

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BASED OFF DR ZOLMAN'S LONGEVITY SCHOOL

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Level 1, 2, 3 Protocol Overview

These are sample recommendations, references, context and critical appraisal are not provided due to the nature of being a sample checklist.

Zolman Longevity Level 1 Stacking 30 years healthspan

- 17 normal biomarkers vs all always abnormal:** FEV1, FVC, CGM, CRP, Cys-C, ACR, NTproBNP, HbA1c, Insulin, TG, Lp(a), ALT, ALP, RDW, Hb, WBC, NLR **+15**
- Smoking:** 0 vs 20/day **+10 yrs**
- Mental Health:** None vs severe **+10 yrs**
- Exercise:** >6 hrs mod/vig/wk (max 3 vigorous) + 6k steps + top 2% for age Bruce Treadmill **+8 yrs**
- Calories (CRON):** 10-20% <RDA **+5 yrs (men)**
- AHEI-2010 Diet:** See the checklist **+5 yrs**
- BMI, Body Fat & Waist Hip Ratio:** 18.5 to 22.5 BMI, 15%/20% men/women, waist < hips **+5 yrs**
- ApoB:** 20 - 60 mg/dL vs 110 **+3 to 6 yrs**
- Blood Pressure:** Under 115/70 vs 140/80 **+3 yrs**
- Hormones (T/E/P):** Free T 0.4-0.6 nmol/L (115-170 USA) (M), HRT post-meno (F) **+2 to 5 yrs**
- Guideline Recommended Screening:** oliverzolman.com/calculators **+2 yrs**
- Sleep:** Meet 5 criteria **+2-5 yrs**
- Vitamins:** D 75-125 nmol/L (30-50 ng/mL) + middle ref range B12 & folate: **+2 yrs**
- Social Strength:** Strong bonds & purpose vs isolated & lost **+2 yrs**
- Perfect Air Quality:** vs 12ug/m³ avg **+1 year**
- Perfect Oral Health:** vs chronic issues **+1 year**
- Alcohol:** 7 drinks/week to 1 **+7 months (unless high risk, e.g. cancer family history)**

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May give an average person an age 90+ life expectancy

Level 1 represents the foundational interventions that any person can implement. These are the evidence-based basics that, when combined, are projected to extend life expectancy beyond age 90.

ZOLMAN LONGEVITY SCHOOL LEVEL 2: OPTIMISE ALL NON-AGE RELATED FACTORS

- 1 **YOUR HEALTH ROLODEX**
World's Top Professionals | Friends & colleagues | Family
- 2 **OPTIMAL NON-AGEING CONDITION DIAGNOSIS & TREATMENT**
Auto-immune | Rare diseases | Chronic Pain | More
- 3 **SEX & SEXUAL HEALTH**
Theory | Vaccines | Drugs & Devices
- 4 **REC. DRUGS SAFETY PROTOCOLS**
Alcohol | Stimulants | Downers
- 5 **AVOIDING HARM**
Clinicians | Therapies | People | Natural Disasters | Rabid dogs
- 6 **EVIDENCE BASED MEDICINE (EBM) SKILLS**
Searching | Reading | Making decisions
- 7 **GENOMICS**
Tests | Polygenic risk | Monogenic results | Drug responses
- 8 **COGNITIVE ENHANCEMENT**
Hardware | Software | Prescriptions/Drugs | Lifestyle
- 9 **TESTING EQUIPMENT OWNED**
Devices | Imaging systems | Software & tracking results
- 10 **ENVIRONMENTAL EXPOSURES**
Air | Light | Water | Animals | People | Occupation
- 11 **EMERGENCY MEDICINE**
Skills | Knowledge | Equipment Owned | Cryopreservation
- 12 **BIOBANKING**
Organelles | Cells | Tissues | Organs | Whole body clones

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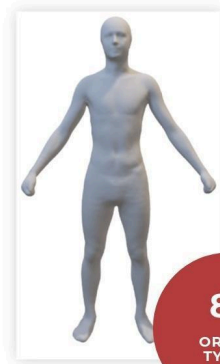
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THEORETICALLY UNLIMITED HEALTHSPAN EXTENSION

LONGEVITY LEVEL 3: AGEING CAUSE REVERSAL

Solving 8 categories of ageing pathology in all 81 organ types



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- 1 **TOO FEW CELLS**
Stem cell exhaustion, cell loss, less mitochondria
- 2 **TOO MANY CELLS**
Cancer, zombie cells, fat cells etc
- 3 **DAMAGED CELL COMPONENTS**
Mitochondrial mutations, genomic instability, telomere shortening
- 4 **WASTE INSIDE CELLS**
Lipofuscin, disabled macroautophagy
- 5 **WASTE BETWEEN CELLS**
Amyloid build up
- 6 **DAMAGED SCAFFOLD BETWEEN CELLS**
Cross-link stiffening, AGEs
- 7 **EPIGENETIC CHANGES**
Drift, noise
- 8 **INTER-CELLULAR COMMUNICATION**
Dysbiosis, chronic inflammation, deregulated nutrient sensing

Theoretically unlimited extension of healthspan

Level 3 is the frontier. Measuring biological age across all 82 organ types using Zolman Clocks, applying every relevant clinical practice guideline, and pioneering experimental therapies.

