

**HORLEYS™**  
intelligent sports nutrition

# Elite Range

**\\ Build Muscle \\ Lose Fat \\ Gain Mass \\**

**\\ NEXT-GENERATION \\ INTELLIGENT ENERGY \\ 09 \\**

There's a product in the Horleys Elite range of protein supplements that can take you from where you are now to where you want to be.

Developed for hard-training athletes and body builders, Horleys offer you a superior selection of the purest ingredients in quality guaranteed formulations.

## ELITE RANGE - NUTRITION INFORMATION QUICK FACTS

All values for Vanilla variants	ICE WHEY		RIPPED FACTORS		CROSSFIRE PROTEIN		AWESOME MASS	
	36.1g serve	per 100g	33g serve	per 100g	35g serve	per 100g	75g serve	per 100g
<b>Energy (kJ)</b>	583	1614	512	1553	561	1602	1261	1681
<b>Protein</b>	32.9g	91.2g	28.1g	85.0g	24.5g	70.0g	26.4g	35.2g
<b>Fat</b>	0.3g	0.9g	0.5g	1.4g	1.0g	3g	5.7g	7.7g
<b>Carbohydrate</b>	0.6g	1.7g	1.0g	3.2g	6.2g	17.7g	35.3g	47.0g

## WELCOME TO THE ICE AGE

### What's so special about Cation Exchange Whey Isolate?

Cation Exchange technology selectively extracts those whey fractions that contain the most branch chain amino acids. Horleys **ICE Whey** has been specifically engineered to deliver not only the purest protein but also the highest concentration of BCAA's per gram of any intact protein source currently in existence.

### And this matters because?

Muscle only grows when it has enough of the specific amino acids that stimulate protein synthesis, and that means enough **BCAA's: leucine, isoleucine and valine**. BCAA's provide an important energy source for muscle during exercise and serve as a key anabolic factor during recovery.

You have to get enough of all the essential amino acids for optimum muscle building. Horleys use cation exchange isolate because it not only delivers the most BCAA'S, it's purity means we maximise the essential amino acid profile as well as offering the highest possible score for bioavailability.

### What about the other whey fractions, aren't they beneficial too?

Yes, they are. Only problem - no research (that we can find) shows these other whey fractions are better at building muscle. Add to that the body preferentially absorbs intact proteins, so using large quantities of free form amino acids is a waste of money. ICE Whey is the ultra pure, superfast nitrogen delivery system for saturating your blood stream with the key array of muscle boosting amino acids in bioavailable peptide form.

## READY, AIM... CROSSFIRE

Exclusive to Horleys **Crossfire Protein**, the **Triple Nitrogen Relay (TNR)** is designed to offer the metabolic benefits of a full spectrum protein combined with a slow release peptide source. The TNR is a precise ratio of amino acids from three superior protein sources: cross flow microfiltered WPI, ultra filtered WPC and enzyme derived casein. Horleys are proud to label the percentage of protein sources in this unique blend.

Crossfire Protein TNR offers exceptionally high quality peptides with a staggered absorption profile to optimise anti catabolic protection and ensure sustained muscle recovery. With Glycomacropeptide (GMP), immunoglobulin and lactoferrin containing whey, the TNR does more than just stimulate GH release and muscle synthesis. The unique bioactive whey fractions have roles in improving immune function and gastrointestinal health, and have been shown to exhibit anti-viral and anti-microbial activity as well as boosting cardiovascular health and bone mineral density.

The Triple Nitrogen Relay in Horleys Crossfire protein makes it the ideal choice for those looking for a complete protein supplement, targeting both nutritional and physiological needs.

## ICE WHEY™

// FOR ADVANCED TRAINERS – THE MOST PURIFIED, RAPIDLY ABSORBED PROTEIN //

The ultimate anabolic drive protein for muscle recovery & growth.

**PROTEIN SOURCE:** 100% Whey Protein Isolate

The purest protein on the planet, with ICE Whey technology. Engineered to deliver the optimum amino BCAA profile for serious muscle gains. Boosted with hydrolysed whey isolate to rapidly deliver short chain peptides to workout-fatigued muscle. Huge glutamine dose for anti-catabolic protection. Ultra low lactose.



