THE SARM HANDBOOK

9th EDITION

SARMSINFO

DISCLAIMER

None of the content provided within this e-book is to be deemed legal or medical advice in any way, shape or form. All decisions are yours alone and I am not responsible for your actions.

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Before deciding to take SARMs, we suggest you do your own research alongside reading these opinions (not to be deemed medical advice).

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SARMs ARE NOT APPROVED FOR HUMAN CONSUMPTION. DO NOT TAKE THEM WITHOUT THE APPROVAL AND SUPERVISION OF YOUR DOCTOR.

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INTRODUCTION

The goal of this E-Book is to provide you, the reader, with the most reliable and up-to-date information about the benefits and dangers of *Selective Androgen Receptor Modulators* and similar compounds, as well as teach you exactly what to take and what to avoid if you want to have a successful cycle.

WHAT ARE SARMs?

Selective Androgen Receptor Modulators are a new class of anabolic drugs that were designed to have positive effects of Anabolic Androgenic Steroids (AAS) without causing their dreaded side-effects

In order to achieve this goal, SARMs were designed to be as selective as possible. Unlike AAS, which target multiple organs and parts of the body besides the muscles, SARMs only target muscle and bone, which (on paper) means that they have less side effects than AAS since they do not impact the prostate, the heart, the hair, etc…

Even though most SARMs come pretty close to this romantic ideal, they are not perfect and they can still cause many of the side-effects that are commonly associated with AAS.

ARE SARMs SAFE?

If someone tells you that SARMs are 100% safe and free of side-effects, run in the opposite direction.

While it is true that some clinical studies were extremely successful at proving the safety of these chemicals, you must take into consideration the fact that the doses taken recreationally for the purpose of building muscle are sometimes 10-20x greater than the doses used in the clinical studies.

The reality is that SARMs are NOT entirely safe. You will experience side effects, whether you notice them or not. Fortunately, these side effects are reversible, and some can even be avoided entirely with the proper use of ancillaries.

The main concern with the safety of SARMs is that they have not been around for as long as AAS have been. Therefore, we lack a significant amount of data on the long-term side-effects of SARMs.

ARE SARMs LEGAL?

As of August 2021, SARMs fall under the category of Research Chemicals. Therefore, they can ONLY be legally sold as such and never for the purpose of human consumption. Possessing SARMs is legal in most Western countries (there are exceptions). Check the laws of your own country before attempting to buy SARMs. All SARMs have been banned by the World Anti-Doping Agency, so their use in tested sports is not allowed.

NOTE ABOUT THE REFERENCES IN THIS E-BOOK

As you may or may not know, some SARMs/RCs have gone through human clinical trials, while others have only been tested on animals and/or test tubes.

A big percentage of what we know about SARMs/RCs and their actions is not based on official science, but on the anecdotal reports of thousands of users who have been brave enough to self-experiment. In other words, the science on SARMs and other Research Chemicals is not settled yet.

You will notice that next to each benefit and side-effect, I have included an A and/or a number between parentheses.

An A letter means that what is claimed about the benefit or side-effect in question is based on anecdotal information, and that not a single trial has been conducted to confirm its veracity.

However, if next to the A there is also a number, part of what is claimed about that benefit or side-effect has been proven to be true by at least one clinical or animal trial, and you can find the specific trial(s) by going to the REFERENCES section at the end of the e-book.

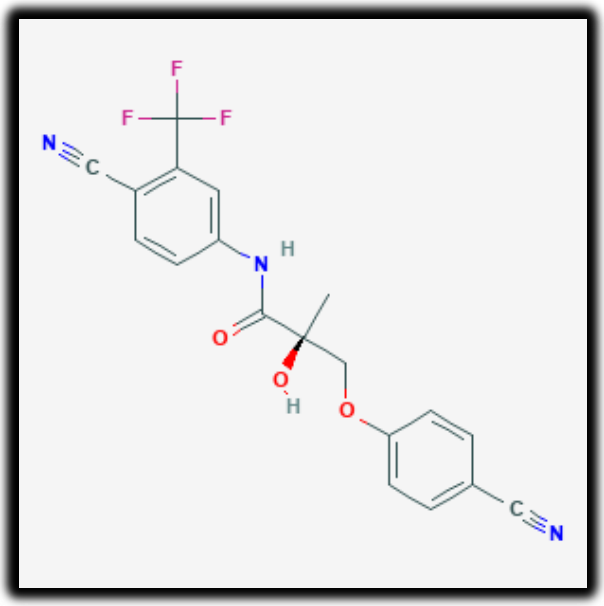
Also note that when the half-life of a drug appears as “Unclear”, that means that we have no accurate scientific data about what the half-life of that compound is in humans. You may find half-lives for these compounds on the internet, but they are either taken from animal studies or they are completely made up.

Please keep in mind that some benefits or side-effects have only been confirmed in animal trials, so we cannot extrapolate that information and confirm that they apply to humans as well.

THE SARMs

OSTARINE (MK-2866)

(2S)-3-(4-CYANOPHENOXY)-N-[4-CYANO-3-(TRIFLUOROMETHYL)PHENYL]-2-HYDROXY-2-METHYLPROPANAMIDE



HALF-LIFE: 24 hours

DOSE: 10-25 mg/day

CYCLE LENGTH: 8 to 12 weeks

PCT: Not Always Required

DOSING FREQ.: Once a day

TIMING: Morning

Ostarine (also known as Enobosarm, MK-2866, GTx-024 and S-22) was one of the first SARMs ever created and the most popular one in the market today. It was developed by GTx, Inc. for the treatment of muscle wasting conditions and osteoporosis.

MK-2866 is the most well-researched SARM available today because it has gone through numerous clinical trials. Even though not all clinical trials have been successful at proving the efficacy of Ostarine in a variety of different situations, every single clinical trial has proven its efficacy at building lean muscle mass with minimal side effects, which has earned Ostarine the trust of most first-time SARM users.

BENEFITS

MUSCLE [1] [A]

One can expect a serious increase in muscle mass during an Ostarine cycle. Even though it is one of the weakest SARMs, it will put on a noticeable amount of muscle mass, and it is strong enough to break a natural plateau.

It can even build a modest amount of muscle mass on a small calorie deficit and retain all muscle mass on a larger deficit.

STRENGTH AND PERFORMANCE [A]

Ostarine will increase your strength considerably if you are on a caloric surplus. On a caloric deficit, your strength will increase during the first few weeks of the cycle, but it will then plateau as you start losing a significant amount of weight.

Users often report increased stamina in the gym, and a desire to keep working out for hours on end.

FAT LOSS [A]

Contrary to what some people believe, Ostarine will not help you lose more fat. It is not a fat burner by any means.

However, it will help retain and even gain some muscle mass during a cut, making cutting cycles more effective.

BONES AND JOINTS [2] [A]

Ostarine will increase the density and strength of your bones. This has been proven to be true in clinical studies and it is one of the purposes it was designed for in the first place.

It is often claimed that Ostarine helps strengthen and heal joints and tendons. While there is not any clinical evidence to prove that this is true, anecdotal reports suggest that Ostarine can indeed strengthen joints and tendons. Ostarine is the only SARM that may have this property.

RECOVERY [A]

Like any anabolic that increases protein synthesis, Ostarine will significantly speed up your recovery times, meaning that you will feel less muscle soreness and you will be able to train the same muscle group sooner than if you were natural.

COSMETIC BENEFITS [A]

Ostarine will not cause any extra water retention and it will significantly harden your muscles, giving them a lean and dense look. Users often claim that Ostarine makes their muscles pop more, and you can expect more vascularity too.

SIDE-EFFECTS

TESTOSTERONE SUPPRESSION [3] [A]

Ostarine, like all SARMs, will cause a significant drop in your Testosterone levels. Fortunately, it is one of the least suppressive SARMs out there and this side effect is very manageable and easily reversible.

The consequences of this drop in your testosterone levels can be:

- Decreased libido
- Weaker erections
- Lethargy
- Lack of motivation
- Irritability
- Testicular atrophy
- Testicular pain

Thankfully, the vast majority of users do not experience more than a couple of these and only for a very limited amount of time, usually by the end of the cycle and during the first week or two after the cycle is over.

It is also worth noting that Ostarine, like all SARMs, will decrease your SHBG. This will lead to an increase in your free testosterone levels which may cause libido, motivation and well-being to improve during the first few weeks of the cycle, until the suppression of the Total Testosterone levels offsets the increase in Free Testosterone.

CHOLESTEROL [4] [A]

Ostarine, like all SARMs, will mess with your HDL and LDL cholesterol levels, causing dyslipidemia.

Your HDL (good) cholesterol will definitely decrease and your LDL (bad) cholesterol will probably increase during the cycle.

There is some evidence indicating that your LDL levels could decrease during the cycle, but there is evidence pointing the other way as well.

This side-effect will not manifest itself by impacting the way you feel, so you will have no symptoms. Getting bloodwork at the end of a cycle will show the true impact of the SARM on your lipid panel.

LIVER TOXICITY [A]

Ostarine is one of the mildest SARMs and it rarely causes a significant degree of liver toxicity, but I have seen elevated liver enzymes after Ostarine cycles in multiple occasions.

OTHER SIDE-EFFECTS [A]

The two side effects we just touched upon will impact every user, but there are some side effects that only happen to an extremely small minority of people.

For example:

- **Gynecomastia:** The growth of breast tissue on males. This is an extremely rare side effect that is caused by an imbalance between your estrogen and testosterone levels. Men who have had pubertal gynecomastia are at risk of developing it if they take Ostarine.

- **Hair shedding:** This side effect is even rarer than the previous one, and thankfully it only seems to be temporary and completely reversible. Any substance that interferes with your hormonal levels has the potential of causing hair shedding, and Ostarine is no exception.

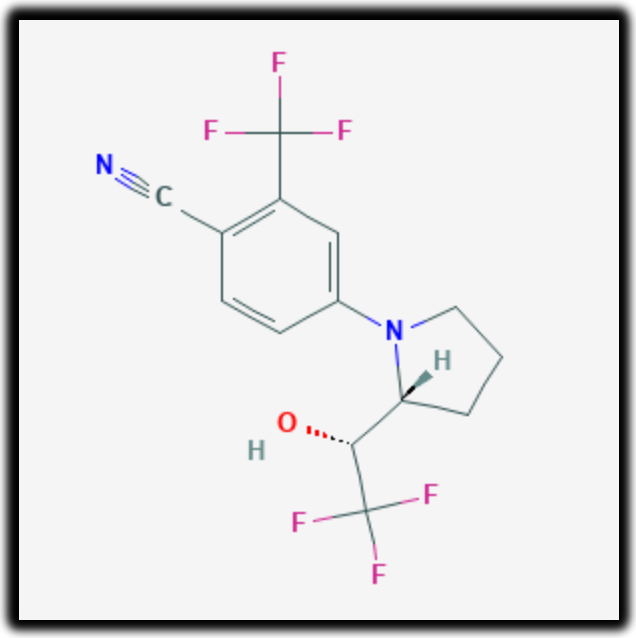
- **Insomnia:** This is another rare side-effect that some people experience. This one is entirely unpredictable but can be mitigated easily.

SARMs impact everyone differently. You may suffer from insomnia and your friend may sleep even better on Ostarine. You may experience increased hunger and your friend may have zero appetite on Ostarine. You will not know how it impacts you until you try it out.

You will find more information on how to manage and mitigate all these and other side-effects in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*.

LIGANDROL (LGD-4033)

4-[(2*R*)-2-[(1*R*)-2,2,2-TRIFLUORO-1-HYDROXYETHYL]PYRROLIDIN-1-YL]-2-(TRIFLUOROMETHYL)BENZONITRILE



HALF-LIFE: 24-36 hours

DOSE: 2.5-10 mg/day

CYCLE LENGTH: 8 weeks

PCT: Recommended

DOSING FREQ.: Once a day

TIMING: Morning

Ligandrol (also known as LGD-4033 and VK5211) is an extremely popular SARM, known for its ability to significantly increase muscle mass in short periods of time.

It was discovered by Ligand Pharmaceuticals, but it is currently being developed by Viking Therapeutics. Like Ostarine, it was designed for the treatment of muscle wasting conditions and osteoporosis.

It has gone through multiple clinical trials, which have proven it to be extremely effective at building lean muscle, even at very low doses. It was well tolerated in all studies, but it usually comes with more side-effects than weaker SARMs like Ostarine and Andarine.

BENEFITS

MUSCLE [5] [A]

Ligandrol is most people's go-to SARM for bulking up. While you will not expect the kind of muscle growth that you could get from some of the most powerful Anabolic Steroids, this compound is strong enough to transform your physique in 8 weeks and have people asking what you are on.

Now, unlike dry SARMs like Ostarine and Testolone, Ligandrol is known for adding water weight, meaning that not all the weight you gain will be lean muscle. You will probably lose 2-4 lbs (~1-2kg) of excess water after the cycle is over.

Ligandrol will also increase your muscle mass or at least retain it on a caloric deficit, but it is rarely used to cut.

STRENGTH AND PERFORMANCE [A]

Ligandrol will increase your strength more than weaker SARMs like Ostarine and Andarine. By the end of the cycle you will be able to rep weights that you could barely rep once before the cycle.

Like all SARMs, it will boost your stamina and performance in the gym. Shorter rest times between sets, the ability to do more reps and to work out for longer are to be expected. A lot of

users report a feeling of euphoria in the gym, a desire to keep working out endlessly when they take LGD-4033.

