

A fit and strong upper body isn't just vital for lifting and carrying, it also contributes to sports performance. This booklet is all about improving strength and endurance in your upper body muscles – which will also enhance their appearance.

The main muscle groups in the upper body are the large muscles of the back and chest, the shoulder muscles and those along the front and back of the arms. If you are following the Army's basic 16-week fitness programme, its combination of press-ups, pull-ups and dips will strengthen all these muscle groups in a balanced way.

But this booklet also includes a strength workout (see page 10) using weights and other equipment that the Army frequently employs when training recruits.

HOW STRENGTH TRAINING WORKS

It challenges your muscles by progressively “overloading” them with a weight or other form of resistance. Provided the right level and type of challenge is placed upon the muscles often enough, they will adapt by getting stronger.

GENERAL WARM-UP EXERCISES



Shoulders



Neck

DID YOU KNOW?

The body needs 48 hours to recover and adapt to the stress of strength training – so don't train the same muscle group on consecutive days. Research does, however, show that muscles in the upper body respond to strength training more quickly than the lower body, so you can expect to see results more quickly.

Specific upper body warm-up exercises

Follow stages 1 and 2 of the general warm-up routine from Booklet 1 (such as the exercises shown left). Then use the following dynamic mobilisations to prepare your upper body for a workout

ARM CIRCLES ▼

Extend your arm straight up to your ear and then rotate it backwards in a large circle 8 times. Now repeat with the other arm. Then rotate both arms forwards in turn, 8 times each.



TRUNK ROTATION WITH ARMS TO THE SIDES ▲

Stand with your feet hip-distance apart and arms up and to the side. Keeping the hips facing the front, gently twist your torso to the side, leading with the arms and allowing your head to follow the spine. Twist to the opposite side, then repeat 8 times in each direction.

Additional warm-up exercises: bend and straighten your arms, clench and extend your fingers, circle your wrists.

PTI TIP

Make sure you balance “pushing” exercises with “pulling” ones to avoid muscular imbalance in the upper body.



The definitive Army press-up

Soldiers do a lot of press-ups – they are a key part of their military physical training. To do the perfect Army press-up, begin with your arms shoulder-width apart, fingers facing forward, your back straight and body in a straight line. Look slightly ahead, not at the floor (in combat, soldiers must keep looking ahead while moving forward in this position). Now lower your body towards the floor, elbows pointing back not splaying out to the side. Stop when your chest and hips are an inch off the floor, then straighten your arms to return to the start position. That counts as one rep.

Note The position of your hands changes the contribution made by the various muscle groups slightly. (see pictures below left). Arms wider than shoulder-distance apart works your chest muscles more, while a narrow position homes in on the triceps on the back of your upper arms.



Narrow position



Wide position



PRESS-UP ON KNEES ▼

If you can't manage a full press-up, try this modified version – or the incline press-up, above right. Start on your hands and knees, then shuffle your hands forward, shoulder-width apart, until your body forms a straight line from knees to shoulders. Lower yourself down until your hips and chest are an inch off the floor, pause, then return to your start position.

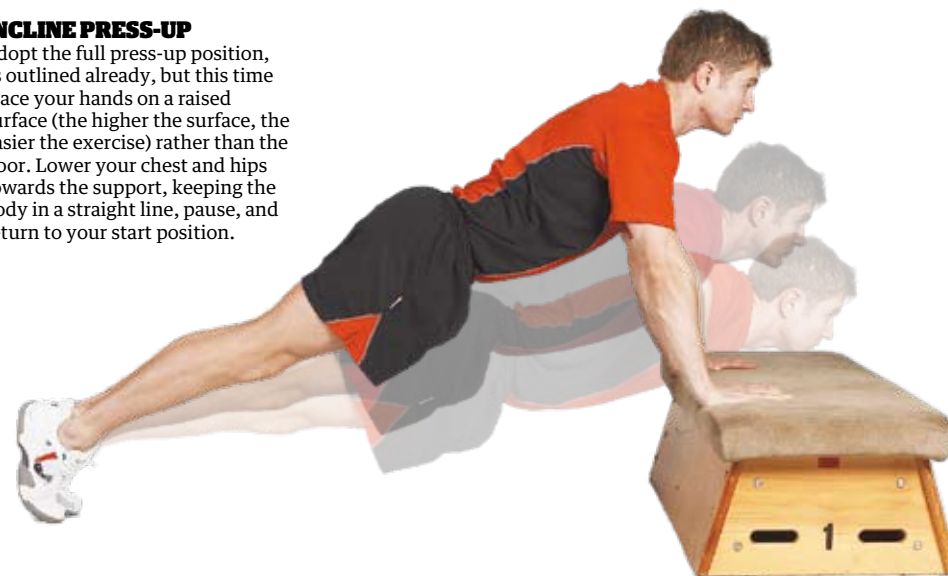


So how does your press-up max score rate? This table gives you an age- and gender-based performance guide for the maximum number of press-ups you can do in two minutes (pauses are allowed!)