### USE IT

- 60 mins before a workout (made in water) to deliver circulating amino acids to working muscle
- 30 minutes after a workout (made in milk/juice) to flood the recovery pathways and ignite muscle rebuilding
- To protein enrich and extend the GI factor of your breakfast oatmeal
- To get 30g of pure, fast acting, satisfying whey protein during the day – anytime

**FOUR SIZES:** 40g Shake N Take, 800g, 1.32kg, 3kg

**THREE FLAVOURS:** Creamy Vanilla, Swiss Chocolate, Strawberry Frost

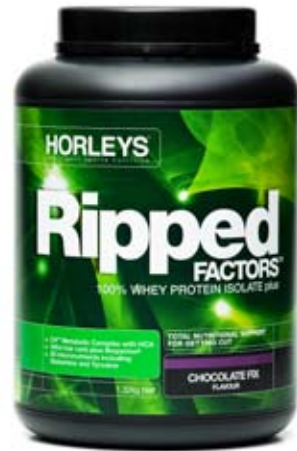
## RIPPED FACTORS™

// COMPLETE NUTRITIONAL SUPPORT – THE BEST PROTEIN TO HELP YOU GET LEAN //

Using ultra pure ICE Whey to maximise BCAA content and optimise absorption, you get low carbs, low lactose, more fat loss ingredients and 20 micronutrients to assist your fat shredding regime. Ripped Factors is a thermogenic, a protein and a nutritional insurance policy all in the same container. The original and still the best.

**PROTEIN SOURCE:** 100% Whey Protein Isolate

- ICE Whey protein to provide anabolic support during dieting for retention of hard earned muscle tissue
- C4 metabolic complex: Caffeine, Carnitine, HCA and Chromium, to assist with fat metabolism via four different pathways
- Bioperine (black pepper extract) to enhance nutrient absorption
- No carb or starch blockers to interfere with protein absorption



### USE IT:

As part of a reduced calorie eating plan to strip body fat. Ideal meal replacement or breakfast shake and great for post-workout nutrition. Perfect for men and women (although not recommended if pregnant or breastfeeding).

**THREE SIZES:** 800g, 1.32kg, 3kg

**TWO FLAVOURS:** Vanilla Dream, Chocolate Fix

## CROSSFIRE PROTEIN™

// THE PREMIUM PROTEIN BLEND FOR ALL TRAINING LEVELS & GOALS //

Crossfire Protein is an ideal protein for sports people and gym-goers, especially those looking to build muscle and stay lean. Crossfire is also the perfect protein supplement for body builders in the off season, vegetarians or those on a moderate carb, higher protein diet for weight management.

With the exclusive Triple Nitrogen Relay delivering both fast & slow peptides for targeted recovery, you get a complete protein source for muscle repair and growth. Full spectrum whey high in GMP, glutamine plus 12 co-factor micronutrients (including vitamins A, C and E with iron, zinc and magnesium) provide the optimum nutritional platform for anyone serious about reaching their performance or physique goals.

**PROTEIN SOURCE:** Cross-flow Microfiltered Whey Protein Isolate, Ultrafiltered Whey Protein Concentrate and Casein



### USE IT:

- 30-60 minutes after a workout or training session
- As a mid-morning and/or mid afternoon meal/snack
- Before bed (as a shake made with milk)

**TWO SIZES:** 1.32kg, 3kg

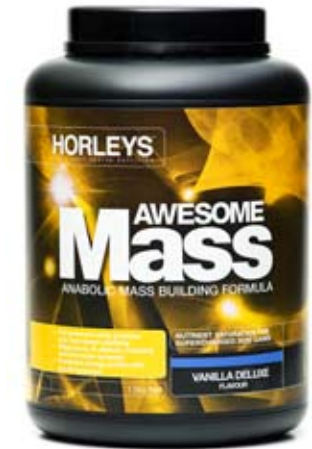
**THREE FLAVOURS:** Vanilla Velvet, Chocolate Fudge, Banana Smoothie

## AWESOME MASS™

// SUPERCHARGED MASS FOOD FOR RAPID SIZE GAINS //

The original Mass Gainer re-invented for the 21st century: more protein, more creatine, less sugar, medium chain triglycerides, nutrient boosters, hydrolysed peptides. The best anabolic mass building matrix, delivering nutrient saturation in a low G.I. formula to fuel quality size and density gains.