FAT LOSS [A]

Contrary to what some people believe, Ligandrol will not make you lose more fat. If anything, it may make you look fatter due to the water retention it causes.

However, like all SARMs, it is excellent at preserving muscle mass and even increasing it while on a caloric deficit.

BONES AND JOINTS [6] [A]

Ligandrol will increase the density of your bones and it will make them stronger. This has been proven to be true in clinical studies and it is one of the purposes it was designed for in the first place.

It does not have the ability to heal joints and tendons that Ostarine is purported to have, but the water retention that it causes can help protect and lubricate them, decreasing the chances of injury.

RECOVERY [A]

Ligandrol will shorten your recovery times. As with any SARM, your muscles will feel less sore the next day and you will be able to work them out again sooner.

COSMETIC BENEFITS [A]

Ligandrol is not the SARM you want to take if your goal is to look as aesthetic as possible. It will not give your muscles the hard, dry look that most SARMs will. The water retention can make your muscles appear less lean and blurrier.

The benefit of this added water, however, is a fuller look and better pumps. If you do not care about looking dry and you just want to fill out your clothes, Ligandrol is your best choice.

SIDE-EFFECTS

TESTOSTERONE SUPPRESSION [7] [A]

Ligandrol, like all SARMs, will cause a significant drop in your Testosterone levels. Ligandrol is a moderately suppressive SARM, and proper measures must be taken in order to manage and reverse this suppression.

The consequences of this drop in your testosterone levels can be:

- Decreased libido
- Weaker erections
- Lethargy
- Lack of motivation
- Irritability
- Testicular atrophy
- Testicular pain

The suppression of testosterone levels will be more noticeable during a cycle of Ligandrol than it will be during a cycle of Ostarine or Andarine. In fact, some users struggle so much with the drop in testosterone that they must cut their cycle short at week 6 or 7 if they are not on a Testosterone Base.

It is worth noting that Ligandrol, like all SARMs, will decrease your SHBG. This will lead to an increase in your free testosterone levels which usually causes libido, motivation and well-being to improve during the first few weeks of the cycle,

until the suppression of the Total Testosterone levels offsets the increase in Free Testosterone.

CHOLESTEROL [8] [A]

Ligandrol, like all SARMs, will cause dyslipidemia. Your HDL (good) cholesterol will decrease significantly, and your LDL (bad) cholesterol will increase.

This side-effect will not manifest itself by impacting the way you feel, so you will have no symptoms. Getting bloodwork at the end of a cycle will show the true impact of the SARM on your lipid panel.

LGD FLU [9] [A]

This is a unique side-effect that apparently only Ligandrol can cause (even though there are some reports of it happening with other SARMs).

This side-effect was proven to be real in a clinical trial where the participants developed the symptoms of an Upper Respiratory Tract infection for no apparent reason.

There is not much you can do to avoid or treat this flu other than wait 3-5 days for it to be gone, but some users have successfully mitigated it with common flu medications.

This side-effect does not affect everyone, but a significant minority of users report it.

LIVER TOXICITY [A]

While Ligandrol is softer on the liver than other SARMs and anabolics, you can expect a noticeable (though rarely worrisome) increase in your liver enzymes.

OTHER SIDE-EFFECTS [A]

There are some side effects that only happen to an extremely small minority of people.

For example:

- Gynecomastia: The growth of breast tissue on males. This is an extremely rare side effect that is caused by an imbalance between your estrogen and testosterone levels. Men who have had pubertal gynecomastia are at risk of developing it if they take Ligandrol.

- Hair shedding: This side effect is even rarer than the previous one, and thankfully it only seems to be temporary and completely reversible. Any substance that interferes with your hormonal levels has the potential of causing hair shedding.

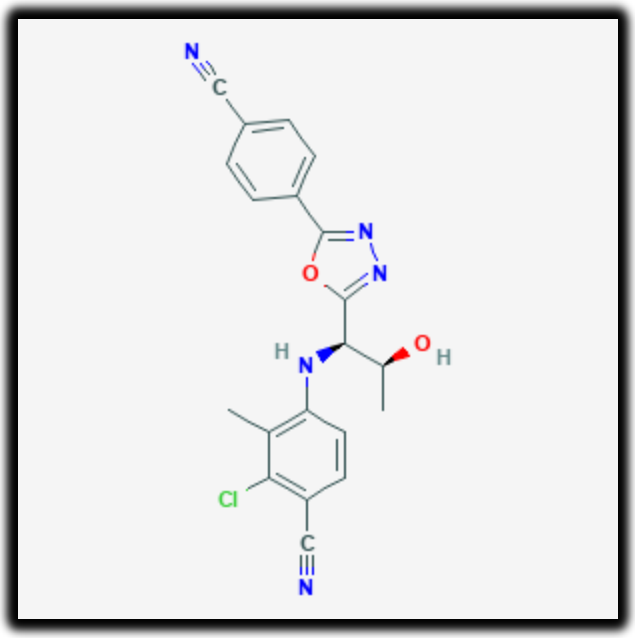
- Insomnia: This is another rare side-effect that some people experience. This one is entirely unpredictable but can be mitigated easily.

SARMs impact everyone differently. You may get the flu, but your friend may feel amazing. You never know what will happen.

You will find more information on how to manage and mitigate all these side-effects in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*.

TESTOLONE (RAD-140)

2-CHLORO-4-[[(1R,2S)-1-[5-(4-CYANOPHENYL)-1,3,4-OXADIAZOL-2-YL]-2-HYDROXYPROPYL]AMINO]-3-METHYLBENZONITRILE



HALF-LIFE: 60 hours

DOSE: 10-20 mg/day

CYCLE LENGTH: 8 weeks

PCT: Recommended

DOSING FREQ.: Once a day

TIMING: Morning

Testolone (also known as RAD-140) has become one of the most widely used and respected SARMs on the market in recent years.

It was developed for the treatment of muscle wasting conditions and breast cancer. It has also been studied on rats as an alternative to TRT, but there is no evidence to indicate that it would be an effective replacement for Testosterone in humans.

The reason why Testolone has become such an iconic PED is that it offers extreme versatility and provides incredible results with relatively manageable side-effects.

BENEFITS

MUSCLE [10] [A]

Testolone is known for its ability to accrue a significant amount of lean muscle mass in short periods of time. It will not add as much weight as something like Ligandrol, but it won't cause water retention either, meaning that what you gain will be mainly lean muscle mass.

The consensus among users of SARMs is that both Ligandrol and Testolone add a similar amount of muscle mass, with the latter being drier and therefore more cosmetically pleasing.

The lack of water retention makes Testolone a very versatile compound that can be useful for a lean bulk or a cutting cycle.

Like all SARMs, it will retain and possibly increase muscle mass while on a caloric deficit.

STRENGTH AND PERFORMANCE [A]

Testolone is famous for its performance enhancing benefits, especially with regards to strength, which you can expect to increase significantly.

Some users report increased aggression and impatience when taking Testolone. This can be seen as a negative side-effect outside of the gym, but when working out that aggression translates into better focus and performance.

Users often report increased stamina in the gym, which translates into shorter resting times between sets, more reps, and the ability to train longer than they are used to.

FAT LOSS [A]

Contrary to what some people claim, Testolone will not help you lose more fat. However, since it is a dry SARM it will make you look leaner and tighter than you really are.

Like all SARMs, it is excellent at keeping muscle mass and even increasing it while on a caloric deficit. Some people see RAD-140 as the more advanced Ostarine alternative for such cycles.

BONES AND JOINTS [11] [A]

Testolone, like all SARMs, will increase the density and strength of your bones.

It does not appear to have any positive impact on joints and tendons, and it can in fact dry them out. More about that in the “SIDE-EFFECTS” section.

RECOVERY [A]

Testolone will make your recovery faster. You will feel less soreness the next day and you will be able to work out those same muscles much sooner.

It is hard to tell whether it is better than other SARMs at doing this, but given how powerful it is, it would be safe to assume that it is more effective at boosting recovery than weaker SARMs.

COSMETIC BENEFITS [A]

Testolone is one of the best SARMs when it comes to improving aesthetics. While it isn't as incredible as something like S-23 or a steroid like Anavar or Masteron, RAD-140 will provide amazing vascularity along with a dry and hard look that is definitely good enough to have you looking amazing at the beach.

OTHER BENEFITS [12] [A]

It has been proven to be effective at fighting breast cancer, reducing prostate size and protecting the brain in rats, so it can potentially do that in humans as well.

The fact that it can fight breast cancer has led some people to believe that it may prevent or even reverse gynecomastia (man boobs), since the drugs used to treat this condition were originally designed as breast cancer medications.

Some users have claimed that RAD-140 shrunk their gynecomastia, but we can also find many examples of people who actually got man boobs from it, so take this claim with a grain of salt and do not expect RAD-140 to be gyno-safe.

Regarding the neuroprotective benefits, it was found to prevent neuronal apoptosis (death) in the absence of sufficient Testosterone and Estrogen, so it may be an effective treatment for neurodegenerative diseases like Alzheimer's disease in the elderly.

SIDE-EFFECTS

TESTOSTERONE SUPPRESSION [13] [A]

Testolone, like all SARMs, will cause a significant drop in your Testosterone levels. Testolone is a moderately suppressive SARM, and proper measures must be taken to manage and reverse this suppression.

The consequences of this drop in your testosterone levels can be:

- Decreased libido
- Weaker erections
- Lethargy
- Lack of motivation
- Irritability
- Testicular atrophy
- Testicular pain

The suppression of testosterone levels will be more noticeable during a cycle of Testolone than it will be during a cycle of Ostarine or Andarine. In fact, some users struggle so much with the suppression that they have to cut their cycle short at week 6 or 7. As you can see, it is similar in terms of suppression to Ligandrol, with some people claiming that Testolone is more suppressive others claiming that Ligandrol is worse.

It is worth noting that Testolone, like all SARMs, will decrease your SHBG. This will lead to an increase in your free testosterone levels which usually causes libido, motivation and

well-being to improve during the first few weeks of the cycle, until the suppression of the Total Testosterone levels offsets the increase in Free Testosterone.

CHOLESTEROL [14] [A]

Testolone, like all SARMs, cause dyslipidemia. Your HDL (good) cholesterol will decrease significantly, whereas your LDL (bad) cholesterol will increase.

This side-effect will not manifest itself by impacting the way you feel, so you will have no symptoms. Getting bloodwork at the end of a cycle will show the true impact of the SARM on your lipid panel.

LIVER TOXICITY [15] [A]

It is unclear how hepatotoxic RAD-140 is because we have anecdotal bloodwork showing elevated liver enzymes, as well as anecdotal bloodwork showing no signs of liver toxicity whatsoever. A recent clinical trial found that RAD-140 does in fact increase liver enzymes.

HAIR SHEDDING [A]

While this side effect can also happen with other SARMs, reports of hair shedding are much more common with RAD.

The cause is unknown, some people theorize that it causes hair loss by suppressing SHBG and increasing Free Testosterone and DHT, while others believe that RAD-140 can attach to the androgen receptors in the scalp and cause hair loss directly.

AGGRESSION [A]

As mentioned before, Testolone is known for causing increased aggression, sometimes in the form of irritability or impatience. This is obviously a negative side-effect, but it can be a positive benefit in the gym.

OTHER SIDE-EFFECTS [A]

There are some side effects that only happen to an extremely small minority of people.

For example:

- Gynecomastia: The growth of breast tissue on males. This is an extremely rare side effect that is caused by an imbalance between your estrogen and testosterone levels. Men who have had pubertal gynecomastia are at risk of developing it if they take Testolone.

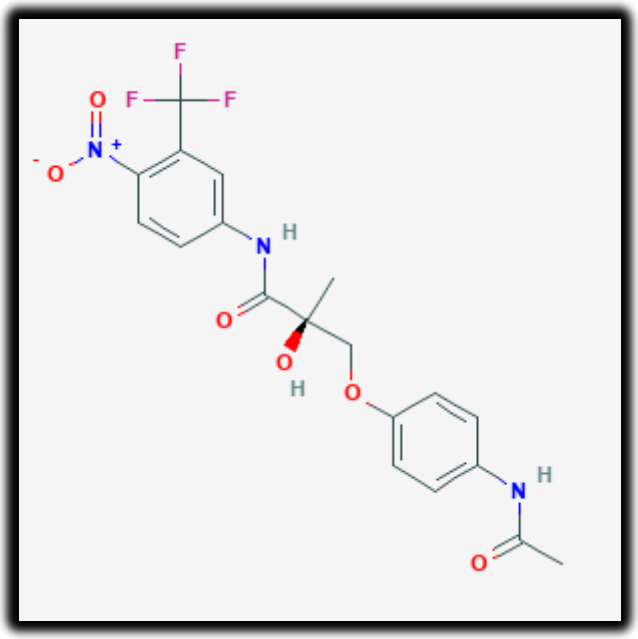
- Insomnia: This is another rare side-effect that some people experience. This one is entirely unpredictable but can be mitigated easily.

SARMs impact everyone differently. You may get the hair loss, but your friend may experience faster hair growth.

You will find more information on how to manage and mitigate all these side-effects in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*.