levels / age	Under 30		30-34		35-39		40-44		45-49	
	M	F	M	F	M	F	M	F	M	F
excellent	72+	46+	70+	41+	68+	37+	62+	33+	55+	31+
very good	53-71	30-45	51-69	26-40	50-67	23-36	44-61	22-32	38-54	20-30
good	44-52	21-29	41-50	19-25	39-49	16-22	35-43	15-21	29-37	13-19
average	34-43	14-20	32-40	12-18	30-38	11-15	27-34	10-14	21-28	6-12
poor	0-33	0-13	0-31	0-11	0-29	0-10	0-26	0-9	0-20	0-5

INCLINE PRESS-UP

Adopt the full press-up position, as outlined already, but this time place your hands on a raised surface (the higher the surface, the easier the exercise) rather than the floor. Lower your chest and hips towards the support, keeping the body in a straight line, pause, and return to your start position.



DECLINE PRESS-UP

Reckon you've got the Army issue press-up taped? Then try this harder version, with your feet placed on a raised surface, such as a chair, rather than on the floor – so that your shoulders and head are lower than your hips. Perform full press-ups as normal.



REPS AND SETS

Perform these staple upper body moves (press-ups, dips and pull-ups) as directed by your level on the basic 16-week fitness programme.

DID YOU KNOW?

A full press-up entails lifting roughly two-thirds of your body weight.

The perfect pull-up

Pull-ups (or “heaves” in Army-speak) are another key aspect of military physical training, as being able to lift your own body weight off the ground is a crucial skill. The standard version uses an underhand grip – the style that military tests use (see main picture, right).

Stand beneath the pull-up bar with your feet together, and take hold of it with an underhand grip. Pull yourself up towards the bar, bending at the elbows and keeping feet and legs locked together. Your chin must clear the bar for the rep to count. Slowly lower and repeat.

Note Pull-ups can be done with an overhand (see inset image) or underhand grip. While an overhand grip is more functional in terms of the position we might be in when we need to lift our body weight off the ground, it is also more challenging than the underhand grip used in Army tests.



PULL-UPS WITHOUT A PULL-UP BAR ◀

If you don't have access to a pull-up bar, you can improvise with tree branches, climbing frames and goalposts. Or try this at-home version.

Place a broomstick over two sturdy chairs, or use an alternative surface that you can shuffle underneath and grip the edge of. Take hold of the broomstick or edge with an underhand grip, your arms shoulder-width apart, and lift your body clear of the floor, keeping your knees bent and feet on the floor. Then bend your elbows to bring your chest up towards the broomstick or surface. Pause, then lower and repeat.

To make the exercise harder, straighten your legs.



ASSISTED PULL-UPS WITH A PARTNER

If you can't manage a full pull-up, use a block or a partner to help you get into the raised position (elbows bent, head above the bar), and then slowly lower yourself back down. Working through the downward phase will strengthen your muscles and help to get you fit (in time) to do the full heave.

Alternatively, get a partner to hold your ankles or support you around the waist to assist with raising and lowering your body. Gradually, take more of your own body weight and reduce the amount of support that your partner provides.

PTI TIP

When doing pull-ups, keep your body still and your movements controlled. Don't use momentum or swinging actions to help you pull up to the bar.



The definitive Army dip

The classic dip is performed on parallel bars. Grasp the bars with your palms facing each other, then support yourself on straight arms with your legs straight and ankles crossed. Lower yourself down to form a right angle at the elbow – not hunching your shoulders up towards your ears – then push back up and repeat.

Note You may not have access to parallel bars, but you can do a perfectly effective dip using a chair, bench or coffee table (see right).