- Experimentally measure biological age in relevant selection of 82 organ types using Zolman Clocks methodology (experimental, as part of clinical research)
- Apply all relevant clinical practice guidelines across all medical specialties systematically

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- Experimental therapies: senolytics, rapamycin/mTOR modulators, NAD+ precursors, plasma exchange, Gene therapy approaches: targeting ageing pathways (telomerase, Yamanaka factors)
- Epigenetic reprogramming: partial cellular reprogramming technologies as they become available, Stem cell therapies: tissue-specific regeneration for organs showing accelerated ageing
- Participation in longevity clinical trials and cutting-edge research protocols
- Organ-specific interventions for any organ too old on Zolman Clocks
- Integration of all Level 1 and Level 2 protocols as the foundation

The Zolman 81 Organ Biological Ages

Each organ ages at different rates in every individual. Dr Zolman's framework attempts to measure biological age across all 81 organ types to create a personalised rejuvenation protocol, as based off Zolman Biological Age Marker Criteria.

Zolman 81 Organ Biological Ages

Nervous System

1. Cerebrum
2. Perfusion system; Ventricles, CSF, meninges, subarachnoid space, dural venous sinuses, cerebral veins, Circle of Willis
3. InterMidbrain: Diencephalon (thal/epi/sub/hypo), basal ganglia, sub nigra, hippocampi & pineal
4. Pituitary gland
5. Cerebellum
6. Brain stem
7. Spinal cord and central canal
8. Cranial nerves non-Vagus
9. Motor PNS
10. Sensory PNS
11. Autonomic NS

Cardiovascular system

12. Heart
13. Arteries
14. Capillaries
15. Veins

Respiratory system

16. Trachea
17. Larynx
18. Bronchi & bronchioles
19. Lungs
20. Diaphragm

Musculoskeletal system

21. Muscles
22. Visceral fat
23. Subcut fat
24. Brown fat
25. Beige fat
26. Tendons
27. Ligaments
28. Cartilage & capsule
29. Structural bone (non-marrow)
30. Intervertebral discs

Immune & RBC System

31. Lymph vessels & nodes
32. Red bone marrow
33. Yellow bone marrow
34. Spleen
35. Thymus

Urinary system

36. Kidneys
37. Ureters
38. Bladder
39. Urethra

Ears & eyes systems

40. Inner ears
41. Middle ears
42. Outer ears
43. Retina
44. Lenses
45. The rest of the eye
46. Lids, brows & lashes

Hormonal (both sexes)

47. Adrenal glands
48. Thyroid
49. Parathyroid

Reproductive male system

50. Prostate
51. Seminal vesicles
52. Testicles
53. Epididymides
54. Vas deferens
55. Scrotum
56. Penis

Oral Gastrointestinal Tract

57. Nose
58. Inner oral lining
59. Lips
60. Tongue
61. Teeth & dental bone
62. Gums
63. Salivary glands
64. Pharynx
65. Oesophagus
66. Stomach
67. Small bowel
68. Large bowel
69. Mesentery
70. Rectum & anal canal
71. Pancreas
72. Liver
73. Gall Bladder

Skin, hair, nails system

74. Skin
75. Hair
76. Nails

Reproductive female system

77. Breasts
78. Uterus
79. Ovaries & tubes
80. Cervix
81. Vagina & clitoris

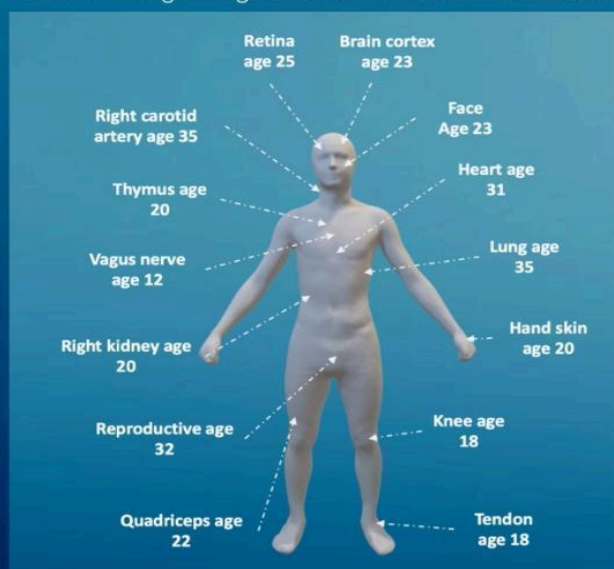
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The Rules