**PROTEIN SOURCE:** Whey Protein Concentrate



### PERFECT FOR:

- Younger trainers, or those struggling to maintain body weight
- Initial phase of a 12-week transformation program, to feed fast new muscle development
- Supporting a sizing-up phase for more experienced trainers

### USE IT:

Mid-morning, immediately after a workout, and one hour before bed

**THREE SIZES:** 750g, 1.5kg, 3kg

**THREE FLAVOURS:** Vanilla Deluxe, Double Chocolate, Banana Split

## THERE'S A SIMPLE EQUATION:

**TRAIN HARD + REST WELL + EAT RIGHT = MUSCLE GROWTH**

Sometimes, the focus is all on the training (weights, reps, sets, intensity) and the other two get neglected. Here some straightforward tips to help you with the nutrition part. First, back to basics, this pinpoints where you should be focussing on your nutrition the most.

### ▶ TRAINING PHASE

During a workout, you're intent on physically inflicting damage to your muscles (although that might not be how you think about it). Also known as the catabolic phase, muscle tissue is broken down as a result of stress. The whole point behind wrecking precious muscle fibre on purpose is that you want to stimulate growth. You want to make sure your nutrition program allows you to inflict as much stress as possible, by supporting each aspect of the metabolic processes involved. But muscle doesn't grow while you are in the gym.

### ▶ RECOVERY PHASE

This is when damaged muscle tissues and depleted energy stores recover themselves. There are two crucial ingredients for a successful recovery: **rest** and **nutrition**. During this phase, you give muscle a chance to repair – overcoming catabolic reactions and kicking tissues into anabolic mode, making muscle fibres grow stronger. The next time you assault them at the gym, they'll be ready for you.

Most of us get the rest part OK. The nutrition part needs you to actively think and plan. Your body can't make new muscle out of nothing. You must provide both the building blocks and the fuel to be able to capitalise on your training efforts.

### ▶ FEED THE MACHINE

Muscles are made of **protein**. The protein that we eat provides the materials that we need to make more muscle tissue. Pretty simple really. But you need to remember that protein is also essential to practically every function your body performs to stay alive. If protein is in short supply, your body will put building new muscle tissue at the bottom of the priority list.

PROTEIN INTAKE LOW	PROTEIN INTAKE HIGH
Negative nitrogen balance	Positive nitrogen balance
Muscle growth difficult, body can breakdown muscle tissue proteins to supply other body functions	Protein available for muscle tissue repair and growth

If you want to maximise the benefits from the training you do, you must make sure you get sufficient quality protein in your diet.

If you had a pile of bricks to build a house, you'd also need people to provide the construction activity. It's the same with muscle gain - you've got the bricks (the protein), but without enough **carbohydrates** to provide the source of energy needed, nothing much will happen. After exercise, carbohydrate (glycogen) stores in your muscle and liver will be emptied. You have to replenish them.

CARBOHYDRATE INTAKE LOW	CARBOHYDRATE INTAKE HIGH
Negative energy balance	Positive energy balance
Body struggles to use the protein consumed to build muscle tissue	Body can actively repair damaged muscles and grow new muscle tissue
Body will break down muscle tissue to provide proteins for energy	Fully replenished carbohydrate stores ensure your next training session is effective

The best carbohydrates during the day are low on the glycemic index as they provide a slow and steady release of energy to the blood stream. Keep your carbs as close to nature as possible - if you grandmother wouldn't recognise it, then you shouldn't be eating it! After training, incorporate a high GI carb source to flood glycogen pathways.

And what about **fat**? Focus on what are known as the essential fats: omega-3 and omega-6 fats. Found in cold water fish, plant seeds and oils, these fats are vital for tissue structure and are involved in hormone production, help boost oxygen use, improve insulin use and help reduce body fat.

Be as concerned about eating enough of the right type of fat as you are about getting enough protein. You'll need a minimum of 40g fat per day to maintain optimum metabolic function.

Then there's the small stuff: **vitamins, minerals and antioxidants**. These are involved both in the structural components of muscle tissue, and in helping the body recover from the extreme stress of exercise. Given the extra demands placed on your body, you should supplement with one quality multivitamin every second day.

Focus on getting a wide variety of fruit and vegetables from the full colour spectrum to maximise your antioxidant and phytonutrient uptake – natural forms are far more effective than anything taken in a pill or capsule.

