# **Questions registration**

- 1) Name
- 2) Gender
- 3) Birthday
- 4) Height
- 5) Weight
- 6) Fitness level
- Beginner (0-2 years training)
- Intermediate (2-5)
- Advanced (5+)
- 7) Body parts you'd like to improve most

(Select up to 5)

(Select none if you want to prioritize equally)

- Quads
- Hamstrings
- Glutes
- Calves
- Back
- Biceps
- Triceps
- Shoulders
- Chest
- Forearms

(NOTE; you will be training your whole body but these will provide a slight tilt towards your lagging body parts)

- 8) Exercise limitations
- No overhead pressing
- No squatting
- No hip hinge movements
- 9) Nutrition goals
- Gain (Muscle and scale weight increases)
- Lose (Fat loss and maintain lean body mass)
- Main-gain (maintain scale weight but build muscle incrementally)
- 10) Select your equipment

Please remove any equipment that you don't have access to (all highlighted green to start and then turns red if they select it) (Option to remove all if they'd rather add fewer options)

11) Days you can train weekly

2,3,4,5,6 - per week

Just a reminder that more is not always better (2-3 days of effective strength training can yield immense results!!!... and even maximize recovery time)

12) Realistic workout time you can commit to per workout 30-40-50-60-70-80 minutes

# Al Coaching

## Days per week

Start with equipment available (Only included programs with what they have access to) From there, days they can train

2-3; full body split

4; upper/lower body x 2

5; modified ppl with tilt towards goal body parts to improve

6; ppl

Here are example programs

Al-Powered Training Structures Based on Exercise Science Program Selection & Structure

2-3 Days/Week: Full Body Workouts 4 Days/Week: Upper/Lower Split (x2)

5 Days/Week: Modified Push/Pull/Legs (Prioritizing Selected Body Parts)

6 Days/Week: Standard Push/Pull/Legs

## **Examples**

#### 1) 2 DAY Full Body Workouts

#### Day 1 - A

- Chest Incline Press 2 x 8-10
- Back Vertical Pull 2 x 6-10
- Shoulder Lateral Raise 2 x 8-12
- Hamstring Iso (Seated/Standing) 2 x 8-10
- Quad Squat (Hack, Leg Press, etc.) 2 x 6-10
- Calf Standing 3 x 8-14
- Biceps Supinated Grip 2 x 8-10
- Triceps Overhead 2 x 8-10
- Abs 2 x 8-12

#### **Day 2 - B**

- Chest Fly 2 x 8-12
- Back Horizontal Pull (Lat Focused) 2 x 8-10

- Shoulder Press 2 x 6-10
- Quad Iso 2 x 8-12
- Glute Ham Hinge 2 x 6-10
- Calf Donkey 3 x 8-12
- Biceps Supinated Grip 2 x 8-10
- Triceps Iso 2 x 8-10
- Rear Delt Lateral 2 x 8-12

## 2) 3 DAY Full Body Workouts

## Day 1 - A

- Chest Incline Press 2 x 8-10
- Back Vertical Pull 2 x 6-10
- Shoulder Lateral 2 x 8-12
- Hamstring Iso 2 x 8-10
- Quad Squat 2 x 6-10
- Calf Standing 3 x 8-14
- Biceps Supinated Grip 2 x 8-10
- Triceps Overhead 2 x 8-10
- Abs 2 x 8-12

## **Day 2 - B**

- Chest Fly 2 x 8-12
- Back Horizontal Pull 2 x 8-10
- Shoulder Press 2 x 6-10
- Quad Iso 2 x 8-12
- Glute Ham Hinge 2 x 6-10
- Calf Donkey 3 x 8-12
- Biceps Supinated Grip 2 x 8-10
- Triceps Iso 2 x 8-10
- Rear Delt Lateral 2 x 8-12

## Day 3 - C

- Chest Flat Press 2 x 6-10
- Back Vertical Pull 2 x 8-12
- Shoulder Lateral 2 x 8-12
- Quad Abduction/Adduction 2 x 8-12
- Glute Iso 2 x 8-12
- Calf Seated 2 x 8-12
- Biceps Pronated Grip 2 x 8-10
- Triceps Compound 2 x 8-10
- Abs Lower Variation 3 x 8-12