1. Score 1 point for each year each marker is under chronological age.
2. Continuously peer-review & improve biostatistical rigidity.
3. Organ biological ages should be measured through safe methods such as contrast free MRI, ultrasound, OCT, photogrammetry, medical devices, virtual devices, microbiopsy, biosolids, biofluids, biogases. Multiple modalities per organ should be used to cover >99% organ specific clinical outcome risk prediction.
4. Biological age markers should meet Zolman Biological Age Marker Criteria to ensure max possible biostatistical rigidity & identify flaws for further research funding.
5. Clinically, Organ Age markers MUST be combined with 1) organ system & multi-system bio age markers (e.g. VO2 max, some EpiAges) and 2) Optimal Clinical Outcomes Range (OCOR) markers (e.g. ALT, cholesterols, Longevity Level 2 markers).

Zolman Ageotypes

Each of 81 organs age at different rates in individuals.



Diet

These are sample recommendations, references, context and critical appraisal are not provided due to the nature of being a sample checklist.

Dietary Pattern & Scoring

- Assess and optimise your AHEI-2010 (Alternative Healthy Eating Index) diet score – aim for 8/10 of the below
- Be careful with wholegrains that are high glycaemic load (GL) and index (GI), and hidden sugars or sweeteners, even wholegrain bread can be high GI and GL, the overnight oats and overnight pasta are tricks to reduce GI.
- Evaluate caloric restriction considerations – even modest 10-15% CR shows benefits in trials for fat loss.
- Set optimal macronutrient ratios: protein 1.2-1.6g/kg for muscle gain - plant based is more linked to longevity partly due to less methionine in particular, healthy fats 25-35%, complex carbs remainder

DIET COMPOSITION. +5 YEARS?		CAN CHEAT ON 2 PROBABLY		
BLUE GOOD		Ideal per day	Good amount per day	Tips
1	Vegetables (but not white potatoes)	> 600g veg/1200g leafy veg	450g veg/900g leafy veg	Weigh food. Frozen/microwave veg etc.
2	Fruits	4+ medium fruits/500g berries	3 medium fruits/400g berries	Weigh so can eyeball it in future
3	Wholegrains or legumes	> 90g	> 60g	Chickpeas, lentils, beans.
4	Nuts	>30g nuts/15g nut butter	20- 30g whole/10-15 g butter	Weigh nuts so can eyeball it in future
5	Omega 6	15 - 20g	15 - 20g	Check packets. Nuts, seeds, oils often.
6	Omega 3	> 250 mg EPA/DHA or 2g ALA	200 mg EPA/DHA or 1.5g ALA	2T ground flaxseed per day, or 100g wild salmon per week
7	Added sugar drinks OR unfresh fruit juice	Never	50 ml per day or 1 glass per week	Small 100 mL freshly squeezed juice with fibre, no plastic, may be OK 3x/wk
8	All red meat, or white processed meat	Never	5g/d or 30g/week	White meat instead
9	Trans fat	< 1g (dairy OK)	< 2 g (dairy OK)	Check packets
10	Sodium "Salt" NaCl sodium equivalent	< 1.6g men < 1.1g women < 4g men, < 2.8g women	< 2.4g men < 1.6g women < 6g men, < 4g women	Check packets
YELLOW BAD		PURE CARNIVORE? CAN MAKE IT WORK		23

Key Micronutrients

- Vitamin D: test serum 25(OH)D, target 85 - 125 nmol/L (standard units) or 35-50 ng/mL (US units), supplement D3 1,000 IU per 10 nmol/L or 4 mg/dL you are below your target, if below optimal
- Folate: Target middle of the normal range, (approx 10-15 ng/mL)
- Magnesium: 400-600mg/day from diet + supplement (glycinate or threonate forms preferred, or oxide or citrate for constipation in addition)

- Vitamin B12: especially critical if plant-based, target middle of the normal range.