Consume a handful of mixed tree nuts everyday (almonds, hazelnuts, Brazil nuts, walnuts), as they provide essential lipids as well as muscle building trace elements.

### ▶ WATCH THE CLOCK

There are two times when the consumption of protein and carbohydrates is critical:

- 60-90 minutes before your workout. This provides a supply of readily usable energy and amino acids to the bloodstream and to working muscle during the session.
- Immediately after your workout. Post exercise, muscle cells are primed to soak up the nutrients required to recover from exercise, minimise further damage and begin the anabolic process of growth.

Eating frequently – about 6 smaller meals a day (with a mix of protein and carbohydrates) – is the best way to ensure you include a wide range of food groups in your diet, keep your energy levels up and your metabolic efficiency at its peak.

## ▶ THAT'S HANDY

Portion size is all-important if you are eating six times a day and don't want to stack on body fat by over-eating.

### MAKE A FIST WITH YOUR HAND:

One portion of carbohydrate equates to one 'fist' sized carbohydrate food (e.g. a cup of cooked pasta or a piece of fruit)

### NOW HOLD YOUR HAND OUT FLAT:

One portion of protein equates roughly to the size of the palm of your hand, or one serve of a Horleys protein supplement.

### A GENERAL RULE OF THUMB:

a.m.	p.m.
Consume two portions of carbohydrate to one portion of protein	Consume one portion of carbohydrate with one portion of protein

If you want to be more precise, you need to ensure you are getting 2 to 2.5 grams of protein per kilo of body weight, per day.

You'll need a minimum of 5 grams of carbohydrates per kilo of body weight per day to fuel muscle development. Depending on your energy requirements, this may need to be increased or decreased when you're starting a serious leaning up phase.

For your post workout shake, have half a gram of protein and half a gram of carbs for every kilo of your body weight within 30 minutes of completing a workout.

### TO ADD 5 KILOS OF MUSCLE IN 6 MONTHS:

<b>Calories</b>	Increase by 20%
<b>Carbs</b>	7g per kg body weight per day
<b>Protein</b>	2g per kg body weight per day
<b>Fat</b>	1g per kg body weight per day

You'll need to train ultra-consistently to stimulate muscle growth and avoid the extra calories becoming bodyfat. Your genetic potential will determine the speed and visibility of your muscle growth.

## ▶ MUSCLE GAIN EATING GUIDE

<b>6 am</b>	20-30 minutes cardio exercise on an empty stomach (water only)
<b>8am Meal 1</b>	Protein shake: blend 2 scoops Horleys Crossfire, 250ml non fat milk, 1 tbsp flax seed oil and one cup of fresh or canned fruit 1 multivitamin (every 2nd day)
<b>10am Meal 2</b>	1 cup cooked rolled oats (sweetened with 1 tsp honey if needed) with an omelette (4 egg whites, one yolk) plus 300ml water or green tea
<b>1pm Meal 3</b>	Mixed green salad and tomatoes with vinaigrette, medium baked potato (or 2 slices wholemeal bread) and 120g lean chicken, turkey, fish or tofu OR 1 cup cooked brown rice, 120g skinless chicken, 2 cups cooked broccoli and one piece of seasonal fruit plus tea, coffee or water
<b>4pm Meal 4</b>	1 scoop ICE Whey with 1 scoop of BetaXtreme in 200ml water a handful of almonds
<b>5pm</b>	40-50 minutes weight training Drink a minimum of 500ml water or Replace Sports Drink during your workout
<b>6pm Meal 5</b>	1 scoop BetaXtreme and 2 scoops ICE Whey blended in 300ml apple juice or Replace Sports Drink
<b>7pm Meal 6</b>	120g lean red meat or 150g grilled fish or skinless chicken plus a generous serve of cooked green vegetables (broccoli, spinach, green beans) and a fist sized serve of sweet potato plus water or green tea
<b>8pm</b>	One cup fat free creamed rice

**This eating plan is a guideline only. Depending on your current body weight, you may require more or less food.**

**The battle of the bulge began with the phrase 'feast or famine'. That's exactly what life was like for our ancestors. Unpredictable food supplies resulted in survival adaptations: we got really good at storing excess energy in the form of fat.**

We're still governed by this evolutionary necessity in a world where food is fast and easy. Honestly – we need the 'foodcourt' concept like a hole in the head. In the 21st century we have to work alongside our ancient survival mechanisms. Here are some smart nutritional strategies that can turn the tables in your favour.