ANDARINE (S-4)

(2S)-3-(4-ACETAMIDOPHENOXY)-2-HYDROXY-2-METHYL-N-[4-NITRO-3-(TRIFLUOROMETHYL)PHENYL]PROPANAMIDE



HALF-LIFE: Unclear

DOSE: 25-75 mg/day

CYCLE LENGTH: 8 to 12 weeks

PCT: Not Always Required

DOSING FREQ.: 3x a day

TIMING: Morning, Noon, Night

Andarine (also known as S-4, Androxolutamide and GTx-007) was one of the first SARMs ever developed. It used to be very popular back when SARMs first gained traction, but in recent years it has lost that prestige.

Like Ostarine, it was developed by GTx, Inc. for the treatment of muscle wasting conditions and osteoporosis. It has also been proven to be effective at reducing prostate size in rats with Benign Prostatic Hyperplasia.

Unfortunately, Andarine was abandoned and it never reached Phase I Clinical Trials. This means that we have no scientific data on the effects of Andarine on humans, but it has been used recreationally by so many users, that we have plenty of anecdotal information to go by.

Before we delve into those, however, I would like to point out that Andarine has pretty much become obsolete. The reason why is that we have SARMs that offer similar or better benefits without some of the side-effects that Andarine has.

BENEFITS

MUSCLE [16] [A]

While Andarine is clearly effective at building lean muscle mass, it is not what it excels at. The anabolism of Andarine is comparable to that of Ostarine, with both drugs building similar amounts of muscle at their recommended doses.

Like all SARMs, however, it will preserve and even increase muscle mass while on a caloric deficit.

STRENGTH AND PERFORMANCE [A]

You can expect Andarine to improve your strength and performance at the gym significantly. It is hard to tell exactly where S-4 ranks against other SARMs in terms of boosting strength, but people often report greater strength gains on Andarine than on Ostarine. If your priority is strength but you want to avoid the harsher SARMs, Andarine is the best option.

FAT LOSS [A]

Contrary to what some people claim, Andarine will not make you lose more fat. However, since it is a dry SARM, it will make you look leaner and tighter than you really are.

Like all SARMs, it is excellent at keeping muscle mass and even increasing it while on a caloric deficit.

BONES AND JOINTS [17] [A]

Andarine will increase your bone density, after all that is partly what it was developed for. Unfortunately, it does not have the joint-healing benefits of Ostarine, which further explains why the latter is more popular. Fortunately, it does not tend to cause dry joints despite being a dry compound.

RECOVERY [A]

Andarine will speed up your recovery and reduce muscle soreness, so you can expect your muscles to be fully recovered and ready to be worked out again much sooner than if you were natural.

COSMETIC BENEFITS [A]

The cosmetic benefits of Andarine are the only reason why some people still choose to run it. This compound is known for providing a very dry, vascular and tight look, making it a perfect choice for contest prep and photoshoots.

Pumps are also significantly better, and you can expect a 3D look that some people define as “Winstrol-lite”.

OTHER BENEFITS [18] [A]

There is some data indicating that S-4 may be able to shrink the prostate, similar to what RAD-140 can do.

The data on this benefit is extremely limited and it was studied on rodents, so take it with a grain of salt.

It is also worth noting that many users claim that Andarine made them happier and improved their mood, but the mechanism of action behind that possible benefit is completely unknown.

SIDE-EFFECTS

TESTOSTERONE SUPPRESSION [19] [A]

Andarine, like all SARMs, will cause a significant drop in your Testosterone levels. Fortunately, Andarine is one of the least suppressive SARMs out there so this side effect is very manageable and easily reversible. Suppression from Andarine is comparable to that of Ostarine.

The consequences of this drop in your testosterone levels can be:

- Decreased libido
- Weaker erections
- Lethargy
- Lack of motivation
- Irritability
- Testicular atrophy
- Testicular pain

Thankfully, most users do not experience more than a couple of these and only for a very limited amount of time, usually by the end of the cycle and during the first week or two after the cycle is over.

It is worth noting that Andarine, like all SARMs, will decrease your SHBG. This will lead to an increase in your free testosterone levels which usually causes libido, motivation and well-being to improve during the first few weeks of the cycle,

until the suppression of the Total Testosterone levels offsets the increase in Free Testosterone.

CHOLESTEROL [A]

Andarine, like all SARMs, will cause dyslipidemia. Your HDL (good) cholesterol will decrease significantly, and your LDL (bad) cholesterol will increase.

This side-effect will not manifest itself by impacting the way you feel, so you will have no symptoms. Getting bloodwork at the end of a cycle will show the true impact of the SARM on your lipid panel.

VISION SIDE EFFECTS [A]

The one thing that puts most people away from Andarine is the fact that it can affect the user's vision. As crazy as it sounds, S-4 will give a yellowish tint to your eyes while making it harder for you to adapt to lighting changes and reducing your ability to see in dark settings.

Fortunately, these problems disappear after the cycle is over and according to most users, they are easy to get used to and they do not impair vision to a significant extent during the cycle. Still, this side-effect is no joke and it should not be taken lightly.

This side-effect is user and dose dependent, with most people reporting that it occurs when taking 50mg/day or more.

LIVER TOXICITY [A]

Even though there is no scientific evidence to prove that S-4 is hepatotoxic, it is not rare for bloodwork to show elevated liver enzymes after a cycle, so expect that outcome.

OTHER SIDE-EFFECTS [A]

The three side effects we just touched upon will impact almost every user, but there are some side effects that only happen to an extremely small minority of people.

For example:

- Gynecomastia: The growth of breast tissue on males. This is an extremely rare side effect that is caused by an imbalance between your estrogen and testosterone levels. Men who have had pubertal gynecomastia are at risk of developing it if they take Andarine.

- Hair shedding: This side effect is even rarer than the previous one, and thankfully it only seems to be temporary and completely reversible. Any substance that interferes with your hormonal levels has the potential of causing hair shedding, and Andarine is no exception.

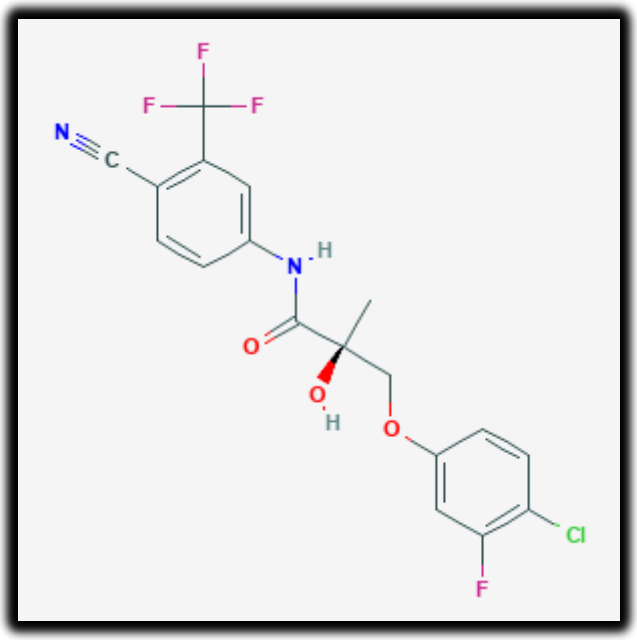
- Insomnia: This is another rare side-effect that some people experience. This one is entirely unpredictable but can be mitigated easily.

SARMs impact everyone differently. You may get horrible vision side-effects and go temporarily blind, and your friend may have zero vision problems. You never know until you try.

You will find more information on how to manage and mitigate some of these side-effects in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*.

S-23

(2S)-3-(4-CHLORO-3-FLUOROPHENOXY)-N-[4-CYANO-3-(TRIFLUOROMETHYL)PHENYL]-2-HYDROXY-2-METHYLPROPANAMIDE



HALF-LIFE: Unclear

DOSE: 10-30 mg/day

CYCLE LENGTH: 4-8 weeks

PCT: Mandatory

DOSING FREQ.: 2-3x a day

TIMING: Morning, Noon, Night

S-23 is perhaps the most powerful cutting SARM on the market today. Despite seeming very promising and attractive on paper, S-23 is quickly becoming one of the least popular and most overlooked drugs in its category, with people choosing other SARMs and oral AAS instead.

It was developed by GTx, Inc. but unlike other SARMs by this company, it was not developed to treat muscle wasting conditions or osteoporosis. Instead, it was developed as a potential form of oral contraception for males. It never reached clinical trials, so we have no scientific data about the effects of S-23 on humans.

BENEFITS

MUSCLE [20] [A]

It is hard to quantify how much muscle S-23 can help you gain because it is rarely used as a bulking compound. People who use it on a modest caloric deficit report a decent increase in muscle mass.

Still, the anecdotal data I have reviewed regarding its use during bulking cycles seems to indicate that S-23 is very anabolic and comparable to SARMs like Ligandrol and Testolone in terms of lean mass accrual.

STRENGTH AND PERFORMANCE [A]

The anecdotal data about the performance enhancing benefits of S-23 we have is very contradictory. On the one hand, we have people experiencing a very significant increase in muscle mass and performance whether they are bulking up or cutting fat.

On the other hand, we have people who experience a serious drop in strength and performance when cutting, partly due to S-23 being harsh on the joints and partly due to the alleged ability of S-23 to rapidly burn through glycogen, something that leaves users feeling extremely depleted and looking seriously flat.

FAT LOSS [21] [A]

Pre-clinical animal studies on S-23 claim that this compound can burn fat on a dose-dependent manner.

We cannot extrapolate this information and confirm that this phenomenon applies to humans as well, but many users claim that S-23 increases metabolism so much, that it can boost fat loss. Take that information with a grain of salt.

BONES AND JOINTS [22] [A]

S-23, like all SARMs, will increase the density of your bones and it will make them stronger. Unfortunately, it tends to mistreat joints and tendons, making users more prone to getting injured.

RECOVERY [A]

Like any proper anabolic, S-23 will speed up recovery times and reduce muscle soreness, allowing you to train specific muscle groups again much sooner.

COSMETIC BENEFITS [A]

The cosmetic benefits of S-23 are the main reason why so many people choose to take it despite the risks associated with it.

From reviewing anecdotal information, we can see that the cosmetic benefits are like those of steroids such as Winstrol and Masteron, so one can expect an extremely dry and vascular look when cycling S-23.

Unfortunately, the muscle flatness that it can cause in the absence of sufficient carbohydrates can compromise the look of users who are trying to look fuller and bigger.

OTHER BENEFITS [23] [A]

Some people welcome the contraceptive effect of S-23, while others fear it and consider it a dangerous side-effect. More information about this in the “SIDE-EFFECTS” section.

It is also worth noting that S-23 sexual desire in female rats, so it may be able to do the same in humans. Make of that what you will.

SIDE-EFFECTS

TESTICULAR SHUTDOWN [24] [A]

All SARMs can potentially cause testicular shutdown if taken in extreme amounts during large periods of time, but S-23 will cause complete shutdown even at small dosages taken for short periods of time. This is normal, given that it was developed as an oral contraceptive and dropping LH and FSH levels to 0 is necessary in order to achieve that. Keep in mind that in most cases S-23 on its own will not cause infertility.

Since S-23 will crash your Testosterone down to a negligible level, there will be no conversion of Testosterone into Estrogen and you will feel like complete garbage throughout the cycle UNLESS you are running a Testosterone base of some sort. This also makes a PCT mandatory (More on that in the chapter about *On-Cycle Therapy* and *Post-Cycle Therapy*).

The consequences of testosterone suppression or shutdown are:

- Decreased libido
- Weaker erections
- Lethargy
- Lack of motivation
- Irritability
- Testicular atrophy
- Testicular pain

If you do not have a Testosterone base, you will suffer from every single one of these side-effects and your life will be miserable until you do a PCT.

It is worth noting that S-23, like all SARMs, will decrease your SHBG. This will lead to an increase in your free testosterone levels which can improve your sex drive and well-being ONLY if you are using a testosterone base.

Anecdotal bloodwork provided by users confirms the effectiveness of S-23 at crashing LH and FSH levels, therefore we can conclude that it is an effective oral contraceptive for men (you should still use condoms though ;).

CHOLESTEROL [A]

S-23, like all SARMs, will cause dyslipidemia. By the end of the cycle, your HDL (good) cholesterol will be significantly lower and your LDL (bad) cholesterol will have sky-rocketed.

This side-effect will not manifest itself by impacting the way you feel, so you will have no symptoms. Getting bloodwork at the end of a cycle will show the true impact of the SARM on your lipid panel.

LIVER TOXICITY [A]

Even though there is no scientific evidence to prove that S-23 is hepatotoxic in humans, anecdotal reports almost always show a significant increase in liver enzyme levels.

ANDROGENIC SIDE-EFFECTS [A]

On paper S-23 should not be androgenic, but hundreds of users report androgenic side-effects such as hair loss, acne and aggression. It is unclear why S-23 has androgenic properties.

INCREASED BODY TEMPERATURE [A]

Some users report increased body temperature, so excessive sweating, night sweats, dehydration and cramps can easily happen.

OTHER SIDE-EFFECTS [A]

There are some side effects that only happen to an extremely small minority of people.

For example:

- Gynecomastia: The growth of breast tissue on males. This is an extremely rare side effect that is caused by an imbalance between your estrogen and testosterone levels. Men who have had pubertal gynecomastia are at risk of developing it if they take S-23.