| Anti-Inflammatory & Gut Health

- Prioritise anti-inflammatory foods: berries, leafy greens, fatty fish, turmeric, extra-virgin olive oil assuming lack of pesticides, additives, sterility and allergenicity
- Eliminate or drastically reduce ultra-processed foods (UPFs) – linked to accelerated ageing
- Achieve 30g+ dietary fibre daily from diverse plant sources (30+ plant species per week)
- Include fermented foods daily if possible without gastrointestinal side effects such as reflux or bloating or nausea: yoghurt, kefir, kimchi, sauerkraut, miso for microbiome diversity
- Consider pesticide content of foods
- Consider acid pH content of foods as per Acid Watchers Diet for reflux and silent reflux
- Consider A2 casein and European gluten.

| Meal Timing & Habits

- Implement time-restricted eating (TRE): 8-10 hour eating window aligned with circadian rhythm, or longer 12 hours with 3 hour gap before bed if want to keep sex hormones higher and minimise reflux
- Hydration targets: 2-3 litres daily, more with exercise; monitor urine colour (pale yellow), understand water, nanofiltration and nanoplastic filtration
- Limit alcohol: ideally zero; if consumed, maximum 1 unit/day with alcohol-free days
- Glycaemic control strategies: pair carbs with protein/fat, eat vegetables first, post-meal walks, standard diabetes care by a medical doctor, basic glucose protecting supplements such as berberine Hcl 1.5 g a day, Chromium picolinate 1000 ug, organic ginger 1.2g, Ceylon Cinnamon 1.2g.

Sleep

These are sample recommendations, references, context and critical appraisal are not provided due to the nature of being a sample checklist.

Sleep Duration & Timing

- Meet the 5 sleep criteria below
- Maintain consistent sleep/wake times (even on weekends) – circadian alignment is critical
- Establish a fixed wind-down routine: start 60-90 minutes before target sleep time

- 1 IDEAL SLEEP DURATION OF 7-8/HR/NIGHT**
- 2 DIFFICULTY FALLING ASLEEP NO MORE THAN 2X/WEEK**
- 3 TROUBLE STAYING ASLEEP NO MORE THAN 2X/WEEK**
- 4 NOT USING ANY SLEEP MEDICATION**
- 5 FEELING WELL RESTED AFTER WAKING UP AT LEAST 5 DAYS/WEEK**

Light Exposure Management

- Get 10-30 minutes of bright outdoor light within 1 hour of waking (sets circadian clock) (use light glasses like <https://www.lumosglasses.com/>)
- Use blue-light blocking glasses 2-3 hours before bed (amber/red lens) or set your lighting, computer and phone to have STRONG blue light reduction filters
- Dim household lights after sunset – use warm, low-intensity lighting
- Blackout curtains or sleep mask for complete darkness during sleep

Sleep Tracking & Testing

- Track sleep with validated devices may help some: Apple Watch, Oura Ring (good HRV/sleep staging) or Muse S (EEG-based)
- Screen for sleep apnoea: snoring, impaired nasal breathing, daytime fatigue, neck circumference >40cm = get tested
- Get tested with WatchPAT or similar (NoxT3, home or lab polysomnography etc.) and know the difference between RDI and AHI, as RDI is very common cause of bad sleep. Know about CPAP, APAP and BiPAP.
- Regardless of AHI RDI results - which may have mismatch with symptoms, fix your nasal breathing using procedures like CBCT scan, septoplasty, EASE, MARPE, FME, DOME Zero, Vivaer, RhinAER, allergy drops, turbinate reduction, internal and external nasal expanders, and more as

guided by nasal endoscopy and expert ENT and sleep doctor, and potentially myofunctional therapy - do not rely on nasal expanders via internal or external means long term. .

- Consider a home sleep study (WatchPAT or similar) if risk factors present
- Know what CBT-I is and how to access online CBT-I courses (included in Longevity School), as well as know about melatonin IR, ER and doxepin, ramelteon, daridorexant, anti-histamines, clonazepam and other drug strategies:
- Sleep efficiency target: >85% time in bed actually asleep

Substances & Supplements

- Caffeine cutoff: 10+ hours before bedtime (half-life varies by CYP1A2 genotype)
- Understand alcohol impact: even 1-2 drinks disrupts REM sleep and HRV significantly
- Magnesium glycinate (200-400mg) 30-60 min before bed – evidence-supported sleep aid but may have no effect

Sleep Hygiene & Environment

- No screens in the bedroom – charge phone outside the room
- Bedroom for sleep and intimacy only – no work, no TV
- Pillow and mattress set up for lack of muscle and neurological pain
- PCO₂, PM_{2.5}, VOC, temp and humidity monitoring, keep CO₂ low by leaving window or door open if small room volume. A radiator below the window turned on overnight may be necessary to stop temperature dropping too low. Use an insect net if necessary.
- White noise machine or *custom moulded* earplugs if environmental noise is an issue
- Manage stress/cortisol before bed: journaling, breathing exercises, or light stretching or instant or extended release melatonin (0.3 - 3 mg titrate up), occasional or short term promethazine or clonazepam 0.25 mg under medical doctor prescribed guidance
- Know that optimal temperature is one that does not cause sweating or shivering

Exercise

These are sample recommendations, references, context and critical appraisal are not provided due to the nature of being a sample checklist.