## 3) 4 DAY Upper/Lower Split

#### Day 1 - Upper A

- Chest Incline Press 3 x 8-10
- Back Vertical Pull 3 x 6-10
- Shoulder Lateral 2 x 8-12
- Biceps Supinated Grip 2 x 8-10

- Triceps Overhead 2 x 8-10
- Rear Delt Lateral 2 x 8-12

## Day 2 - Lower A

- Quad Squat 3 x 6-10
- Hamstring Iso 3 x 8-10
- Glute Ham Hinge 3 x 8-12
- Calf Standing 3 x 8-14
- Abs  $3 \times 8-12$

#### Day 3 - Upper B

- Chest Fly 3 x 8-12
- Back Horizontal Pull 3 x 8-10
- Shoulder Press 2 x 6-10
- Biceps Supinated Grip 2 x 8-10
- Triceps Iso 2 x 8-10
- Rear Delt Row 2 x 8-12

#### Day 4 - Lower B

- Quad Unilateral 3 x 8-12
- Hamstring Curl 3 x 8-12
- Glute Ham Hinge 3 x 8-12
- Calf Seated 3 x 8-12
- Abs 3 x 8-12

#### 4) 5 DAY Modified PPL

#### Day 1 - Push (Chest/Shoulders/Triceps)

- Chest Incline Press 4 x 8-10
- Chest Fly 3 x 10-12
- Shoulder Lateral Raise 4 x 10-12
- Shoulder Press 3 x 8-10
- Triceps Overhead Extension 3 x 8-12
- Triceps Dips 3 x 8-10
- Abs Hanging Leg Raise 3 x 12-15

#### Day 2 - Pull (Back/Biceps/Rear Delts)

- Back Vertical Pull 4 x 6-10
- Back Horizontal Row 3 x 8-12
- Rear Delt Reverse Fly 3 x 12-15
- Biceps Supinated Grip Curl 3 x 8-10
- Biceps Incline Curl 3 x 10-12
- Forearm Reverse Curl 2 x 12-15

## Day 3 - Legs (Quads/Hamstrings/Glutes/Calves)

- Quad Squat 4 x 6-10
- Quad Leg Extension 3 x 10-12
- Hamstring Curl 3 x 8-12
- Glute Hip Thrust 4 x 8-12
- Calf Standing Raise 4 x 10-14
- Calf Seated Raise 3 x 10-14

#### Day 4 - Upper Body (Weak Points Focus)

Chest Flat Press – 3 x 8-10

- Shoulder Lateral Raise 4 x 10-12
- Rear Delt Row 3 x 10-12
- Triceps Skull Crushers 3 x 8-12
- Biceps Hammer Curl 3 x 8-10
- Abs Cable Crunch 3 x 12-15

#### Day 5 - Lower Body (Weak Points Focus)

- Quad Bulgarian Split Squat 3 x 8-12
- Hamstring Seated Curl 3 x 10-12
- Glute Reverse Hyperextension 3 x 8-12
- Calf Standing Raise 3 x 10-14
- Calf Seated Raise 3 x 10-14

## 5) 6 DAY PPL

#### Day 1 - Push (Chest/Shoulders/Triceps)

- Chest Incline Press 4 x 8-10
- Chest Fly 4 x 10-12
- Shoulder Lateral Raise 4 x 10-12
- Shoulder Press 3 x 8-10
- Triceps Overhead Extension 3 x 8-12
- Triceps Dips 3 x 8-10
- Abs Hanging Leg Raise 3 x 12-15

#### Day 2 - Pull (Back/Biceps/Rear Delts)

- Back Vertical Pull 4 x 6-10
- Back Horizontal Row 4 x 8-12
- Rear Delt Reverse Fly 3 x 12-15
- Biceps Supinated Grip Curl 3 x 8-10
- Biceps Incline Curl 3 x 10-12
- Forearm Reverse Curl 2 x 12-15

#### Day 3 - Legs (Quads/Hamstrings/Glutes/Calves)

- Quad Squat 4 x 6-10
- Quad Leg Extension 3 x 10-12
- Hamstring Curl 3 x 8-12
- Glute Hip Thrust 4 x 8-12
- Calf Standing Raise 4 x 10-14
- Calf Seated Raise 3 x 10-14

## Day 4 - Push (Chest/Shoulders/Triceps - Secondary Focus)

- Chest Flat Press 4 x 8-10
- Chest Machine Press 3 x 10-12
- Shoulder Lateral Raise 4 x 10-12
- Shoulder Front Raise 3 x 10-12
- Triceps Rope Pushdown 3 x 8-12
- Triceps Skull Crushers 3 x 8-10
- Abs Cable Crunch 3 x 12-15