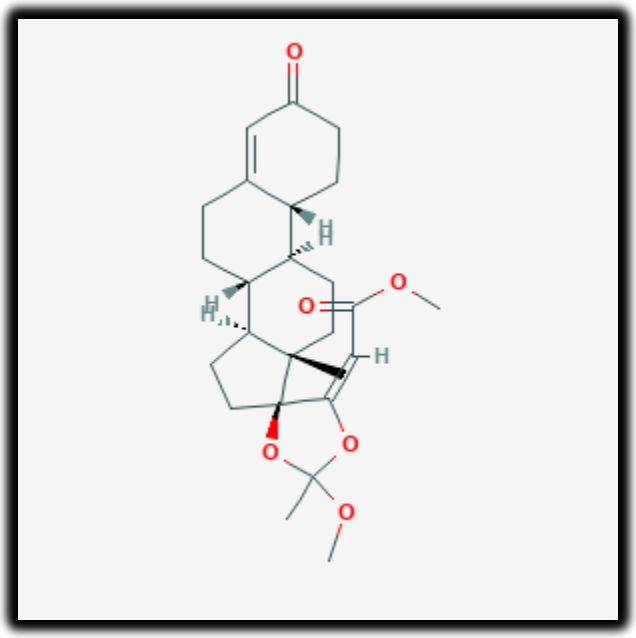
- Insomnia: This is another rare side-effect that some people experience. This one is entirely unpredictable but can be mitigated easily.

SARMs impact everyone differently. You may become infertile, and your friend may impregnate his girlfriend during a cycle of S-23.

You will find more information on how to manage and mitigate some of these side-effects in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*.

YK-11

METHYL(2E)-2-[(8R,9S,10R,13S,14S,17S)-2'-METHOXY-2',13-DIMETHYL-3-OXOSPIRO[1,2,6,7,8,9,10,11,12,14,15,16-DODECAHYDROCYCLOPENTA[A]PHENANTHRENE-17,5'-1,3-DIOXOLANE]-4'-YLIDENE]ACETATE



HALF-LIFE: Unclear

DOSE: 5-10 mg/day

CYCLE LENGTH: 4-8 weeks

PCT: Mandatory

DOSING FREQ.: 2-3x a day

TIMING: Morning, Noon, Night

YK-11 is the most intriguing and fascinating SARM one can possible use. It is a steroidal SARM of the 19-Nor (Nandrolone) family that is also supposed to act as a Myostatin inhibitor. On paper, these properties make it an extremely powerful and versatile compound that can be used to destroy plateaus as well as erase one's genetic limits.

Unfortunately, YK-11 has never been tested and we have very little anecdotal information about it despite its promising properties. In fact, YK-11 never made it to *in vivo* pre-clinical trials, meaning that it was only studied in test tubes and never on rodents or primates.

BENEFITS

MYOSTATIN INHIBITION [25] [A]

Myostatin is a protein that acts on the muscle cells to prevent muscle growth. From an evolutionary perspective, an extremely muscular body would be very inconvenient, so it makes sense for the body to have a mechanism that limits muscle growth.

The way YK-11 allegedly inhibits this protein is by inducing the production of Follistatin, an antagonist to Myostatin. The logic behind this mechanism is that the more you increase Follistatin, the less effective Myostatin will be at limiting muscle growth and the bigger you will be able to become.

MUSCLE [26] [A]

Due to the limited amount of anecdotal information we have about this compound and the fact that it is usually stacked with other anabolics, it is hard to quantify how much muscle mass YK-11 will help you gain.

It is very anabolic so it will increase your muscle mass, but we do not know the extent to which it will do so, compared to other SARMs and steroids. YK-11 is often used as a “wingman” because it is theorized that by inhibiting myostatin, this SARM enhances the anabolic potential of whatever you stack it with.

STRENGTH AND PERFORMANCE [A]

According to anecdotal information, YK-11 will make you a lot stronger. After all, it is a 19-Nor derivative and such compounds are known for increasing strength, aggression and performance in the gym.

Unfortunately, it is very common for YK-11 to cause stiff joints due to the myostatin inhibition, a side-effect that can compromise strength gains.

FAT LOSS [A]

If YK-11 is an effective myostatin inhibitor, then it may potentially facilitate fat loss since low levels of this protein are linked to a reduction of fat mass.

BONES AND JOINTS [27] [A]

YK-11, like all SARMs, will increase the density and strength of your bones.

A lot of people report that their joints feel extremely weak and stiff when on YK-11. This makes complete sense because myostatin inhibition is directly correlated to decreased joint and ligament health.

This negative side-effect predisposes athletes to getting injured during YK-11 cycles.

RECOVERY [A]

YK-11 will make your recovery faster. You will feel less sore the next day and your muscles will be ready to work out again a lot sooner.

The extent to which YK-11 helps with recovery is unknown, but a LOT of people report a recovery level that is unmatched by any other SARM. That is another hint that YK-11 may in fact be an effective myostatin inhibitor.

COSMETIC BENEFITS [A]

One of the greatest things about YK-11 is that in conjunction with another anabolic it will blow you up in size while keeping you relatively lean and free of water retention.

Like S-23, it is often compared to Winstrol and Masteron, so cutting cycles with YK-11 are effective at bringing out the definition. Pumps are also improved, and a more 3D look is guaranteed with this SARM.

SIDE-EFFECTS

TESTOSTERONE SUPPRESSION [A]

It is unclear whether YK-11 only suppresses testosterone (like most SARMs do) or if it totally shuts down testosterone production in the testes (like the vast majority of AAS do). Some users experience severe suppression, but there are case reports of users experiencing a mild degree of suppression.

It will probably cause full-shut down when stacked with oral Anabolics so I would always recommend a Test. Base and a PCT. (More information on this in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*).

The consequences of testosterone suppression or shutdown are:

- Decreased libido
- Weaker erections
- Lethargy
- Lack of motivation
- Irritability
- Testicular atrophy
- Testicular pain

YK-11 will decrease your SHBG. This will lead to an increase in your free testosterone levels which usually causes libido, motivation and well-being to improve during the cycle, but ONLY if you have a testosterone base.

CHOLESTEROL [A]

YK-11, like all SARMs, will cause dyslipidemia. By the end of the cycle, your HDL (good) cholesterol will be significantly lower and your LDL (bad) cholesterol will have sky-rocketed.

The impact of YK-11 on the lipid panel will be harder than that of most SARMs and it will be comparable to that of other oral Steroids.

This side-effect will not manifest itself by impacting the way you feel, so you will have no symptoms. Getting bloodwork at the end of a cycle will show the true impact of the SARM on your lipid panel.

LIVER TOXICITY [A]

Unlike the rest of SARMs, YK-11 is a methylated oral AAS. This essentially means that you can expect a serious degree of liver toxicity. Anecdotal findings confirm that this is the case.

ANDROGENIC SIDE-EFFECTS [29] [A]

Even though it is not a DHT derivative, it is common for people to report androgenic side-effects like acne, hair loss and aggression when they are on YK-11.

OTHER SIDE-EFFECTS [A]

Keep in mind that due to how rarely this SARM is used, there may be more side-effects that we do not know of, but the following side-effects can happen to anyone who uses SARMs and messes with his hormonal balance:

For example:

- **Gynecomastia:** The growth of breast tissue on males. This is an extremely rare side effect that is caused by an imbalance between your estrogen and testosterone levels. Men who have had pubertal gynecomastia are at risk of developing it if they take YK-11.

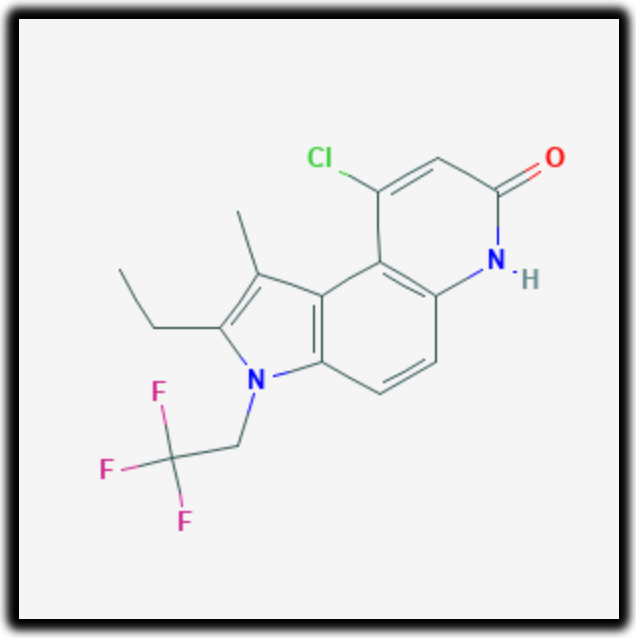
- **Insomnia:** This is another rare side-effect that some people experience. This one is entirely unpredictable but can be mitigated easily.

SARMs impact everyone differently. You may get insane amounts of acne in your face, but your friend's skin may improve on YK-11.

You will find more information on how to manage and mitigate some of these side-effects in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*.

LGD-3303

9-CHLORO-2-ETHYL-1-METHYL-3-(2,2,2-TRIFLUOROETHYL)-6H-PYRROLO[3,2-F]QUINOLIN-7-ONE



HALF-LIFE: Unclear

DOSE: 5-20 mg/day

CYCLE LENGTH: 4-8 weeks

PCT: Mandatory

DOSING FREQ.: 2-3x a day

TIMING: Morning, Noon, Night

LGD-3303, not to be confused with Ligandrol, was developed by Ligand Pharmaceuticals to treat muscle wasting conditions and osteoporosis.

The preclinical and anecdotal information about this SARM is very limited. Those who have used it describe it as a dry counterpart of Ligandrol because it can blow you up in size without causing any water retention.

Unfortunately, LGD-3303 is one of the hardest SARMs to come across, and paradoxically, the supply is unable to meet the demand. It can be bought from legitimate vendors from time to time, but it always runs out of stock in record time.

BENEFITS

MUSCLE [30] [A]

According to anecdotal reports this is one of the best, if not the best SARM for building lean muscle mass. As mentioned before, people who have used it often describe it as the drier, stronger counterpart of Ligandrol, so you can expect a massive increase in lean tissue.

Due to its lack of water retention and its ability to retain and even increase muscle on a caloric deficit, it could be used effectively during a cutting cycle, but using it for that purpose would be a waste of its muscle building potential.

STRENGTH AND PERFORMANCE [A]

The strength and performance enhancing benefits of LGD-3303 definitely live up to its anabolic potential. You can expect an increase in strength and stamina that is more worthy of an Anabolic Steroid than a regular SARM.

FAT LOSS [A]

LGD-3303 does not burn fat, but like all anabolics it will retain and increase muscle mass while on a caloric deficit.

BONES AND JOINTS [31] [A]

LGD-3303, will most certainly increase the strength and density of your bones.

Fortunately, it is unlikely to have a negative impact on joint and tendons despite being a “dry” compound, so you will not be as prone to injury as you would be with something like Testolone or S-23.

RECOVERY [A]

As the powerful anabolic that it is, LGD-3303 will speed up recovery times and reduce muscle soreness, allowing you to re-train any muscle group a lot sooner than you would be able to as a natural.

COSMETIC BENEFITS [A]

Given the lack of water retention, you can expect your muscles to fill out while retaining a dry and hard look. It can be argued that LGD-3303 provides the best of both worlds: The volume and size that a wet compound would give, with the dry, hard and veiny look that a cutting agent would cause.

You can expect to be walking around with a pump 24/7, and your muscles will certainly have a full 3D look that few oral anabolics can provide.

SIDE-EFFECTS

TESTOSTERONE SUPPRESSION [A]

The extent to which LGD-3303 suppresses testosterone is unknown and varies from person to person, but according to anecdotal information, LGD-3303 is one of the most suppressive SARMs and it can possibly cause complete shutdown. Therefore, having a testosterone base and doing a proper PCT is advised. (More information on this in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*).

The consequences of testosterone suppression or shutdown are:

- Decreased libido
- Weaker erections
- Lethargy
- Lack of motivation
- Irritability
- Testicular atrophy
- Testicular pain

It is worth noting that LGD-3303, like all SARMs, will decrease your SHBG. This will lead to an increase in your free testosterone levels which usually causes libido, motivation and well-being to improve during the cycle, but ONLY if you have a testosterone base.

CHOLESTEROL [A]

LGD-4033, like all SARMs, will cause dyslipidemia. By the end of the cycle, your HDL (good) cholesterol will be significantly lower and your LDL (bad) cholesterol will have sky-rocketed.

This side-effect will not manifest itself by impacting the way you feel, so you will have no symptoms. Getting bloodwork at the end of a cycle will show the true impact of the SARM on your lipid panel.

LIVER TOXICITY [A]

There is no scientific data to prove that LGD-3303 is hepatotoxic, but I have seen elevated liver enzymes after LGD-3303 cycles.

The great thing about it, however, is that the liver toxicity caused by LGD-3303 is rarely as bad as what anabolic Steroids with a similar strength and potency would cause.

OTHER SIDE-EFFECTS [A]

Keep in mind that due to how rarely this SARM is used, there may be more side-effects that we do not know of, but the following side-effects can happen to anyone who uses SARMs and messes with his hormonal balance:

For example:

- **Gynecomastia:** The growth of breast tissue on males. This is an extremely rare side effect that is caused by an imbalance between your estrogen and testosterone levels. Men who have had pubertal gynecomastia are at risk of developing it if they take LGD-3303.

- **Hair shedding:** This side effect is even rarer than the previous one, and thankfully it only seems to be temporary and completely reversible. Any substance that interferes with your hormonal levels has the potential of causing hair shedding, and LGD-3303 is no exception.