## ▶ EAT OFTEN

All over the world people try to lose weight by fighting the natural urge to eat. This is a mistake. Skipping meals and following very low calorie diets simply trains your body to get by on fewer calories – you 'down-regulate'. Your body responds by squirreling away any extra calories it does get into lumpy fat stores.

Work with your internal furnace instead: stoke your body's metabolic fire by frequent feeding. A small meal balanced in protein and carbohydrate every three hours is the clever way to get lean – you'll keep your fat burning potential high and have more energy.

*Eat a smaller meal every 3 hours – a mix of protein and carbs*

## ▶ MAKE A FIST OF IT

The impact of bigger portion sizes over the past two decades is an estimated 9% average increase in daily calorie intake. Sounds harmless? That's the same as eating three extra DAYS worth of calories every month. It's absolutely critical to keep your calorie intake in check.

Use your flat palm and clenched fist to gauge portion sizes. Hardly rocket science, but it works. A complete meal comprises one palm-sized portion of lean protein (chicken, fish, egg whites or cottage cheese) plus one fist-sized portion of low GI carbs (brown rice, rolled oats, or sweet potato). The only exception to this rule is leafy green vegetables – eat these freely and in whatever quantity you desire.

*Control your portion sizes: 1 serving = 1 fist or palm size portion.*

## ▶ PROTEIN POWER

When looking to strip fat, be aware of your body's 'thermic response' to food. As you eat, your body burns calories to digest the food. When you consume protein, your body expends a little more energy to digest it than either fat or carbohydrate.

- A diet high in protein increases the calories you burn simply by being metabolically expensive
- Protein is also the key satiety nutrient – keeping you full for longer, helping to control appetite and to minimise low blood sugar related cravings.
- Protein in a meal reduces the glycaemic load, slowing the release of carbohydrates to the bloodstream.

A high blood sugar level strongly stimulates insulin secretion, which activates the fat storage enzyme called lipoprotein lipase. This enzyme encourages storage of blood sugar as fat, rather than leaving it to be burned as energy. Keep insulin levels in check throughout the day by eating small, balanced protein and low GI carb meals.

*Eat 1.5-2g of protein/kg of body weight per day, spread over 5-6 meals.*

## ▶ LEARN FAT FRIEND FROM FOE

Whilst eating fat will not necessarily make you fat, there are some fats that will actually help you get lean and stay that way.

Essential fatty acids (EFA's) act like hormones, increasing fat burning and turn up your body's heat production (known as thermogenesis). EFA's belong to two groups: omega-3's and omega-6's, but you do need to get them in the right ratio to be optimally effective (1 om3 to 4 om6). EFAs are found in green leafy veggies, seeds and nuts and cold water fish like salmon. Good sources of both groups can be found in flax seed and hemp seed oil.

*Add 2 tablespoons of flax or hemp oils to your food every day. Eliminate as much animal based saturated fat as possible.*

## ▶ BULK IT UP

We all know that fibre keeps us regular, but a diet high in wholegrain foods has been scientifically linked to a lower body weight.

- Fibre facilitates fat loss by slowing the entry of some carbohydrates to the bloodstream, decreasing blood sugar levels. High levels of sugar in the blood create an insulin spike which slows fat burning.
- Fibre assists appetite control by helping you feel full.
- High fibre foods are generally less processed, meaning less calories gram for gram.

*Put wholegrains, brown rice, bran, beans, lentils and green vegetables on your shopping list. Aim for a minimum 35g of fibre every day.*

## ▶ MOO-VE IT

More and more studies are showing calcium-rich, low-fat dairy products have positive effects on maintaining a healthy body weight. Although the mechanisms are still not clear, researchers believe that blood lipid metabolism and the pathways by which fat is stored and released may be affected. The research does indicate that calcium in a pill form just doesn't seem to work as well as the calcium in real foods.

