

FACT SHEET

FOOD FOR YOUR SPORT – BODYBUILDING

ABOUT BODYBUILDING

Advice contained in this fact sheet is intended to support natural (i.e. drug free) bodybuilding.

The sport of bodybuilding demands certain physique traits of its competitors. Muscle mass, definition, symmetry, and leanness and/or vascular definition are of varying importance for athletes, depending on the competitive division.

Preparation for competition requires meticulous planning and discipline, and typically occurs in phases spanning months to years. An appropriately formulated nutrition plan is important for optimising training and physique outcomes during all phases of preparation. In addition, it is essential for maintaining optimal health and wellbeing throughout the training and competition phase. Nutrition strategies need to be highly individualised, and periodised to each specific phase of preparation.

Three main phases of preparation are undertaken within the competitive bodybuilding year. A large part of the year is spent in the “bulking” phase, where the primary goal of training and nutrition is to optimise gains in muscle size.

In a well-planned and executed program, bulking is usually followed by a phase of “refining”, where shortfalls in muscular symmetry can be addressed, and the lead-in to “cutting” (leaning-up) can be gradually commenced.

The cutting phase typically begins two to four months before competition, where the primary goal of training and nutrition is to achieve leanness (reduced % body fat) whilst minimizing loss to muscle mass and definition.

A final phase, in the week prior to competition, aims to further enhance the appearance of musculature, and assist blood vessels and muscle striations to stand out (depending on the competitive division).

TRAINING DIET (BULKING PHASE)

Just like any change in body composition, gaining muscle mass requires a concentrated effort. The essential formula for muscle gain during the bulking phase is a well-designed training program, combined with an energy-rich diet that has sufficient quality protein, and appropriate meal timing.

The rate of muscle gain is influenced by factors such as genetics, training history, age, gender and sleep; however gains of 250-500 grams per week are possible for most individuals if nutrition and training are optimised.

The role of nutrition during this phase is to supply necessary *fuel* to support the demands of training, and provide *substrates* (quality protein) to maximise muscle growth and repair.

Whilst often overlooked, carbohydrate (stored as glycogen) is the main fuel source for moderate to high intensity exercise. Not having enough carbohydrate compromises training quality, and can also impact upon hormones (e.g. insulin growth factor-1, insulin and testosterone) that are important for muscle growth. As a result, carbohydrate should be considered an important part of the bulking diet.

NUTRITIONAL RECOMMENDATIONS FOR THE BULKING PHASE:

- **Set realistic goals** Weight gain of 250–500g per week is a realistic target for “bulking”. Rates higher than this may be achievable, but can promote increased fat gains. Regular body composition assessment with skinfold testing or Dual Energy X-ray Absorptiometry (DXA) scans can assess the exact proportions of fat vs. muscle to help with the planning process.
- **Eat enough energy** In order to gain muscle mass, a positive energy balance is required to promote an anabolic state. This means that you must consume more energy (calories or kilojoules) than you burn each day. To promote gains of 250-500g per week, an energy surplus of 450-500 calories per day on training days is recommended. A higher energy surplus may lead to more rapid weight gain; however with excessive energy intake comes the potential for gains in fat mass is higher.

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- **Remember carbohydrate** Eating adequate amounts of carbohydrate-rich foods around training sessions help to facilitate quality training, optimal recovery and muscle growth. Having a carbohydrate containing meal or snack before exercise and topping up with extra carbohydrate during sessions longer than ~90 minutes will help to maximise adaptations to training. Quality carbohydrates found in foods such as wholegrains, vegetables, fruit, yoghurt and milk are all appropriate choices. The amount of carbohydrate needed will vary between individuals depending on body size, training load and goals.
- **Spread protein out** Spreading your protein across the day is helpful for maintaining an adequate supply of the amino acids necessary for muscle repair and growth. Aiming for 20-30 g quality protein with each meal and snack is a good guide. Daily protein intake higher than 2-2.5g protein per kilogram body weight is unnecessary.
- **Optimise recovery** Eating carbohydrate and protein within 30 minutes of resistance exercise will support restoration of muscle glycogen (re-fuel) and begin muscle repair.

EATING BEFORE COMPETITION (CUTTING)

In preparation for competition, competitors enter a phase termed cutting where they attempt to lose body fat to enhance the appearance of musculature and/or vasculature. This process of cutting is usually achieved by creating a state of negative energy balance through an increase in aerobic training and gradual decrease energy intake (usually carbohydrate +/- fat). In this way, the relative protein content of the diet increases.

Research into comp prep diets is limited, however research from similar areas suggest that less muscle and more fat is lost if you eat relatively less carbohydrate than protein during energy restriction. The down side to this of course, is that eating less carbohydrate may compromise your ability to train, potentially causing loss of muscle volume, and slower fat loss.

Considering that the cutting period can last 3 – 4 months, a rapid increase in aerobic training and reduction in

energy intake can have a detrimental impact on muscle size, so a compromise has to be made between decreasing body fat and maintaining muscle mass and training performance. A lead-in phase of "refining" can be helpful and also helps reduce the likelihood of mental fatigue/burnout. Working closely with a Sports Dietitian is essential – ideally a long-term relationship allows you both to become familiar with how your body responds to plans.

NUTRITIONAL RECOMMENDATIONS FOR THE CUTTING PHASE:

- Energy restriction for fat loss should be gradual. Rapid, excessive energy restriction will result in greater muscle loss and negatively impact training and possibly hormones which will have further impacts on lean tissue.
- Cutting requires a tight periodisation of carbohydrate to match training requirements, and regular review of body composition.
- Work closely with your Sports Dietitian to determine the right amount of energy and carbohydrate for your training and physique goals.

FINAL PREPARATION FOR THE STAGE

Enhancing muscle size and vasculature is attempted in week prior to competition. Common practice is to glycogen deplete before carbohydrate loading prior to competition. There is little scientific research into these practices.

OTHER NUTRITION TIPS

- **Restricted eating** can lead to a limited variety of foods especially during the cutting phase. To avoid deficiencies include a variety of fruits, vegetables, dairy products and lean meat
- **Creatine** supplements may be beneficial for optimising training output in some individuals but can have a side effect of fluid gain. Seek advice from an Accredited Sports Dietitian before using.
- **HMB (β -hydroxy- β -methyl butyrate)** claims to increase strength gains and prevent breakdown of muscle mass but the evidence for its use has not been scientifically proven and long term effects are unknown. Seek advice from an Accredited Sports Dietitian before using any supplements to ensure you are using appropriate and beneficial options.