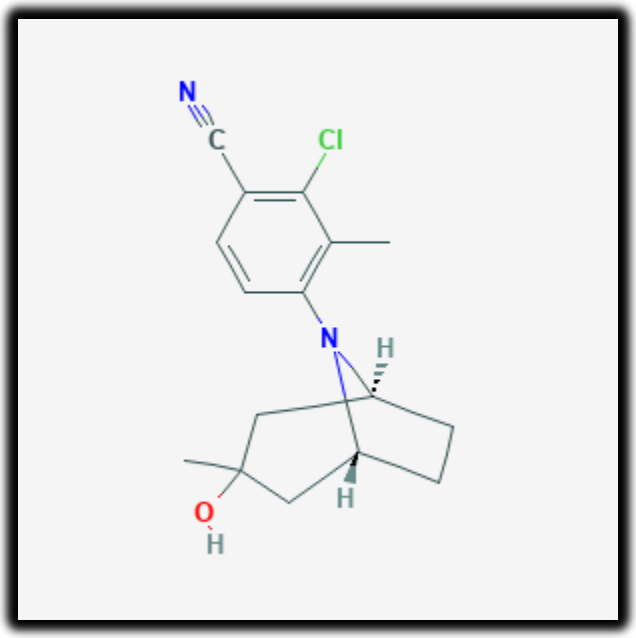
- **Insomnia:** This is another rare side-effect that some people experience. This one is entirely unpredictable but can be mitigated easily.

SARMs impact everyone differently. You may grow a third testicle, but your friend's testicles may fall off during a cycle of LGD-3303. You never know what's going to happen.

You will find more information on how to manage and mitigate some of these side-effects in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*.

ACP-105

2-CHLORO-4-[(1R,5S)-3-HYDROXY-3-METHYL-8-AZABICYCLO[3.2.1]OCTAN-8-YL]-3-METHYLBENZONITRILE



HALF-LIFE: Unclear

DOSE: 10-20 mg/day

CYCLE LENGTH: 8 to 12 weeks

PCT: Not Always Required

DOSING FREQ.: 2-3x a day

TIMING: Morning, Noon, Night

ACP-105 was developed by Acadia Pharmaceuticals for the treatment of muscle wasting conditions and osteoporosis.

This SARM is quite hard to find in the market, so we do not have a lot of anecdotal information on it. There have been no human clinical trials either.

Those who have used it compare it to Ostarine in terms of side-effects and to Andarine in terms of benefits. Those traits make ACP-105 a great cutting compound with minimal side effects that has the potential to replace S-4 and even Ostarine as the mild sarms *par excellence* if more anecdotal data confirms its efficacy and relative safety.

BENEFITS

MUSCLE [A]

Going by the little anecdotal information we have about ACP-105, a fair description of its effects would be to compare it to Ostarine and Andarine in terms of pure muscle accrual potential.

It will obviously retain muscle mass on a calorie deficit, and it may even build some muscle if the deficit is not too deep. This compound is almost exclusively used for cutting cycles.

STRENGTH AND PERFORMANCE [A]

ACP-105 will increase strength, performance and stamina. We do not have enough anecdotal information to determine exactly how effective it is at doing so, but due to its mild nature it probably increase strength and performance to a similar extent to Ostarine and Andarine.

FAT LOSS [A]

ACP-105 has no fat-burning properties, but like all anabolics it will retain and increase muscle mass while on a caloric deficit.

BONES AND JOINTS [A]

ACP-105, like all SARMs, will increase the density and strength of bones. There is no anecdotal data to suggest that it has the joint healing properties of Ostarine, but it does not seem to cause dry joints either, which is a big plus for such a dry compound.

RECOVERY [A]

ACP-105 will make your recovery faster. You will feel less sore the next day and your muscles will be ready to work out again a lot sooner.

The extent to which ACP-105 helps with recovery is unknown but given its mildness, it should be about as effective as Ostarine or Andarine at doing so.

COSMETIC BENEFITS [A]

The cosmetic improvements provided by ACP-105 are said to be very similar to those of Andarine.

Therefore, you can expect a very dry, vascular and tight look. This makes ACP-105 a perfect choice when preparing for a Bodybuilding contest or a photoshoot. In my opinion, this benefit alone makes ACP-105 much more attractive than Andarine, which is similar in almost every way except the visual side-effects. It is also a worthy opponent to Ostarine, which may not be as dry but is good for joints.

SIDE-EFFECTS

TESTOSTERONE SUPPRESSION [A]

According to those who have used ACP-105, the testosterone suppression caused by this compound is very mild and similar to that of Ostarine and Andarine.

The consequences of testosterone suppression or shutdown are:

- Decreased libido
- Weaker erections
- Lethargy
- Lack of motivation
- Irritability
- Testicular atrophy
- Testicular pain

The vast majority of users will not experience more than one or two of these symptoms and only for a short period of time towards the end of the cycle and for a week or two after the cycle is over.

It is worth noting that ACP-105, like all SARMs, will decrease your SHBG. This will lead to an increase in your free testosterone levels which usually causes libido, motivation and well-being to improve during the first few weeks of the cycle, until the suppression of the Total Testosterone levels offsets the increase in Free Testosterone.

CHOLESTEROL [A]

ACP-105, like all SARMs, will cause dyslipidemia. Your HDL (good) cholesterol will decrease, and your LDL (bad) cholesterol will increase.

The impact of ACP-105 on the lipid panel will probably be milder than that of most other SARMs.

This side-effect will not manifest itself by impacting the way you feel, so you will have no symptoms. Getting bloodwork at the end of a cycle will show the true impact of the SARM on your lipid panel.

LIVER TOXICITY [A]

Even though there is no scientific evidence to prove that ACP-105 is hepatotoxic, it is safe to assume that it can elevate liver enzymes, so expect that side-effect.

OTHER SIDE-EFFECTS [A]

Keep in mind that due to how rarely this SARM is used, there may be more side-effects that we do not know of, but the following side-effects can happen to anyone who uses SARMs and messes with his hormonal balance:

For example:

- Gynecomastia: The growth of breast tissue on males. This is an extremely rare side effect that is caused by an

imbalance between your estrogen and testosterone levels. Men who have had pubertal gynecomastia are at risk of developing it if they take ACP-105.

- **Hair shedding:** This side effect is even rarer than the previous one, and thankfully it only seems to be temporary and completely reversible. Any substance that interferes with your hormonal levels has the potential of causing hair shedding, and ACP-105 is no exception.

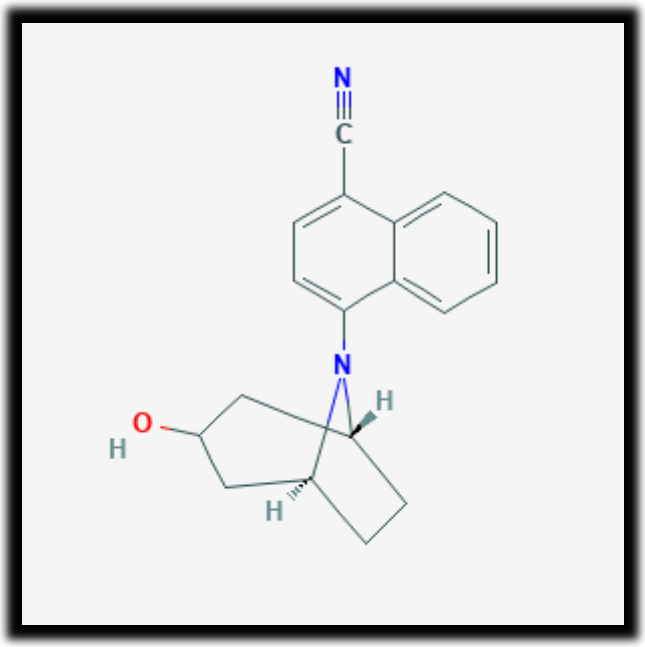
- **Insomnia:** This is another rare side-effect that some people experience. This one is entirely unpredictable but can be mitigated easily.

SARMs impact everyone differently. You may have the best erections of your life, but your friend's penis may shrink to the size of a pea during a cycle of ACP-105.

You will find more information on how to manage and mitigate some of these side-effects in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*.

AC-262536

4-[(1R,5S)-3-HYDROXY-8-AZABICYCLO[3.2.1]OCTAN-8-YL]NAPHTHALENE-1-CARBONITRILE



HALF-LIFE: Unclear

DOSE: 20-30 mg/day

CYCLE LENGTH: 8-12 weeks

PCT: Not Always Required

DOSING FREQ.: 2-3x a day

TIMING: Morning, Noon, Night

AC-262536 was developed by Acadia Pharmaceuticals for the treatment of muscle wasting conditions and osteoporosis.

This is a very rare SARM in the sense that not many companies offer it, and for that reason we only have a small amount of anecdotal reports about its effects. It has only been tested in preclinical models.

From what we know thanks to anecdotal information, this is a very mild SARM, comparable to Ostarine, ACP-105 and Andarine in terms of benefits and side-effects. Unfortunately, it is not growing in popularity like other LGD-3303, ACP-105 and other rare compounds are.

BENEFITS

MUSCLE [A]

Based on the little information we have about it, we can expect AC-262536 to build a modest but noticeable amount of muscle mass on a caloric surplus and to retain muscle mass on a caloric deficit. According to those who have used it, it provides similar gains to something like Ostarine, Andarine or ACP-105.

STRENGTH AND PERFORMANCE [A]

AC-262536, like all SARMs, will increase strength and improve stamina in the gym.

The extent to which it will do so compared to other SARMs is unknown, but it is probably on the level of Ostarine, Andarine and ACP-105

FAT LOSS [A]

AC-262536 has no fat-burning properties, but like all anabolics it will retain and increase muscle mass while on a caloric deficit.

BONES AND JOINTS [A]

AC-262536, like all SARMs, will increase the density and strength of bones.

I have not come across any information about its effects on joints.

RECOVERY [A]

AC-262536 will make your recovery faster. You will feel less sore the next day and your muscles will be ready to work out again a lot sooner.

COSMETIC BENEFITS [A]

According to those who have used it, AC-262536 will not cause any water retention, and the cosmetic benefits that it will provide are like those of Ostarine.

Better pumps, a tighter look and increased vascularity are all likely to happen.

SIDE-EFFECTS

TESTOSTERONE SUPPRESSION [A]

According to the little anecdotal data we have about AC-262,536, the testosterone suppression caused by this compound is very mild and similar to that of Ostarine and Andarine.

The consequences of testosterone suppression or shutdown are:

- Decreased libido
- Weaker erections
- Lethargy
- Lack of motivation
- Irritability
- Testicular atrophy
- Testicular pain

Most users will not experience more than one or two of these symptoms and only for a short period of time at the end of the cycle and for a week or two after the cycle is over.

It is worth noting that AC-262536, like all SARMs, will decrease your SHBG. This will lead to an increase in your free testosterone levels which usually causes libido, motivation and well-being to improve during the first few weeks of the cycle, until the suppression of the Total Testosterone levels offsets the increase in Free Testosterone.

CHOLESTEROL [A]

AC-262536, like all SARMs, will cause dyslipidemia, so you can expect HDL (good) cholesterol to decrease and LDL (bad) cholesterol to decrease. The impact of this SARM on the lipid panel will probably be comparable to that of similarly powerful SARMs.

This side-effect will not manifest itself by impacting the way you feel, so you will have no symptoms. Getting bloodwork at the end of a cycle will show the true impact of the SARM on your lipid panel.

LIVER TOXICITY [A]

Even though there is no scientific evidence to prove that ACP-105 is hepatotoxic, it is safe to assume that it can elevate liver enzymes, so expect that side-effect.

OTHER SIDE-EFFECTS [A]

Keep in mind that due to how rarely this SARM is used, there may be more side-effects that we do not know of, but the following side-effects can happen to anyone who uses SARMs and messes with his hormonal balance:

For example:

- Gynecomastia: The growth of breast tissue on males. This is an extremely rare side effect that is caused by an

imbalance between your estrogen and testosterone levels. Men who have had pubertal gynecomastia are at risk of developing it if they take ACP-105.

- **Hair shedding:** This side effect is even rarer than the previous one, and thankfully it only seems to be temporary and completely reversible. Any substance that interferes with your hormonal levels has the potential of causing hair shedding, and this SARM is no exception.

- **Insomnia:** This is another rare side-effect that some people experience. This one is entirely unpredictable but can be mitigated easily.

SARMs impact everyone differently. And because we have little information on AC-262536, anything can happen.

You will find more information on how to manage and mitigate some of these side-effects in the chapters about *On-Cycle Therapy* and *Post-Cycle Therapy*.

QUICK COMPARISON CHART

	MUSCLE	STRENGTH	SIDE-EFF.	PCT	CYCLE
MK-2866	2	2	1	OPT.	CUT
LGD-4033	4	4	3	REC.	BULK
RAD-140	4	5	3	REC.	BOTH
S-4	2	3	2	OPT.	CUT
S-23	4	5	5	MAN.	CUT
YK-11	3	3	4	MAN.	BOTH
LGD-3303	5	5	4	MAN.	BULK
ACP-105	2	3	1	OPT.	CUT
AC-262536	2	2	1	OPT.	CUT

*Numerical values are out of 5.

OPT.: (OPTIONAL) Means that even though you may benefit from doing a PCT, the compound rarely requires on so you can *probably* get away without a PCT

REC.: (RECOMMENDED) Means that even though you may be able to bounce back without PCT, you will benefit greatly from doing one.

MAN.: (MANDATORY) PCT is always necessary.