*Kick your fat loss efforts into high gear by getting at least two servings a day of low fat dairy – including skim milk, cottage cheese and yoghurt.*

## ▶ TEA TOTAL

Green tea contains high concentrations of catechin polyphenols. These compounds work with other chemicals to intensify fat oxidation and thermogenesis. Green tea also slows carbohydrate absorption, preventing sharp increases in blood insulin levels. Drinking green tea regularly will increase your metabolism. For an extra fat burning boost, the active compound in green tea (EGCG) can also be found in Horleys PyrogenX capsules.

*Drink two cups of green tea a day: an hour before a workout and the other with one of your mid afternoon meals.*

## ▶ HAPPINESS IS HYDRATION

Research shows that dehydration can result in a significant drop in your resting metabolic rate and result in your body using a higher percentage of energy from carbs as opposed to fat.

What's more, too little water upsets your sodium balance and will result in your body holding onto water, meaning you end up looking puffy.

*Make sure you're getting two litres of fluids daily for optimal hydration.*

## ▶ FAIL TO PLAN = PLAN TO FAIL

Plan your daily meals every morning (or better yet, the night before). To be successful, you must be prepared. The old 'fly-by-the-seat-of-your-pants' approach to nutrition, which means eating whenever and whatever's convenient, isn't going to get you any leaner.

## ▶ THERMOGENIC TIMING

The best times to have a serving of a thermogenic capsule are one hour prior to a workout (to allow the full effect to benefit your workout intensity) and early afternoon to counteract the natural lull in the 24 hour circadian rhythm and metabolism.

## ▶ THREE, TWO, ONE, GONE

To lose 5 kilos of body fat in 12 weeks:

<b>Calories</b>	Decrease by 20%
<b>Carbs</b>	3g per kg body weight per day
<b>Protein</b>	2g per kg body weight per day
<b>Fat</b>	1g per kg body weight per day

If you increase your energy output with more intense or frequent workouts, you could drop either the same weight faster or more weight in the same time. Note: lose weight faster than 500g per week and you will find it much harder to keep it lost long term.

## ▶ FAT LOSS EATING PLAN

<b>Breakfast Option 1</b>	1½ cups cooked rolled oats 1 small pot (150g) low fat yoghurt
<b>Option 2</b>	½ English muffin (no butter) 6 scrambled egg whites with chopped onions and mushrooms (use 1 tsp olive oil) 1 cup cooked spinach 1 cup seasonal berry fruits or ½ cup canned, drained peaches
<b>Mid Morning</b>	Ripped Factors shake with 200ml non-fat milk Blend with one cup of frozen fruit of your choice and one Tbsp of flaxseed oil
<b>Lunch</b>	150g boneless & skinless chicken with 2 cups mixed salad greens 1 kiwifruit or nectarine 1 apple or pear 1 cup green tea
<b>Mid afternoon</b>	125g canned tuna in water or lemon juice - add pepper & herbs to taste 1 banana 1 small handful of whole almonds 1 cup green tea
<b>Dinner</b>	200g serving of fish or 150g serve of chicken or beef, seasoned with salt-free chilli seasoning 1 cup cooked basmati rice* 2 cups of stir fry/steamed vegetables (include broccoli, spinach, mushrooms and red capsicum) with 1 tbsp avocado 1 cup fruit salad
<b>Post Workout</b>	Protein shake: Ripped Factors with 100ml non-fat milk and 100ml cold water

**\* only eat rice with your evening meal if you worked out for 45 minutes or longer that day**

**This plan as it stands is suitable for someone weighing around 80kg. If you weigh around 60kg, reduce every portion size by a third.**

**Whether you're a classic 'hard gainer' with a fast metabolism, or looking to pack size on a more substantial frame, you can use this information to help you make the right adjustments to your eating plan.**

## ▾ CARBOHYDRATES

Carbohydrates are an essential ingredient when it comes to building muscle and gaining weight. They're the primary energy source used by the body, and they are very important in any weight-gaining programme. You can eat protein until its coming out your ears, but you won't have the energy to power your workouts or replenish your depleted muscle stores of glycogen (which fuel muscle repair and growth) unless you eat plenty of carbs.

Carbohydrates are also important because they raise the body's insulin levels when you eat them. Insulin is considered an anabolic hormone because it transports carbs to the muscle cells and also drives the amino acids from the protein sources you eat into the muscle cells to promote new growth.