Cardiovascular Training

- Achieve 150+ minutes moderate or 75+ minutes vigorous cardio per week (minimum guidelines)
- Include VO2max training: 4x4 min intervals at 90-95% max HR, 1-2 sessions per week
- Zone 2 training: 3-4 sessions/week at conversational pace for mitochondrial health and fat loss
- Track resting heart rate and HRV trends as fitness biomarkers
- Perform the treadmill protocol in Level 1 slide for CardioRespiratoryFitness (VO2 max not necessary for most unless have certain lung or cardiac conditions)

Resistance Training

- Resistance train 2-4x per week, hitting each major muscle group 2x per week
- Prioritise compound movements: deadlift, squat, bench press, overhead press, rows
- Consider trap bar deadlift – lower injury risk with similar posterior chain benefits
- Apply progressive overload: increase weight, reps, or volume systematically each week
- Know about thoracic outlet syndrome and symptoms caused by resistance exercise

Programming & Rep Ranges

- Hypertrophy focus: 8-12 reps, 3-4 sets, 60-75% 1RM, 60-90 sec rest
- Strength focus: 3-6 reps, 4-5 sets, 80-90% 1RM, 2-3 min rest
- Muscular endurance: 15+ reps, 2-3 sets, lighter loads, shorter rest
- Test and maintain grip strength – a powerful predictor of all-cause mortality
- Include flexibility/mobility work: 10-15 min daily, yoga or dedicated mobility sessions

Body Composition Targets

- Body fat % targets: men 10-15%, women 18-25% for optimal healthspan
- Prioritise lean mass preservation – sarcopenia is a major ageing driver
- Get body composition DEXA scan every 6-12 months to track body composition precisely or Withings Body Comp/Body Cardio/Body Scan 1/Body Scan 2 scales (precise, but less accurate)
- Optimise NEAT (Non-Exercise Activity Thermogenesis): walk 8,000-12,000+ steps daily

Recovery

- Sleep checklist
- Protein timing: 1.6/kg/day spread across at least 2 meals for lean mass
- Deload every 4-6 weeks: reduce volume by 40-50% for recovery adaptation
- Cold exposure (cold plunge/shower) for recovery – separate from hypertrophy days
- Fix low testosterone or menopausal hormones with biHRT (bio identical hormone replacement therapy)

Blood tests

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Metabolic & Lipid Panel

- Complete metabolic panel (CMP): glucose, electrolytes, kidney and liver markers
- Advanced lipid panel: ApoB (target <60 mg/dL), Lp(a) (test once – genetic), not LDLp or oxLDL
- HbA1c (target <5.4%) and fasting glucose (<90 mg/dL) for glycaemic control
- Fasting insulin – calculate HOMA-IR for insulin resistance assessment

Inflammatory Markers

- hsCRP (target <0.5 mg/L) – chronic low-grade inflammation is a hallmark of ageing
- IL-6 (interleukin-6) – key pro-inflammatory cytokine, rising levels signal immune ageing
- Homocysteine (target <10 umol/L) – cardiovascular and neurological risk marker; need folate and B12 at 10 ng/mL and 500 pg/mL or higher, but not outside ref range, to achieve this often.

Hormones

- Testosterone: total, free, SHBG, and bioavailable – test in morning (8-10 AM)
- Estradiol (E2) in men and women – critical for bone, brain, and cardiovascular health
- DHEA-S – adrenal function and ageing marker
- Full thyroid panel: TSH, free T3, free T4, thyroid antibodies (TPO, TG)
- IGF-1 if elderly – growth hormone axis, context-dependent interpretation needed, too low = need more methionine and BCAAs

Vitamins & Minerals

- Vitamin D: 25(OH)D target - See Level 1 Checklist
- Vitamin B12 and folate - See Level 1 Checklist
- Iron panel: ferritin (target 40-100 ng/mL), TIBC, transferrin saturation, use non-apo lactoferrin 500 mg to raise, phosphate sparing iron IVs and period bleed and period frequency reduction to raise ferritin
- Zinc Copper, Magnesium, top half of ref range (RBC more accurate than serum magnesium)