Regarding the "CYCLE" column, it refers to the kind of cycle that each SARM excels at, but you can cut or bulk with all SARMs.

SYNERGY

One of the main principles I personally preach is ***SYNERGY:*** **The idea that combining PEDs that work through different pathway leads to better results than combining a bunch of PEDs with a similar mechanism of action.**

Everyone wants to stack LGD-4033 and RAD-140, or Ostarine and LGD-4033, or S-23 and RAD-140, etc…

In my opinion, combining regular SARMs with each other is far from optimal and often increases side-effects more than it improves benefits, making the juice not worth the squeeze.

I theorize that SARMs fight to attach to the same receptors, and that only the strongest one of the two (or rather, the one with the highest binding affinity) will attach to the receptor, kicking the other SARM out of the receptor and making it useless.

We do not have any reliable scientific data to indicate that this theory is true, but if we look at the empirical evidence it becomes obvious that, for example, combining LGD-4033 with RAD-140 only provides a small increase in muscle and strength compared to just running one or the other, but the testosterone suppression and the impact on organs becomes significantly worse.

On the other hand, if we combine synergistic compounds like LGD-4033 and MK-677, or RAD-140 and YK-11, we get significantly better results and an increase in side-effects that is proportional to the strength of the second compound we have added.

Another example would be the combination of any dry SARM like Ostarine, RAD-140 or S-4 (among others) with Cardarine and/or SR-9009.

Unlike stacking Ostarine with RAD-140 (which a lot of people think will burn more fat than running one or the other), by stacking any dry SARM with Cardarine and/or SR-9009, we get all the anti-catabolic, performance-enhancing and aesthetic benefits of the SARM plus the accelerated fat-loss, doubled endurance and positive impact on the lipid panel that compounds like Cardarine and SR-9009 provide.

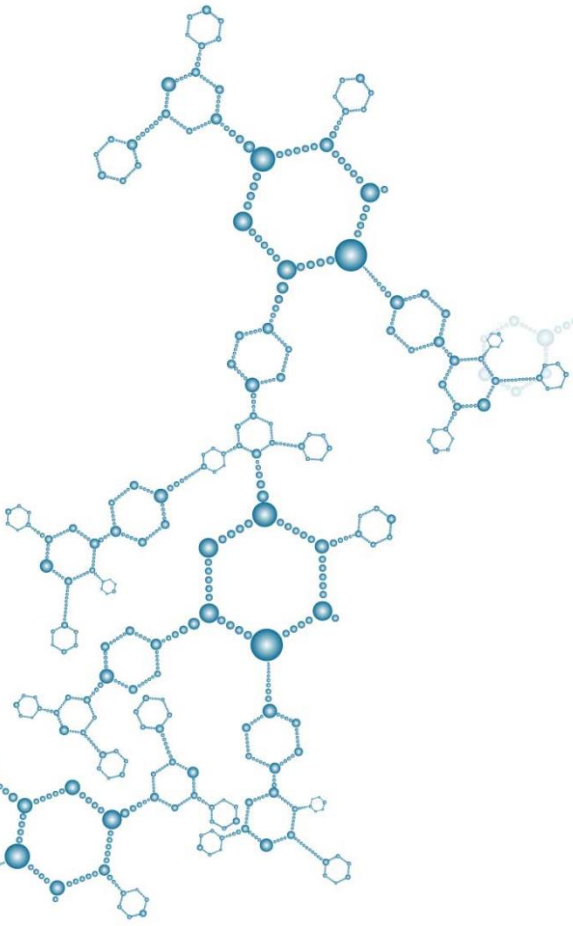
So not only are we accelerating fat loss and improving cardiovascular capacity, but we are also counteracting one of the main side-effects of SARMs: Dyslipidemia.

NOTE: Some users like to stack Ostarine with other SARMs for the positive impact on the joints that it has. This theory makes sense, but in my opinion there is no need to further suppress your hormones and damage your organs for the sake of joint health, when you could be using side-effect-free joint health supplements like Fish Oil, Collagen Powder, MSM or even a peptide like BPC-157 or TB-500.

WHAT CAN YOU COMBINE?

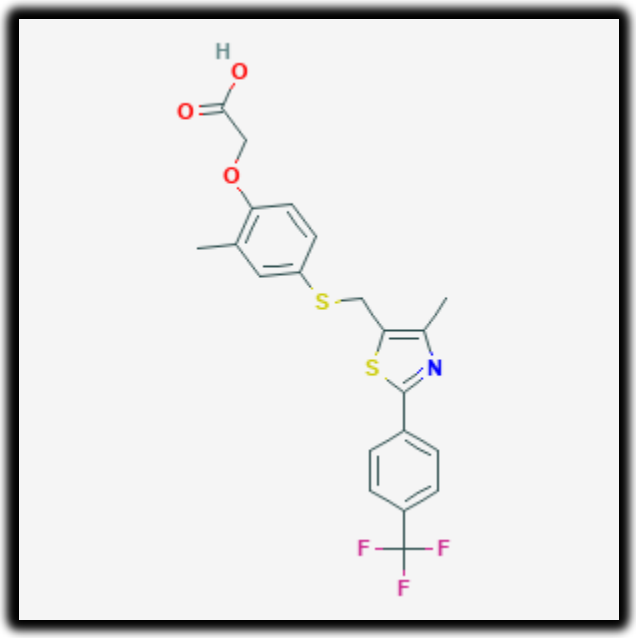
	MK-2866	LGD4033	RAD-140	S-4	S-23	YK-11	LGD3303	ACP-105	AC-262536	MK-677	GW-501516	SR-9009
MK-2866	-											
LGD-4033		-										
RAD-140			-									
S-4				-								
S-23					-							
YK-11						-						
LGD-3303							-					
ACP-105								-				
AC-262536									-			
MK-677										-		
GW-501516											-	
SR-9009												-

OTHER RESEARCH CHEMICALS



CARDARINE (GW-501516)

2-[2-METHYL-4-[[4-METHYL-2-[4-(TRIFLUOROMETHYL)PHENYL]-1,3-THIAZOL-5-YL]METHYLSULFANYL]PHENOXY]ACETIC ACID



HALF-LIFE: 24 hours

DOSE: 10-20 mg/day

CYCLE LENGTH: 8 weeks

PCT: Never

DOSING FREQ.: Once a day

TIMING: Morning

Cardarine (also known as GW-501516 and Endurobol) is a PPARδ receptor agonist that was developed by Ligand Pharmaceuticals and GSK for the treatment of metabolic and cardiovascular diseases. Unfortunately, it was abandoned after a controversial study in which rats developed cancer came out.

Despite posing this risk, it has been used by numerous professional athletes and by hundreds of thousands of users for the purpose of improving endurance, burning fat and protecting the heart. This is one of the most widely used non-anabolics PEDs and for a good reason, since its properties are nothing short of miraculous.

BENEFITS

ENDURANCE [32] [A]

Cardarine can dramatically improve endurance and stamina almost overnight. Some users even claim that it can double their endurance, allowing them to run, swim or ride a bike at a higher intensity for longer periods of time. You should not necessarily expect it to double your endurance, but you will most definitely experience a 30%+ improvement if you are a good responder to it.

Even though this benefit is more attractive to endurance athletes than to bodybuilders, the latter can still benefit from it not only when they do cardio, but also when doing weights, as the endurance increase can also be felt there.

CHOLESTEROL, INFLAMMATION & CANCER [33] [A]

Cardarine will significantly improve your lipid panel by increasing HDL (good cholesterol) and lowering LDL (bad cholesterol) as well as Triglycerides. This benefit makes Cardarine a useful addition to any SARM or AAS cycle since it can offset the dyslipidemia caused by such compounds.

It has also been proven to lower inflammation and it has been shown to fight certain types of cancer, as well as lower blood sugar levels, which makes it a great addition to an MK-677 cycle. There is also evidence that it can protect the kidneys.

FAT LOSS [34] [A]

In simple terms, we could say that Cardarine accelerates fat loss by prioritizing fat as an energy source and modulating various genes that are involved in fat burning.

Even though it can most definitely aid in losing fat, do not expect drastic results. This is not on the level of a hardcore thermogenic fat-burner like Clenbuterol, let alone DNP.

SIDE-EFFECTS

CANCER RISK [35]

The study in question involved the administration of Cardarine to Wistar Rats for 2 years Upon doing some research into this species, we find out that Female Wistar rats have a life expectancy of up to 3 years and that they are prone to developing cancer.

There is a lot of discussion online about the human equivalent of the dose that these rats were administered. Some people claim that the human equivalent would be 200mg/day, whereas some people say it is closer to 40 mg/day. The latter is a more accurate assessment.

Regardless of what the real equivalent dose is, what is clear is that if one were to take Cardarine, they should not take more than 20mg/day, and they should take long breaks and limit its use as much as possible.

Fortunately, there has not been a single report of cancer being directly caused by Cardarine in humans yet, and there is a study [35] indicating that Metformin could inhibit PPARδ agonist induced tumor growth.

HEART ENLARGEMENT [35]

Cardarine has been shown to enlarge the heart in the same way that intense Cardio does. No signs of pathological cardiac hypertrophy were found so this side-effect is not necessarily dangerous.

MUSCLE FIBER TYPE SWITCHING [35] [A]

Cardarine may be capable of converting Type 2 muscle fibers into Type 1 muscle fibers.

Type 1 muscle fibers (slow-twitch) are conducive towards endurance based activities like long distance running, swimming and cycling.

Type 2 muscle fibers (fast-twitch) are conducive towards activities that require short bursts of energy like weightlifting and sprinting.

Endurance athletes naturally have a greater percentage of Type 1 muscle fibers, so it should not come as a surprise that PEDs like Cardarine which were created to be "cardio in a pill" can contribute to an increase in Type 1 muscle fibers.

On paper, this is great news if you are an endurance athlete, but bad news if you are a bodybuilder, but I believe that a bodybuilder will not experience this switch as long as he focuses his efforts on weightlifting rather than cardio & endurance.

Muscle flatness is also possible, though almost never reported when the user is bulking up and eating a lot of carbs. Cardarine

will burn through glucose faster, which can make you look significantly flatter when cutting on a low-carb diet.

BRAIN DAMAGE [35] [A]

Even though Cardarine has been shown to increase blood circulation to the brain in preclinical trials, there is evidence to suggest that it can elevate IL-6, a cytokine that is linked to brain cell damage.

LIVER FIBROSIS [35] [A]

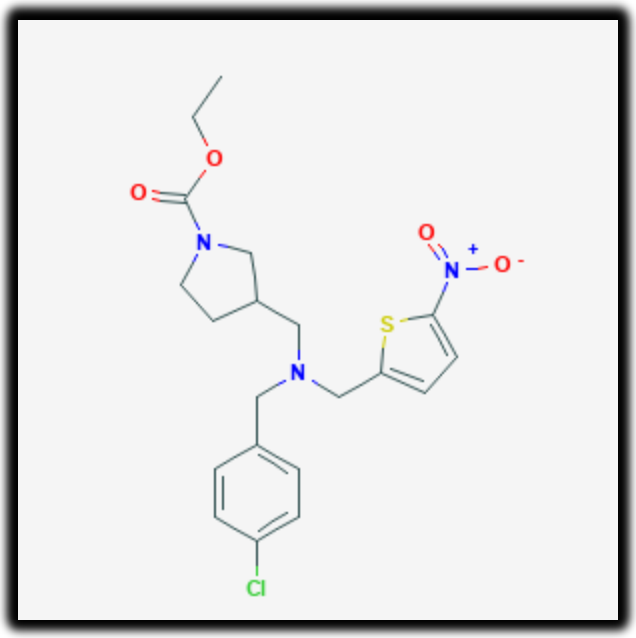
This is a very controversial side-effect. On one hand, there is evidence to suggest that it can decrease the likelihood of rats developing non-alcoholic fatty liver disease, but on the other hand, it was found to cause liver fibrosis in rats with liver disease. Liver fibrosis occurs when the liver regenerates and an excess number of proteins is used. Liver fibrosis can decrease blood flow through the liver and impair its function and ability to regenerate itself.

This is a scary side-effect when you consider that Cardarine could cause liver fibrosis when stacked with a hepatotoxic SARM, but in my experience and after receiving a lot of anecdotal reports on Cardarine + SARM cycles, I have yet to see cases of liver fibrosis in liver scans.

Someone who uses SARMs and Cardarine responsibly and with an adequate liver protecting supplement on-cycle should not be too worried about this side-effect.

STENABOLIC (SR-9009)

ETHYL 3-[[(4-CHLOROPHENYL)METHYL-[(5-NITROTHIOPHEN-2-YL)METHYL]AMINO]METHYL]PYRROLIDINE-1-CARBOXYLATE



HALF-LIFE: Unclear

DOSE: 20 mg/day

CYCLE LENGTH: 8 weeks

PCT: Never

DOSING FREQ.: 4x a day

TIMING: Morning, Noon, Late Afternoon, Night

Stenabolic (also known as SR-9009) is a Rev-ErbA agonist that was developed by prof. Thomas Burris of the Scripps Research Institute.

It has pretty much the same benefits as Cardarine, but without the cancer risk that comes with it. Despite this, Cardarine is way more popular. Why? Because Stenabolic is not orally bioavailable and its half-life is short so one would have to inject it or take it sublingually every 4 hours in order to achieve stable blood levels.