TRICEPS DIP

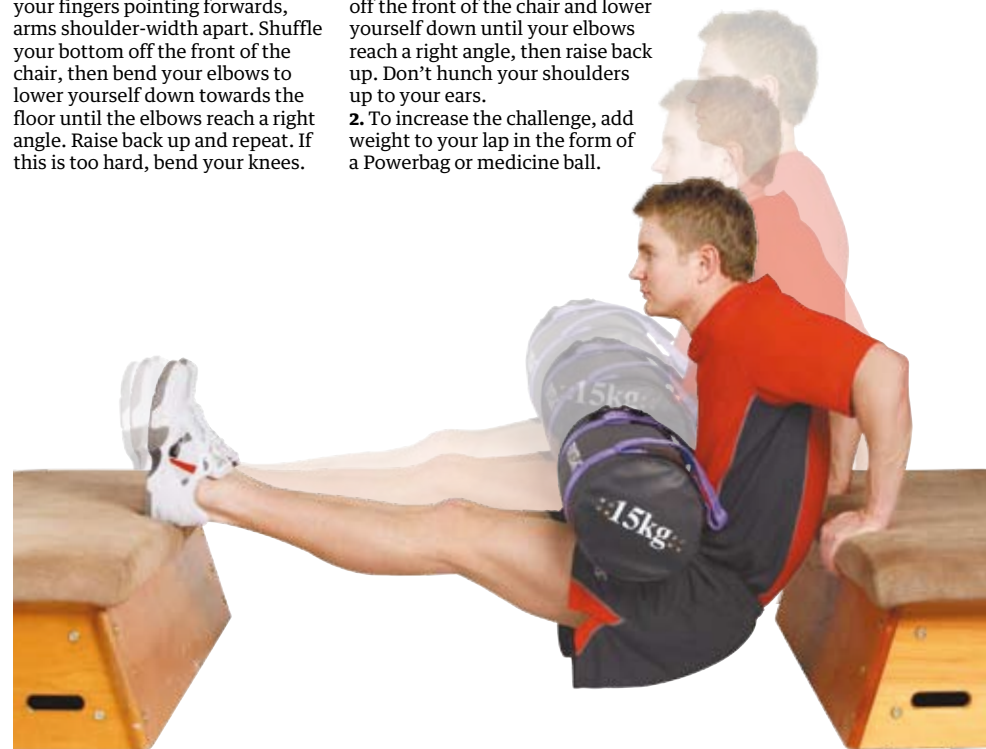
As shown on the wallchart that accompanies this fitness programme, sit on the edge of a chair or bench with your legs extended straight out in front. Now grip the edge of the chair with your fingers pointing forwards, arms shoulder-width apart. Shuffle your bottom off the front of the chair, then bend your elbows to lower yourself down towards the floor until the elbows reach a right angle. Raise back up and repeat. If this is too hard, bend your knees.

DOUBLE DIP ▲ ▼

Two more challenging versions of the triceps dip are shown here:

1. Place your hands on one chair, as for the triceps dip, but put your feet on another chair opposite (see above). Shuffle your bottom off the front of the chair and lower yourself down until your elbows reach a right angle, then raise back up. Don't hunch your shoulders up to your ears.

2. To increase the challenge, add weight to your lap in the form of a Powerbag or medicine ball.



Training with weights and resistance bands

The exercises in this section use dumbbells and elasticated bands, instead of gravity, as the resistance. If you don't have weights, try improvising with household items such as full water bottles or food cans. The main muscle groups worked are indicated for each exercise, so you'll have an idea which ones make good alternatives to exercises in the basic 16-week fitness programme

HOW HARD SHOULD I WORK?

In terms of how many sets of reps to perform, the Army staple is 3 – although they might use anywhere between 1 and 5 sets, depending on the specific aim and purpose of the session. If you are new to strength training then, initially, a single set will produce results – but you'll progress quicker if you do more.

As a starting point, aim for 10 repetitions per set. That means lifting a weight, or performing the exercise, 10 times – using a resistance level that makes the last couple of repetitions difficult.

- To focus more on muscular endurance than strength, increase the number of reps but use less weight or an easier exercise option.
- To focus more on strength and size, use fewer reps but an increased level of weight or challenge.
- To focus on power (a product of strength and speed), perform the exercises at a faster pace.

Note The amount of rest you take between sets also affects your progress. Ideally, rest for 60-120 seconds between each set to allow your muscles to recover before they have to work again. The more you are focusing on endurance, the shorter the rest period should be; the more you want strength, the longer the rest period. Finally, how often do you need to train to see results in upper body strength? 2-3 sessions per week is ideal.



BICEPS CURL WITH DUMBBELLS ►

This exercise homes in on the biceps on the front of your upper arm.

Stand with your feet hip-distance apart, a dumbbell in each hand and palms facing your thighs. Bend your elbows to raise the weights up, allowing the arm to rotate so that when the weights reach the front of your shoulders, the palms are facing you. Pause, then lower and repeat.



BENCH PRESS WITH DUMBBELLS ◄

This is a good alternative to press-ups, working your chest, shoulders and triceps.