Organ Function

- Liver: ALT, AST, GGT – target ALT <25 IU/L (lower is better)
- Kidney: Cystatin C-based eGFR (more accurate than creatinine-based in fit individuals)
- Complete blood count (CBC) with differential – baseline immune function, check NLR under 3 for inflammation separate from hsCRP/ESR

| Advanced Testing & Imaging

- Calculate PhenoAge from standard blood tests – 10 year all cause mortality risk predictor; biological vs chronological age
- DEXA scan: bone density + body composition (lean mass, visceral fat)
- Low radiation dose protocol coronary CT angiography (CTCA) with coronary calcium score when indicated
- Strategic (not whole body) MRI, ultrasound, biosample screening for cancers
- Genetic testing: APOE status, polygenic risk scores, pharmacogenomics, carrier status

AI models

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AI for Health Research

- Use ChatGPT, Claude, Gemini or Perplexity for rapid literature reviews on health topics
- Cross-reference AI outputs with primary sources (PubMed, Cochrane) – never rely on AI alone
- Learn effective prompting: provide context (age, sex, conditions), ask for citations
- Use AI to summarise long research papers – paste abstracts or full texts for key takeaways

AI-Powered Testing & Analysis

- Blood test interpretation platforms: upload results for AI-guided optimal range analysis
- Wearable data AI: Oura, Whoop, Apple Health data can be analysed by AI for trends
- AI imaging analysis tools: research platforms for AI-assisted radiology interpretation, important in breast cancer now for example
- Biological age calculators: use AI/ML-based biological age estimators with your data

AI for Personalised Health

- AI drug interaction checkers: verify supplement and medication interactions before protocols
- Personalised nutrition AI: tools that combine genetic data with dietary recommendations
- Exercise programming AI: generate periodised training plans based on goals and equipment
- Sleep analysis AI: correlate sleep data with lifestyle factors for personalised optimisation

Limitations & Best Practices

- AI can hallucinate medical information – always verify dosages, interactions, and protocols
- AI is not a replacement for physician oversight – use it as a research accelerator
- Be cautious with AI-generated treatment plans – they lack your full medical context
- Stay updated: AI health tools evolve rapidly – reassess capabilities every 3-6 months
- Protect health data privacy: review terms of service before uploading medical records to AI

Mental Health

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Screening & Baseline Assessment

- Complete PHQ-9 (depression) and GAD-7 (anxiety) screening and YBOCS (OCD) and Autism and ADHD assessments as relevant – establish baseline scores
- Cognitive testing baseline: MoCA, ACE3 or CNS Vital Signs for memory, processing speed
- Assess purpose and meaning (ikigai) – strong sense of purpose linked to lower mortality risk
- Social connection audit: quantify meaningful relationships and weekly social interactions

Meditation & Mindfulness

- Establish daily meditation practice: even 10-15 min/day shows neuroplasticity benefits
- Evidence-based protocols: MBSR (8-week), Vipassana, or loving-kindness meditation
- Mindfulness throughout the day: mindful eating, walking, breathing micro-practices
- Consider app-guided practice: Waking Up, Headspace, or Insight Timer for consistency

Stress Management & Biofeedback

- HRV biofeedback training: use Oura, Whoop, or dedicated device to train stress resilience
- Breathing protocols: 4-7-8, box breathing, or physiological sigh for acute stress
- Digital and excess work or excess leisure detox: set boundaries on work, leisure, news/social media consumption – schedule offline time with people
- Nature exposure: aim for 120+ minutes per week in natural environments

Therapeutic & Nutritional Support

- Therapy: RF-CBT (Rumination Focused) - Regular CBT (Cognitive Behavioural) or ACT (Acceptance and Commitment)
- Brain-protective nutrients: Cocoavia, Omega 3, any vitamin or mineral deficiency
- Exercise for neurogenesis: aerobic exercise promotes BDNF and hippocampal growth
- Sleep quality for brain health: glymphatic clearance of amyloid-beta occurs during deep sleep, sleep disorders can cause all mental health conditions
- Gratitude practice: daily journaling of 3 specific items – linked to improved wellbeing

Know key drugs and devices

- Escitalopram drops 1 mg - 20 mg a day for anxiety as a first line most evidence based newer generation SSRI, can start at 1 mg a day build up 1 mg per day up to target dose. May not need to be on long-term, typically 6-18 months. Titrate off super slowly. Regular family doctors often prescribe too high a dose to start, whilst psychiatrists can know the importance of building up slowly.
- Promethazine sedating anti-histamine up to 10 days per month, max 60 days per year for stress related insomnia, follow doctors guidance