Carbohydrates are classified as either complex or simple, a fairly old-fashioned way of describing them. The majority of the carbs you eat should be complex, but a better way to make the right carb choice is to use the Glycemic Index (GI) as a guide. Low GI carbs are broken down more slowly, providing longer lasting energy. Many low GI carbs come with healthy extras too, like fibre and antioxidants (wholegrain cereals and most vegetables fall in the low GI category).

Get a good dose of higher GI carbs after your workout, as they are the ideal, fast, insulin spiking energy source to fuel your body's recovery. Make your post-workout protein shake with a base like Horleys Replace Sports Drink and you'll deliver nutrients to pumped-up but nutrient depleted muscle cells much faster.

## ▾ PROTEIN

During training or strenuous exercise, muscle proteins are damaged or cannibalised as a fuel source. Your protein needs increase depending on the duration and intensity of exercise, and eating enough high quality protein is the only way to promote muscle growth.

All of the animal sources of protein are known as 'complete' proteins – they have all of the essential amino acids humans need. Include eggs, fish, chicken, cheese, milk and (especially) red meat, in your daily diet if you want to see solid gains.

## ▾ FATS

Lean body types can afford to eat a higher percentage of daily energy needs from fat, so don't be overly concerned about eating 'low-fat' – just make sure you don't over-do the saturated fats found in animal products and hidden in many processed foods. You must pay attention to getting enough of the omega-3 fatty acids, which perform essential functions in the body but that our modern diet has seen us neglect. Eating oily fish (salmon, sardines) weekly and supplementing with two tablespoons of flaxseed oil a day will supply you with all the omega-3's your body needs.

## ▾ THE MATHEMATICS OF MASS GAIN

Mass gain means your calorie intake needs to over-compensate for the energy you use. This is more easily achieved by eating 6-7 smaller meals or snacks per day. This will ensure that your system is constantly drip fed nutrients for maximum metabolic efficiency while preventing the fullness and discomfort associated with large meals.

As a general rule for a 'moderate' activity level, 40 kilocalories (kcal) per kg of body weight are required to maintain weight. As an example:

70KG PERSON, MODERATELY ACTIVE			
Daily Intake	Carbs	Protein	Fat
Calories per gram	4	4	9
Calorie intake ratio	50%	30%	20%
Weight Maintenance	350g	210g	62g
For 10kg gain	400g	240g	71g

Mass gain requires more calories, but there are provisos on how much extra fat and protein you should consume. Research shows that there is no metabolic advantage to consuming more than 3g protein per kg of your body weight. As far as fat goes, a maximum of 80g per day will be ample for anyone's requirements regardless of body weight. This means that extra calories should be provided mostly by carbohydrates (preferably low to moderate GI carbs).

Aim for gradual increases in calorie intake as you make mass gains. That is, don't eat like an 80kg person if you only weigh 70kgs. Increase your calorie intake slowly e.g. eat as though you weigh 75kgs at 70kgs, at 75kgs eat as though you were 80kgs etc. This will help to prevent you storing excess calories as body fat.

Even in a perfect world the consumption of enough quality food is difficult (to get enough protein for a 70kg person doing a heavy training program 4 days per week would require approximately 7 chicken breasts or 35 eggs per day). The sheer volume of food can be daunting and you might be full before you have eaten enough calories. This is where protein supplements come into play, as they deliver concentrated amounts of nutrients in a convenient as well as easily digested and absorbed form.

## Are we there yet?

Permanent mass gains are more certain when the rate of gain is slow but steady. It is unrealistic to expect to naturally gain more than a kilo per week, as the body has mechanisms to control fuel storage, energy consumption and protein turnover. If you have a very active or physically demanding job, you should factor this in as a major contributor to your daily energy expenditure, and will need to increase your food intake accordingly.

If gains are very slow, look to increase the nutrient density of the food you're eating. That means slipping in a bit of 'fast food' here and there and maybe the odd chocolate bar – just don't fill up on empty calories like soft drinks.

## ▾ WORKOUT WISE

The secret to working out for mass gains are short, intense bouts of resistance training, focussing on the large muscle groups (back, chest and legs). Compound exercises like squats, bench press and deadlifts allow you to work these muscle groups as well as the smaller associated muscles like biceps, triceps and shoulders. You're not training your ego, think about your muscle. Train for reps and blood volume: 8-12 reps per set is ideal. Be consistent – don't miss a workout.