## Day 5 - Pull (Back/Biceps/Rear Delts - Secondary Focus)

- Back T-Bar Row 4 x 8-12
- Back Lat Pullover 3 x 10-12
- Rear Delt Row 3 x 10-12

- Biceps Hammer Curl 3 x 8-10
- Biceps Concentration Curl 3 x 10-12
- Forearm Reverse Curl 2 x 12-15

## Day 6 - Legs (Quad/Glute/Hamstring/Calf - Secondary Focus)

- Quad Bulgarian Split Squat 4 x 8-12
- Hamstring Seated Curl 4 x 10-12
- Glute Reverse Hyperextension 4 x 8-12
- Calf Standing Raise 4 x 10-14
- Calf Seated Raise 4 x 10-14

## Age-Based Adjustments to Al-Generated Training Programs

To optimize training programs based on a user's age, the app should adapt exercise selection, volume, intensity, and recovery considerations to maximize progress while minimizing injury risk and fatigue. Below is a breakdown of the recommended adjustments based on different age groups.

# **Modify by age**

## Ages 18-29 (Peak Performance & Adaptability)

Training Focus: Strength & Hypertrophy

- Volume: High volume & frequency (4-6 days per week optimal).
- Intensity: 70-90% of 1RM, pushing closer to failure (0-2 RIR).
- Recovery Considerations: Less focus on recovery aids; faster muscle recovery.
- Compound Movements Priority:
- Tempo-controlled reps still prioritized (3-1-1-0 or 2-1-1-0).
- Squats, Deadlifts, Bench Press, Overhead Press, Weighted Pull-ups/Chin-ups.
- Accessory Work: Some machines and cables for controlled stimulus.
- Cardio: Low-moderate amounts to maintain heart health but not interfere with muscle gain.

## Adjustments in AI Programming:

- Higher intensity with lower rep ranges (4-10 reps for compounds, 8-12 for isolation).
- Less rest time between sets (45-90 sec isolation, 90-120 sec compounds).

#### Ages 30-39 (Strength Retention & Injury Prevention Focus)

Training Focus: Strength, Hypertrophy & Joint Longevity

Exercise Selection: Mix of barbells, dumbbells, and machines, slight increase in machine use for longevity.

- Volume: Moderate to high (4-6 days per week).
- Intensity: 70-85% of 1RM, working in the 1-3 RIR range.
- Recovery Considerations: Increased importance of sleep, mobility work, and deloads every 6-8 weeks.
- Compound Movements Priority:

- Still focus on squats, deadlifts, presses, and pull-ups, but introduce controlled tempo to reduce injury risk.
- Accessory Work: Machines and cables used more strategically for joint longevity.
- Cardio: Moderate, includes more steady-state work for long-term health.

#### Adjustments in AI Programming:

- Moderate increase in machine/cable work (50-70% of total exercises).
- More tempo-controlled reps (4-1-1-0 or 3-1-1-0).
- Slightly increased rest time (~90 sec for compounds, 60 sec for isolation).

## Ages 40-49 (Joint Health & Hypertrophy Maintenance)

Training Focus: Strength Maintenance, Hypertrophy & Injury Prevention

- Exercise Selection: Greater reliance on machines, cables, and dumbbells over heavy barbell work.
- Volume: Moderate (3-5 days per week).
- Intensity: 60-80% of 1RM, 2-4 RIR focus.
- Recovery Considerations: Longer warm-ups and cooldowns, more mobility work, structured deloads every 4-6 weeks.
- Compound Movements Priority:
- Machine variations of squats, rows, and presses over heavy free weights.
- Accessory Work: More isolation and cable/machine work to reduce joint strain.

## Adjustments in AI Programming:

- Increased machine/cable reliance (60-80%) to reduce joint strain.
- More unilateral work (e.g., split squats, single-arm row, single-leg RDLs).
- Lighter loading with higher reps (10-15 for hypertrophy, 6-8 for strength maintenance).
- Longer rest periods (~120 sec for compounds, 60-90 sec for isolation).