- Clonazepam 0.25 mg microdose per day for a few days only then a break to break anxiety, and panic attacks, know the acute and long term risks and tolerance issues. Under medical doctors guidance only.
- Know about tDCS, TMS, accelerated TMS (with TBS), DBS, implanted vagal nerve stimulators, ultrasound-based vagal nerve ear stimulators
- Know about ketamine, MDMA, IV DMT, other route of administration DMT, 5-meo-DMT, psilocybin and nor-ibogaine protocols for different use cases as one/few and done alternatives to ongoing medications
- Know about T3, T4, testosterone, bioidentical estrogen, bioidentical progesterone and other hormones and how they can be causative
- Know about sleep apnea, sleep disordered breathing, high AHI, RDI, abnormal CBCT results and how these can be causative

Skin

These are sample recommendations, references, context and critical appraisal are not provided due to the nature of being a sample checklist.

Sun Protection & Retinoids

- Daily SPF 50+ broad-spectrum (UVA/UVB) on all exposed skin – #1 anti-ageing intervention for skin, use modern non-penetrating filters like in EU, UK and Korea, use physical sunscreen rather than chemical if have melasma, use iron oxide sunscreen in addition ideally too for everyone.
- Retinoid protocol: start tretinoin 0.01% custom compounded, slowly titrate if need, avoid eye area if get inflammation, drop down to adapaline microdose if tretinoin too strong.
- Apply retinoid at night on dry skin, buffer with moisturiser if irritation occurs
- Reapply sunscreen every 2 hours during sun exposure, or after sweating/swimming

Topical Actives

- Vitamin C serum: L-ascorbic acid 10-20% in the morning – antioxidant + collagen synthesis
- Niacinamide (3-5%): reduces inflammation, improves barrier, fades hyperpigmentation
- Peptides: copper peptides and matrixyl for collagen stimulation and wound healing are experimental only, need more and better clinical trials.
- Hyaluronic acid (HA) as Cerave cream or lotion whole body as required to get soft skin, or coconut oil: humectant for hydration – can apply to damp skin if super dry, seal with moisturiser
- Chemical exfoliation: AHAs (glycolic, lactic) 1-3x/week; BHAs (salicylic) for pores not on retinoid days
- Topical testosterone propionate for skin ageing is an experimental option based on old evidence

Advanced Treatments

- Red light therapy (LED): 633 nm and 810 nm as LASER or StylPro or DermaLux masks, 810 for anti inflammatory, 633 not indicated if active inflammation. Blue light for anti-acne.
- Microneedling: professional-grade (0.25 - 1.5mm depth, or at home with good training) every 4-6 weeks for collagen remodelling
- TRL, ErbYag, CO2 or Tixel treatments, or even full depth Phenol Peels: Ablative laser or thermo-mechanical fractional or deep peel treatment for rejuvenation; augment with topical julaine, topical botox, topical sculptra, topical rejuvan, topical sunekos
- Collagen supplementation: hydrolysed collagen peptides 10-15g/day for elasticity, not for wrinkles, if you can't stomach it try dipeptide/tripeptide extracts, adding sweeteners, adding to food or just doing 2 - 10g glycine per day (too much can drop body temperature too much)
- Professional skin assessments: dermatologist + VISIA or comparable imaging annually

Lifestyle & Foundation

- Moisturiser basics: ceramides, cholesterol, fatty acids – repair and maintain skin barrier
- Antioxidant-rich diet for skin: berries, green tea, dark chocolate, tomatoes (lycopene)
- Avoid smoking entirely – accelerates skin ageing dramatically (matrix metalloproteinases)
- Limit alcohol: dehydrates skin, promotes inflammation, depletes vitamin A

Peptides

These are sample recommendations, references, context and critical appraisal are not provided due to the nature of being a sample checklist.

Healing & Regeneration Peptides with awful evidence

- BPC-157: gastric pentadecapeptide – ongoing studies for gut healing, tendon repair, tissue regeneration, unclear evidence.
- GHK-Cu (copper peptide): wound healing, collagen synthesis, anti-inflammatory – topical and injectable - ongoing studies, unclear evidence.
- Thymosin Beta-4 (TB-500): tissue repair, cardiac protection, anti-inflammatory properties, ongoing studies - unclear evidence.

