



## Tension Rod Dumbbell Grip Adapter - Adaptive Fitness Equipment



TOMGLOBAL

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### Summary

3D-printed adapter connecting tension rods to dumbbells, assisting users with limited grip strength during workouts.

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### ### Overview

The **Tension Rod Dumbbell Grip Adapter** is an adaptive 3D-printed fitness accessory designed to couple dumbbells with tension rods or auxiliary exercise bars. It allows users with hand weakness or grip impairments to perform upper body strength exercises without requiring intense hand or finger pinch strength.

### ### Who is this for?

Designed for adaptive athletes and individuals facing motor limitations, including:

Reduced grip strength, hand weakness, or arthritis

Individuals recovering from hand injuries or stroke rehabilitation

Anyone requiring modified exercise mechanics for fitness equipment

### ### Purpose & Key Features

**Secure Weight Coupling:** Firmly locks dumbbells into place with tension rod bars for safe weightlifting.

**Enhanced Load Distribution:** Distributes weight forces across larger muscle groups rather than placing all load on finger grip.

**Reinforced Structure:** Engineered with extra perimeter strength to withstand mechanical load during workout routines.

### ### Recommended Print Settings

**Material:** PETG or ABS/ASA (Strong material recommended for weight-bearing structural applications)

**Layer Height:** 0.2 mm

**Infill:** 35% – 50% (Gyroid or Grid infill)

**Perimeters / Walls:** 4 to 5 walls for maximum strength under tension

**Supports:** May be required depending on print orientation

**Printer Type:** FDM Printer

### ### Credits & Attribution

**Original Project:** Tension Rod Dumbbell Grip Adapter

**Designed with:** Tikkun Olam Makers (TOM)

**Original Source:** [TOM Global](<https://tomglobal.org/project/tension-rod-dumbbell-grip-adapter-6733368e6b07820013a09810>)

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## This remix is based on



**Tension Rod & Dumbbell Grip Adapter | TOM Global**

# Model files



miscolet1731409535125.stl

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