## Ages 50-59 (Sustainable Muscle Retention & Mobility)

Training Focus: Muscle Retention, Joint Mobility & Strength Maintenance

- Exercise Selection: Primarily machines, cables, and controlled dumbbell movements.
- Volume: Moderate (3-4 days per week).
- Intensity: 50-75% of 1RM, 3-4 RIR focus.
- Recovery Considerations: Longer warm-ups and structured recovery days.
- Compound Movements Priority:
- Machine-based squats, leg presses, chest presses, and lat pulldowns prioritized over free weights.
- More landmine movements (e.g., landmine squats, landmine presses).
- Accessory Work: Focus on controlled resistance work and stability exercises.
- Cardio: Low-impact options like incline walking, cycling, and rowing.

#### Adjustments in AI Programming:

- 70% of exercises shifted to machine and cable work for joint safety.
- Reps increased (10-20 rep range) for lower joint stress.
- Minimal barbell work (except for landmine exercises).
- Extra mobility and prehab focus (shoulder, hips, lower back).

- Longer rest periods (90-120 sec) between sets.

## Ages 60+ (Longevity, Functional Strength & Mobility)

Training Focus: Mobility, Functional Strength & Joint Health

- Exercise Selection: Primarily machines, cables, bands, and bodyweight movements.
- Volume: Low to moderate (2-4 days per week).
- Intensity: 40-65% of 1RM, 4-5 RIR focus.
- Recovery Considerations: Prioritizing recovery, flexibility, and balance work.
- Compound Movements Priority:
- Leg press, machine chest press, lat pulldowns, and assisted squats preferred over free weights.
- Focus on stability-based movements (e.g., step-ups, banded work).
- Accessory Work: Mobility drills, resistance band work, and joint-friendly variations.
- Cardio: Low-impact steady-state work (walking, swimming, cycling).

## Adjustments in AI Programming:

- 80-90% reliance on machines, cables, and bands.
- Elimination of barbell work to avoid excess joint stress.
- High-rep range (12-20 reps) for safer muscle stimulation.
- Longer warm-ups and cooldowns with dynamic stretching.
- Balance and coordination work integrated into sessions.

## **Fitness level**

#### Beginner:

- Utilization of mostly 'beginner exercises'
- More tempo utilized
- Longer rest periods
- Fewer intensifiers (drop sets/supersets)

#### Intermediate:

- Utilization of a mix of beginner and intermediate exercises
- Slightly reduce rest periods
- Start adding intensifiers (super set./ myo set)

## **Advanced**

- Utilization of all exercises open
- More intensifiers (Long length partials, myo sets, super sets)

## **Defining intensifiers**

## Superset

**Definition:** Performing two exercises back-to-back with **minimal to no rest** between them.

**Purpose:** Saves time, increases training density, and enhances muscular endurance. Often pairs of opposing muscle groups (e.g., biceps & triceps) or same muscle group for added fatigue.

#### Example:

- Barbell Bicep Curl → immediately into → Tricep Rope Pushdown

## **Drop Set**

**Definition:** Performing a set to failure, then immediately **reducing the weight** (usually by 20–30%) and continuing the set without rest. This can be repeated for multiple "drops."

**Purpose:** Pushes past failure, increases metabolic stress, and maximizes muscle fiber recruitment.

#### **Example:**

- Lateral Raise with 25 lbs to failure  $\rightarrow$  drop to 15lbs  $\rightarrow$  continue to failure  $\rightarrow$  drop to 10lbs  $\rightarrow$  finish to failure

## Myo Set (Myo-Reps)

**Definition:** Begin with a near-failure **activation set** (typically 10–20 reps), rest 10–20 seconds, then perform short "**mini sets**" of 3–5 reps with the same weight until you can no longer complete the reps.

**Purpose:** Maximizes effective reps, keeps volume low but intensity high, excellent for hypertrophy and time efficiency.

#### **Example:**

- Seated Row – 14 reps (activation) → rest 15 sec → 5 reps → rest 15 sec → 4 reps → rest → continue until failure

## **Long-Length Partials**

**Definition:** Perform **partial reps** at the **stretched or lengthened** range of motion of an exercise (where the muscle is under the most tension).

**Purpose:** Increases mechanical tension in the most hypertrophy-sensitive range, without needing heavy loads. Very effective for targeting fibers that respond to stretch.

## Example:

- Lying Cable Lateral Raise – at the bottom (fully stretched) portion only

- Leg Curl – bottom 1/3 of the movement where hamstrings are lengthened