Anti-Ageing & Immune Peptides with awful evidence

- Epithalon (Epitalon): telomerase activation peptide – studied for anti-ageing in animal models
- Thymosin Alpha-1: immune modulation, used clinically for hepatitis and as adjunct therapy
- Selank: anxiolytic and nootropic – nasal administration, studied for anxiety and cognition
- Semax: neuroprotective and cognitive enhancing – nasal, BDNF modulation

Growth Hormone Secretagogues and muscle gain peptides

- CJC-1295 + Ipamorelin: GH-releasing combination – most studied secretagogue stack
- Follistatin: myostatin inhibitor – studied for muscle growth and body composition → very likely won't work as the half life is so short - no evidence.
- Understand trade-offs: GH axis stimulation has longevity implications (IGF-1 considerations)

Quality & Safety

- Source quality: GMP grade, certificate of analysis (COA), HPLC purity testing, mass spec testing, endotoxin testing, sterility testing otherwise can die from sepsis or other serious issues potentially
- Third-party testing: independent lab verification of identity, ISO accredited, USP methods
- Check legal status in your country – peptide regulations vary significantly by jurisdiction
- Storage: most peptides need refrigeration (2-8°C), reconstituted use bacteriostatic water at point of use, not in advance.
- Learn reconstitution: calculate concentration, use insulin syringes, sterile technique
- The Finnrick hack: Submit to Finnrick to verify individual sample HPLC MS Endo as 2nd 3rd party for free; additionally use Finnrick existing data to guide decision making.

Clinical Considerations

- Injection protocols vs nasal
- Assess clinical trial evidence: most peptides have no or flawed or limited human RCT data

- Know risks and side effects: injection site reactions, immune response, unknown long-term effects
- Always work with a physician: peptides are not supplements – medical oversight is essential
- Regulatory landscape: FDA has increased scrutiny on compounding pharmacies and peptide sales
- Know the safety testing your clinician orders may be a gimmick.

HRT (Hormone Replacement Therapy)

These are sample recommendations, references, context and critical appraisal are not provided due to the nature of being a sample checklist.

Testosterone Assessment

- Test total testosterone, **free testosterone (in men)**, SHBG, bioavailable testosterone, estrogen (morning, 8-10 AM), FSH, LH, sperm count (genetic condition of low testosterone and no/low sperm possible)
- Understand optimal vs normal ranges: optimal free T may be higher than lab lower bound reference range
- Repeat testing: confirm low levels with 2-3 separate morning tests before considering TRT

Natural Optimisation First

- Optimise sleep: poor sleep can reduce testosterone by 10-15% – prioritise 7-9 hours
- Resistance training: compound lifts are the strongest natural testosterone stimulus
- Body fat: reduce to 10-18% (men) – excess adipose increases aromatase (T to E2 conversion)
- Stress management: chronic cortisol elevation suppresses gonadotropin-releasing hormone
- Key nutrients: zinc, vitamin D, magnesium, boron – correct deficiencies first

TRT & Monitoring

- TRT indications: confirmed hypogonadism with symptoms despite lifestyle optimisation
- Monitor on TRT: total/free T, E2, hematocrit, PSA, lipids every 3-6 months
- Hematocrit: TRT increases RBC production – target <52%, donate blood if elevated
- PSA monitoring: baseline before TRT, then regular checks – does not cause but may accelerate
- Fertility preservation: TRT suppresses spermatogenesis – consider HCG or banking sperm

Estrogen & Female HRT

- Estrogen in men: don't crash E2 – essential for bone density, brain, cardiovascular health or go too high - libido and feminisation issues.
- Female biHRT (bioidentical hormone replacement therapy) (perimenopause/menopause): transcutaneous estradiol + typically oral micronised (bioidentical) progesterone – benefits when started early, but can be safely started in some at any age after menopause → VAGINAL estrogen can be used for all menopausal women generally, and can be in addition to transcutaneous estrogen. Likely need expert LLM such as Dama Assist or clinician to optimise doses, forms and blood levels.
- Progesterone: bioidentical micronised progesterone preferred over synthetic progestins
- Timing hypothesis: HRT within 10 years of menopause or before age 60 has benefits, but starting later may be OK if cleared for certain cancer and arterial risks.

Additional Hormones

- DHEA: precursor hormone, levels decline with age – test before supplementing

- Pregnenolone: master precursor hormone – limited evidence, use under medical guidance
- Thyroid optimisation: TSH (target 1-2 mIU/L), free T3, free T4 – subclinical hypo is common even in normal range potentially
- Melatonin after age 50 due to pineal gland calcification (or as based on pineal calcium volume as with 3D 3T SWI MRI)
- Work with an endocrinologist or hormone-specialist physician for all HRT decisions
- Assess risks vs benefits: individual cardiovascular, cancer, and thrombotic risk factors