A regular liquid solution or the powder inside SR-9009 capsules can be administered sublingually by leaving it under the tongue for 2-3 minutes. It can also be used topically, which works well.

BENEFITS

ENDURANCE [36] [A]

Like Cardarine, SR-9009 will increase endurance and stamina significantly. Cardarine is superior unless SR is injected.

When Stenabolic is used sublingually, you can expect a modest improvement in endurance, but it is far from ideal. People who have used the injectable form claim it is amazing, and some of them even report that together with Cardarine (oral), they can almost double their endurance.

CHOLESTEROL, INFLAMMATION & CANCER [37] [A]

Stenabolic will also reduce LDL cholesterol, Triglycerides, and increase HDL cholesterol. Anti-inflammatory actions are to be expected. Studies have also shown that it can be useful against certain types of cancer.

FAT LOSS [38] [A]

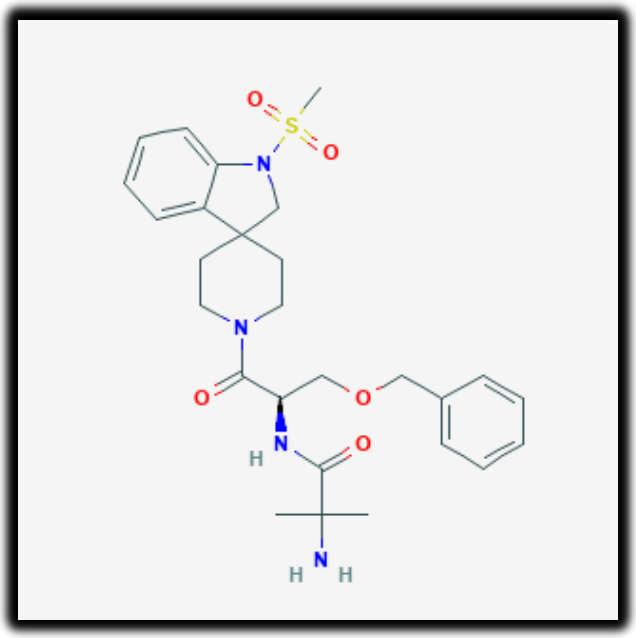
Stenabolic will help with the mobilization and burning of fat. Stacking it with Cardarine makes for a perfect fat burning and performance enhancing combination without the thermogenic effects of most traditional fat-burners.

SIDE-EFFECTS

No side-effects other than insomnia (if administered in the evening) have been reported or found in preclinical studies. However, anything could happen since there is little information on it.

IBUTAMOREN (MK-677)

2-AMINO-2-METHYL-N-[(2R)-1-(1-METHYLSULFONYLSPIRO[2H-INDOLE-3,4'-PIPERIDINE]-1'-YL)-1-OXO-3-PHENYLMETHOXYPROPAN-2-YL]PROPANAMIDE



HALF-LIFE: Unclear

DOSE: 10-20 mg/day

CYCLE LENGTH: 8 to 16 weeks

PCT: Never

DOSING FREQ.: Once a day

TIMING: Morning

Ibutamoren (also known as MK-677, Nutrobal and Oratrope) is an oral Growth Hormone Secretagogue and an agonist of the Ghrelin Receptor. It was developed by Reverse Pharmacology for the treatment of growth hormone deficiency, muscle wasting conditions and osteoporosis.

This is an extremely popular compound used as a replacement for regular HGH injections. It is not as powerful as elevated doses of HGH, but it is way cheaper, rarely faked and orally bioavailable. This is a versatile PED that can be added to pretty much any cycle, whether you are cutting, bulking, maintaining or just trying to recover from an injury.

NOTE: Even though the half-life in humans is unknown, its effects have been shown to last for 24 after administration.

BENEFITS

MUSCLE [39] [A]

Even though Ibutamoren will increase IGF-1, one of the most anabolic hormones in our bodies, it will not accrue a significant amount of muscle mass on its own.

It will, however, provide a new muscle growth pathway that together with SARMs or steroids will maximize your results. Furthermore, Ibutamoren has been proven to be anti-catabolic, so it will help preserve muscle on a caloric deficit.

STRENGTH AND PERFORMANCE [40] [A]

Ibutamoren is known for increasing water retention, which often helps improve strength. The positive effect of high HGH on the joints and tendons will also help you become stronger and perform better while minimizing the chances of an injury.

FAT LOSS [41] [A]

Growth Hormone is known for boosting fat loss through lipolysis (mobilization of fat for energy), so you can expect the same to occur with MK-677. Unfortunately, it will make you hungry, so you may struggle to remain on a calorie deficit.

If you intend to use MK-677 for fat loss, I would suggest taking it before bed at least 3 hours after your last meal, followed by 3-4 hours of fasting after you wake up the next day.

This is because lipolysis can only occur when insulin levels are low, and this is best achieved through fasting. Doing cardio in the morning, during the 3-4 hours of fasting, will significantly increase fat loss.

BONES AND JOINTS [42] [A]

Having elevated levels of Growth Hormone will not only strengthen bones, but it will also heal, repair, and strengthen your joints, ligaments and tendons.

Note that in some instances, the water retention caused by Ibutamoren can be too heavy and it can have a negative impact on the joints, causing them to feel stiff.

RECOVERY & HEALING [43] [A]

Since HGH speeds up tissue healing and regeneration, one can expect faster muscle recovery when taking Ibutamoren. This means you will feel less sore and you will be ready to work out again sooner.

Many people claim that Ibutamoren has fixed chronic pain in some areas of their body, and it will definitely boost the speed at which your body heals itself (whether it be skin damage, skin burns, bone fractures, injured joints, etc…).

Ibutamoren can also strengthen the immune system and it has been shown to have antiviral properties which could make it a useful treatment for certain viruses.

INCREASED HUNGER [44] [A]

This can either be seen as a positive benefit or a detrimental side-effect. If you are bulking up, hunger is always welcome (especially if you are the kind of guy who is never hungry and struggles to eat enough), but if you are on a cut it can make things harder.

Some users report no extra hunger when they take Ibutamoren before bed, so if you want to benefit from the increased hunger, take Ibutamoren first thing in the morning.

BETTER SLEEP [45] [A]

The sleep improvement caused by Ibutamoren is one of its best properties. You can expect REM sleep to be deeper and last for longer, and you will almost certainly wake up more refreshed and energized the next morning.

According to some people, 6 hours of sleep on Ibutamoren are as effective, refreshing and energizing as 8 hours of normal sleep.

This benefit will also contribute to muscle growth, fat loss and injury recovery.

NUTRIENT PARTITIONING [46] [A]

Ibutamoren will make nutrient partitioning more efficient, meaning that carbs, protein and fat will be used more efficiently. If you are bulking up you will gain less fat than you otherwise would (as long as you control your insulin sensitivity, more on that in the *On-Cycle Therapy* chapter).

COSMETIC BENEFITS [47] [A]

The added water retention will make you look bigger (gains of up to 10lbs of water are possible, but they rapidly fade away after the cycle).

If you are very lean, water retention can fill you out and make your muscles pop but expect to lose some definition if you are on a calorie surplus. On a calorie deficit, the water retention is almost non-existent.

Ibutamoren will also improve the quality and appearance of your hair and skin.

ADDITIONAL TIP: It may be possible to enhance the effects of MK-677 by using Huperzine A. According to some "broscientists" it can inhibit somatostatin, a hormone that limits GH production, allowing MK-677 to increase GH levels even more. There is no scientific data to prove that Huperzine A can actually do this, but there are anecdotal reports from people who experienced a noticeable increase in the intensity of Ibutamoren's effects after introducing Huperzine A at 250 micrograms a day.

SIDE-EFFECTS

INSULIN SENSITIVITY/BLOOD SUGAR LEVELS[48] [A]

Ibutamoren will increase your blood sugar levels and cause insulin resistance. This side-effect can cause symptoms like lethargy, extreme hunger and tingling/numbness of extremities. It may even lead to Type 2 Diabetes in those who abuse it for months on end and those who have a family history (a genetic propensity) of this condition.

Fortunately, high blood sugar and insulin resistance can be easily mitigated (More information in the chapter about *On-Cycle Therapy*).

WATER RETENTION [49] [A]

Even though the water retention can be useful when it comes to looking bigger, getting stronger and lubricating your joints, it is an undesired effect for some people.

Firstly, if you are on a calorie surplus you can expect your muscles to lose definition, almost as if you gained 10lbs of fat in a few days. Your face may also look puffy and bloated.

Secondly, if the water retention becomes too heavy (due to taking a very high dose or eating insane amounts of carbs), it can have a negative impact on the joints.

And finally, excessive water retention can cause high blood pressure.

LETHARGY [A]

Some users report feeling lethargic throughout the day if they take more than 15mg/day. This can either be due to insulin resistance or due to the compound itself.

CANCER [50] [A]

Ibutamoren will NOT cause cancer. However, if a user already has cancer (whether he is aware of it or not), Ibutamoren will speed up the growth and development of his cancer cells.

PROLACTIN & OTHER SIDE-EFFECTS [51] [A]

Ibutamoren can increase your prolactin levels. Prolactin is the hormone responsible for milk production in females, and it can cause gynecomastia, erectile dysfunction and low sex drive in males. (More information on how to control Prolactin in the *On-Cycle Therapy* chapter).

The increased hunger be a negative side-effect for those who are trying to lose weight. Fortunately, it can be mitigated by taking the compound before bed instead of taking it in the morning (this does not always work).

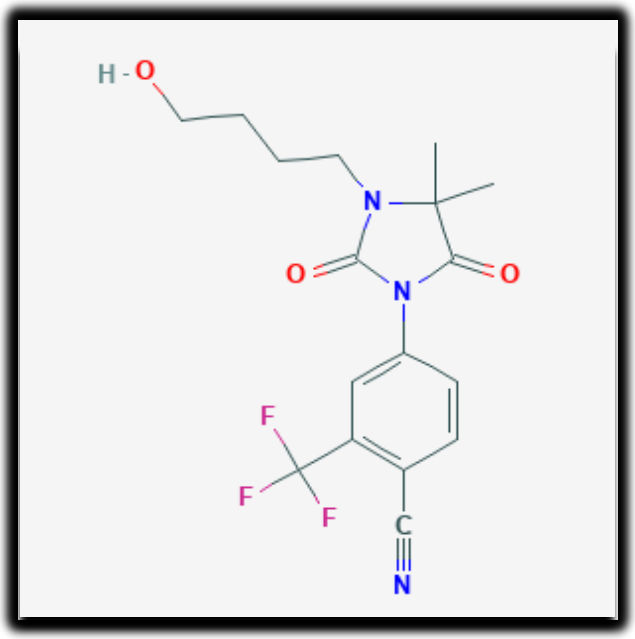
Another possible side-effect of Ibutamoren is growth of hands, feet, nose and other parts of the body, but one would have to take it repeatedly for years on end for that to happen.

Acne is also possible but rarely reported. High Prolactin and IGF-1 can cause it.

Finally, a rarely discussed but possible side-effect of Ibutamoren is mild testosterone suppression. After all, this compound mimics ghrelin, a hormone that can decrease testosterone levels. This side-effect was seen in a clinical trial as well, but in my personal experience and judging from all the bloodwork I have reviewed, the testosterone suppression caused by Ibutamoren is very mild and rarely causes any symptoms.

RU-58841

4-[3-(4-HYDROXYBUTYL)-4,4-DIMETHYL-2,5-DIOXOIMIDAZOLIDIN-1-YL]-2-(TRIFLUOROMETHYL)BENZONITRILE



HALF-LIFE: 1 hour

DOSE: 30-100 mg/day

PCT: Never

DOSING FREQ.: Once a day

TIMING: Night (After shower)

RU-58841 (also known as PSK-3841 and HMR-3841) is a topical, non-steroidal anti-androgen that was developed for the treatment of androgenic alopecia, acne and excessive hair growth.

This compound is a very promising solution to hair loss because unlike drugs such as Finasteride and Dutasteride, RU does not block the reduction of Testosterone into DHT. It simply blocks the androgen receptors in the scalp to prevent DHT from attaching to it and causing hair loss.

Unfortunately, there is little research on this compound so we can only rely on anecdotal information to know what the real benefits and side-effects are.

BENEFITS

HAIR LOSS PREVENTION [52] [A]

Bodybuilders who use Steroids can benefit from a compound like this because it can potentially avoid the acceleration of hair loss that having elevated levels of DHT would cause.

Even though hair loss from SARMs is extremely rare, it is caused by an increase in Free Testosterone (and therefore an increase in DHT), so RU58841 should be effective at preventing hair loss during a SARM cycle.

Unlike SARMs and other research chemicals, RU58841 is topical and it should be applied to the scalp once daily after taking a shower. Some people take RU58841 powder and dissolve it in 5% Minoxidil. This combination can both prevent hair loss and regrow lost hair.