Intense training means workouts should not last more than 1 hour. Aim to make either regular increases in the weights you use or the amount of repetitions you perform. There are no mass gains without strength gains and the latter are easy to see and measure.

## ▾ REST AND GROW

Muscle growth (therefore mass gain) takes place during rest. Large muscle groups can take up to 3-5 days to fully repair themselves following intense exercise. To allow enough recovery time, only work your large muscle groups twice a week.

Quality sleep is also crucial. Get at least 7 hours in a row, and those hours you get before midnight are more important than the ones after.

## MASS GAIN EATING PLAN

<b>8am Meal 1</b>	Serious Cereal: add one scoop of Awesome Mass to 200ml milk and blend, then pour over 1 cup low fat, high fibre breakfast cereal  3 slices wholemeal toast with peanut butter or Vegemite/Marmite  One multivitamin
<b>10am Meal 2</b>	English muffin or fruit bar  Awesome Mass Shake (2 scoops in 300ml low fat milk and one banana added to blender)
<b>1pm Meal 3</b>	Large baked potato with a handful of diced lean meat (ham, beef, chicken), 2 cold boiled eggs and 2 tomatoes  OR  1½ cups cooked brown rice with 200g lean chicken and 2 cups green vegetables  OR  3 sandwiches made with wholemeal bread, tuna or turkey filling with salad greens and grated cheese  1 piece of fruit and a pottle of low fat yoghurt
<b>4pm Meal 4</b>	Pre-workout  Horleys P33 Protein Bar plus large glass of water or green tea
<b>5pm Weight Training</b>	Drink a minimum of 500ml of Horleys Replace Sports Drink or Carbo Cola during your workout
<b>6pm Meal 5</b>	Post-workout  2 scoops ICE Whey and 1 scoop Beta Xtreme blended in 300ml Replace
<b>7pm Meal 6</b>	200g lean red meat or 300g grilled fish or skinless chicken, plus as many steamed vegetables as you like and a fist sized serve of sweet potato  Dessert: optional, but suggest one cup of canned fruit or creamed rice
<b>Before bed</b>	One scoop of Awesome Mass blended with 200ml milk

### What are MCT's?

Medium Chain Triglycerides, found in **Awesome MASS**, are a concentrated energy source derived from palm kernel oil. They are metabolised differently to conventional lipids. MCT fatty acids are transported to and oxidised directly in the liver, meaning they have very little tendency to be converted to body fat. MCT's provide the rapid energy utilisation of carbohydrates with more than twice the calories per gram. MCT's may help your body spare primary muscle fuel (glucose and amino acids) for longer, more intense workouts.

### Bang for your Buck

When you're spending hard earned dollars on supplements, you want to get what you pay for. The Horleys brand has stood for quality nutritional products since 1976. Integrity is extremely important and we are proud of the high ethical standard that pervades all aspects of our business. Every step is taken to ensure each production batch of Horleys product is as close as possible to the nutritional profile advertised on our packaging. You can be assured if we put it on the label, we put it in the product.

### Athlete Safety

Horleys protein supplements are produced in an export certified food plant with the highest level of GMP accreditation to minimise the risk of cross contamination during manufacture with any World Anti Doping Agency listed substances. For further assurance on this matter, please write to us.

### The Taste Test

To develop the best flavour profiles possible, each and every Horleys product has over a dozen hours invested in it by the food technologists at Horleys. It's not as easy as it might sound - to get a good tasting shake crammed full of efficacious ingredients (in decent amounts) is a major challenge. Horleys supplements are formulated with world class ingredients for local tastes.

Horleys choose sucralose as the intense sweetener for the Elite Range. Consideration to formulating products with steviol glycosides (stevia) will be given if the ingredient is approved for use in foods in New Zealand and Australia.

# HORLEYS™

intelligent sports nutrition

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The eating plans are provided as a guide only. Horleys recommend you consult a qualified dietitian or health professional if you have any pre-existing health conditions or are taking prescription medication before beginning any intensive exercise and supplementation program. Horleys products are not intended to be used as a sole source of nutrition. Best results will be obtained when these products are used in conjunction with an appropriate nutrition plan and exercise regime.

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For full nutritional profiles and ingredients in our products, visit

[www.horleys.com](http://www.horleys.com)