Lie on a bench with a dumbbell in each hand, resting just above your chest. Extend your arms upwards, keeping them level with your sternum, in an arc until your arms are fully outstretched. Pause, then lower and repeat.

**SHOULDER PRESS ◀**

This exercise focuses on the shoulders but also works your chest, triceps and the upper back.

Stand or sit with your feet hip-distance apart, a dumbbell in each hand resting on your shoulders, hands facing forwards. Extend the arms in an arc-like motion above the head, to meet at the top. Pause, then lower and repeat.

STANDING FLIES ►

This exercise is a good shoulder strengthener.

Stand with your feet hip-distance apart, a dumbbell in each hand, palms facing your thighs. Extend your arms out to the sides, taking them no higher than parallel with the shoulders, then lower and repeat.

**SINGLE-ARM ROW ►**

This is a good alternative to the pull-up if you don't have the right equipment, as it mimics the underhand grip most closely.

Stand side-on to a bench, with a dumbbell in the hand furthest from the bench. Have your back straight, tummy pulled in and neck in line with your spine. Start with the arm relaxed, hanging straight down holding the dumbbell. Keeping the back still, bend your elbow to bring the weight up to the front of your shoulder. Pause, lower and repeat. Swap sides between sets.

**TRICEPS OVERHEAD EXTENSIONS ▲**

You can do this triceps-strengthening exercise using a resistance band or holding a dumbbell. This is a good alternative to the dips exercise.

Take one end of the resistance band in your right hand, and stand firmly on the other end of it with your right foot. Take your arm up beside your head and bend your elbow behind you, adjusting the resistance until there is some tension in the band. Now extend your arm overhead, resisting the band, until your elbow is straight. Pause, then lower and repeat. Swap sides between sets.

**LAT PULLDOWN ▲**

This is another good alternative to a pull-up, employing the same muscle groups as an overhand pull-up grip.

Hook the resistance band over a rail or bar (or use a door attachment, which can be bought from resistance band manufacturers). Take an end of the resistance band in each hand, and stand or sit with your palms facing forward, arms extended. Now bend your arms, squeezing the shoulder blades together, to bring the ends of the resistance band towards your shoulders. Pause, then extend the arms again and repeat.

Don't forget to cool down

Remember it's every bit as important to cool down after your workout as it is to warm up. Perform the following stretches from Booklet 1

NECK ▼

Stand tall and bend your head to the side, to stretch out that side of your neck. To increase the stretch, take your hand over your head and gently pull the head further to the side. Hold for about 10 seconds, then swap sides and repeat.



CHEST ▼

Clasp your hands together behind your back, palms pointing upwards, then gently pull your arms away from the back, keeping the arms as straight as possible and your shoulders down. Hold for 10-15 seconds, lower and repeat.



BACK AND SHOULDERS ▼

Stand with your feet hip-width apart and knees slightly bent. Link your hands together in front of you. Push away through the shoulders and upper back, rounding your back into a C-shape. Hold, relax and repeat.



SHOULDER STRETCHES ►►

Stand tall with feet hip-distance apart. Take your right arm across the body, grasping it just above the elbow with the crook of your left arm and gently pulling it to the chest (see right). Don't hunch your shoulders up. Swap sides.

To stretch the front and middle of the shoulders, go on all fours, sit back on your haunches and bend the torso forward, extending your arms out on the floor in front of you (see Booklet 1).



TRICEPS STRETCH ◀

Extend your right arm above your head and then bend the elbow, dropping your forearm behind your head. Gently push the elbow back with your left hand. Swap sides.



FOREARM AND WRIST STRETCH ▲

Extend both arms out in front of you, turning the left hand upwards and using the right hand to gently press your fingers away. Feel a stretch along the underside of your arm and wrist. Swap sides.

UPPER BODY SPORTS

Upper body training doesn't have to be restricted to the gym. Activities such as rock climbing, rowing and kayaking are great ways of building strength and endurance in these muscle groups, and they use a whole range of muscles – both those that “pull” and “push” – so strength development is balanced. Swimming is also good upper body training, particularly front crawl, in which about 80 per cent of the work comes from the back, shoulders and arms.

In the Army, rope climbing is often used to develop functional upper body strength – you can find ropes in a local sports hall or school gym. Rope work adds variety and requires coordination as well as strength. But it is technically demanding and should only be done under supervision.

A safe method for use on your own is to start in a sitting position on a mat. Using only your hands, climb the rope until your feet are 4-6 inches off the ground, with your legs hanging vertically. Then lower yourself, and repeat.