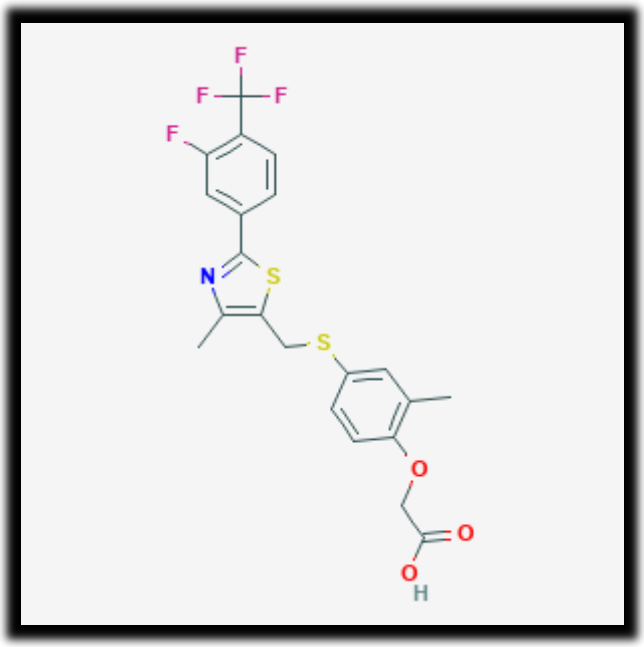
SIDE-EFFECTS

On paper, RU58841 should not have side-effects like lethargy, lack of libido or erectile dysfunction because it does not lower DHT systematically, but some users have reported having those problems anyway. Some users also report heart palpitations, difficulty to ejaculate and headaches. [A]

These side-effects seem to be dose-dependent, so the higher the dose, the more dangerous RU becomes.

GW0742

2-[4-[[2-[3-FLUORO-4-(TRIFLUOROMETHYL)PHENYL]-4-METHYL-1,3-THIAZOL-5-YL]METHYLSULFANYL]-2-METHYLPHENOXY]ACETIC ACID



HALF-LIFE: Unclear

DOSE: 10-20 mg/day

CYCLE LENGTH: 8 weeks

PCT: Never

DOSING FREQ.: 2-3x a day

TIMING: Morning, Noon, Night

GW0742 (also known as GW-610742) is a PPARδ receptor agonist, developed by the same scientists who created Cardarine. Unfortunately, we do not have a lot of scientific data on this drug, and the number of anecdotal reports that can be found on the internet is very small.

It has grown in popularity as of late, with many people thinking that it can provide the same benefits as Cardarine without the cancer risk.

Unfortunately, we do not have enough data to confirm or deny whether it can cause cancer, but I would personally assume that it can.

BENEFITS

ENDURANCE [53] [A]

You can expect a boost in endurance and stamina, similar to what Cardarine provides. Based on my personal experience and the cycle reports of other users, I can conclude that there is not a big difference between the two, but your experience may vary.

CARDIOVASCULAR HEALTH [54]

GW0742 will treat dyslipidemia in the same way that Cardarine does. Expect your HDL (good) cholesterol to go up and your LDL (bad) cholesterol to go down.

It has also been shown to treat right heart hypertrophy caused by pulmonary hypertension and hyperglycemia.

FAT LOSS [55] [A]

GW-0742 activates the genes that are involved in burning fat and prioritises the use of stored fat as a source of energy for the body.

It works through the exact same pathway as Cardarine, but anecdotally some users report that they experienced more fat loss on GW-0742. Take this with a grain of salt.

ANTI-DIABETIC PROPERTIES [56]

Studies have shown that GW0742 can improve glucose homeostasis in diabetic rats. In other words, it will lower elevated blood sugar levels which will prevent insulin resistance.

This makes GW0742 a potentially useful drug against diabetes and an excellent addition to an Ibutamoren cycle.

SIDE-EFFECTS

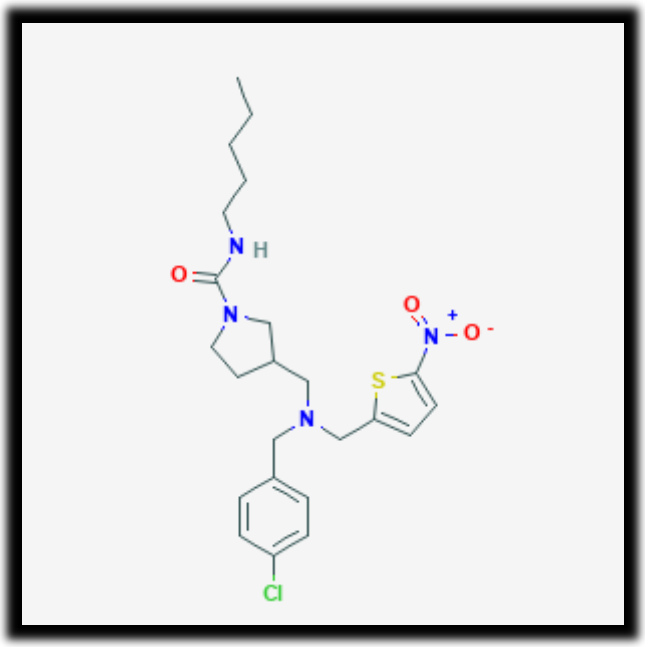
Whether it can cause cancer (in rats) like its bigger brother Cardarine is unknown, but if the cancer was due to Cardarine's PPARδ agonistic properties, then we can conclude that GW0742 also has the potential to cause cancer.

Like Cardarine, it can cause heart enlargement and switch type 2 fibers to type 1, in the same way that intense cardio does. [56]

Despite the lack of data on GW-0742 compared to Cardarine, I personally opt for assuming that it will have the same side-effects.

SR-9011

3-[[[4-CHLOROPHENYL]METHYL-[[5-NITROTHIOPHEN-2-YL]METHYL]AMINO]METHYL]-N-PENTYLPYRROLIDINE-1-CARBOXAMIDE



HALF-LIFE: Unclear

DOSE: 20mg/day

CYCLE LENGTH: 8 weeks

PCT: Never

DOSING FREQ.: 4x a day

TIMING: Morning, Noon, Late Afternoon, Night

SR-9011 is a Rev-Erb agonist, developed by prof. Thomas Burris, the creator of SR-9009. This drug is to Stenabolic what GW0742 is to Cardarine. The demand for this compound has increased in the last year, and some companies are starting to offer it.

Unfortunately, there is a very limited amount of both scientific and anecdotal information, but we know for a fact that it has the same general effects as SR-9009.

Like with Stenabolic, this drug is not orally bio-available so it should be taken sublingually, applied topically or injected for optimal results.

BENEFITS

ENDURANCE [57] [A]

SR-9011 will boost endurance to a significant extent when administered properly. This has been confirmed by both scientific papers and anecdotal reports.

CHOLESTEROL AND INFLAMMATION [58] [A]

SR-9011 will treat dyslipidemia by increasing HDL (good) cholesterol and lowering LDL (bad) cholesterol. It will also fight inflammation.

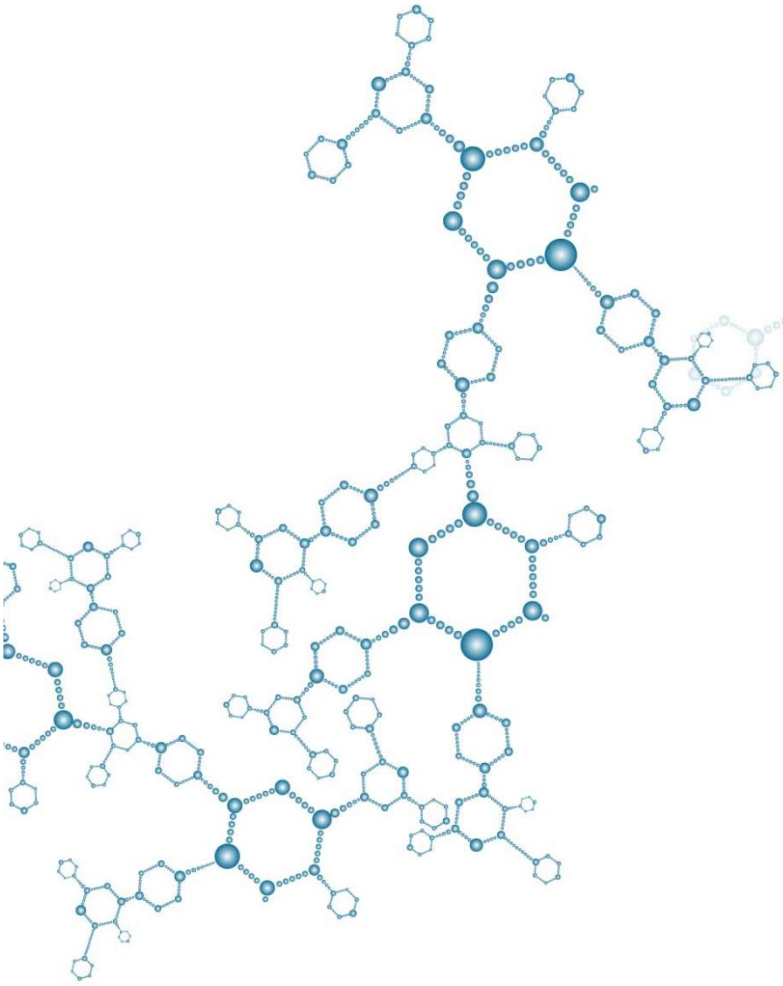
FAT LOSS [59] [A]

Due to its mechanism of action being almost identical to that of SR-9009, SR-9011 will also increase fat mobilization and fat burning so you can expect decent results in that department.

SIDE-EFFECTS

No side-effects have been reported, but wakefulness was noted in animal trials, so it could potentially make sleeping harder if taken a few hours before bed.

GETTING BLOODWORK DONE



Can you successfully cycle SARMs without getting bloodwork done? Yes. Is that a good idea? Not really. If you never get bloodwork done, you will not be able to monitor your health after a cycle and compare it to your natural baseline. If you are serious about PED use and you consider yourself a responsible adult, you simply need to get bloodwork done.

Before your very first cycle, get bloodwork done to find out what your baseline values are. Then, you can get bloodwork done again right after the cycle ends to see the negative impact it had on your health, and again before the following cycle. Some users also choose to get bloodwork halfway through the cycle, but that is not essential.

I understand that getting bloodwork done is expensive in most countries so only get bloodwork done before every cycle if you are on a tight budget. This approach will tell you whether you recovered properly from the previous cycle, and it will let you know if you can start a new cycle or not.

When asking your doctor or a private lab for a test, make sure the following panels are included:

- Hormonal Panel: Testosterone, Free Testosterone, SHBG, LH, FSH, Estradiol, etc…

- Lipid Panel: Total Cholesterol, LDL Cholesterol, HDL Cholesterol, Triglycerides, etc…

- Comprehensive Metabolic Panel: AST, ALT, Glucose, BUN, Creatinine, etc...

- CBC with or without Differential: Hematocrit, Hemoglobin, White Blood Cell count, Platelet count, etc...

Note: If your results are in different units, use Google to convert them to the units used here.

1. HORMONAL PANEL

Testosterone: This hormone needs no introduction. The primary sex hormone in men, promotes optimal sexual development, muscle mass, bone strength, well-being, mental health, the growth of body hair, etc…

IDEAL RANGE: 650-1100 ng/dl

Free Testosterone: The amount of available circulating Testosterone, the rest is bound to SHBG. This is the Testosterone that your body can actually use.

IDEAL RANGE: 10-20 ng/dl

SHBG: Sex-Hormone Binding Globulin binds to androgens like Testosterone, so the lower it is, the more Free Testosterone you will have.

IDEAL RANGE: 15-30 nmol/L

LH & FSH: Luteinizing Hormone and Follicle-Stimulating Hormone stimulate Testosterone production and spermatogenesis, respectively. The higher the better.

IDEAL RANGE: 5-10 mIU/ml for both

Estradiol: The main sex hormone in females, but very important for optimal sexual function, well-being, neuroprotection and bone strength in men.

IDEAL RANGE: 20-30 pg/ml

2. LIPID PANEL

Total Cholesterol: Cholesterol is a sterol and the precursor to steroid hormones, Vitamin D and bile acid. It has tons of functions within the body and it is an essential molecule but high Cholesterol is linked to cardiovascular disease.

IDEAL RANGE: 125-200 mg/dl

HDL Cholesterol: Good Cholesterol, prevents atherosclerosis within the walls of arteries. Important for the prevention of cardiovascular disease.

IDEAL RANGE: Over 40 mg/dl

LDL Cholesterol: Bad Cholesterol, unlike HDL it causes atherosclerosis. The higher it is, the greater the risk of developing cardiovascular disease.

IDEAL RANGE: Below 100 mg/dl

Triglycerides: Triglycerides are an ester derived from glycerol and fatty acids, the higher your Triglyceride levels, the greater the chance of developing cardiovascular disease.

IDEAL RANGE: Below 150 mg/dl

3. COMPREHENSIVE METABOLIC PANEL

AST & ALT: These two enzymes reflect liver (hepatic) health. Drinking alcohol, taking oral anabolics and even intense training can cause an increase in both AST and ALT.

IDEAL RANGE: AST below 40 u/l and ALT below 56 u/l

Glucose: Blood sugar levels indicate the concentration of glucose in the blood. The higher they are, the more insulin resistant you become, affecting your health in many negative ways and putting you at risk of developing Type 2 Diabetes.

IDEAL RANGE: 80-90 mg/dl

BUN: Blood Urea Nitrogen is a marker that reflects the health of the Kidneys. Having too much BUN indicates a lack of proper renal function.

IDEAL RANGE: 5-20 mg/dl

Creatinine: Creatinine is a breakdown product of creatine and is secreted by the body at a constant rate depending on the amount of muscle mass it holds. Like BUN, it is a marker that reflects kidney health.

IDEAL RANGE: 0.9-1.3 mg/dl

4. COMPLETE BLOOD COUNT

Red Blood Cell Count: Marker that measures the amount of circulating red blood cells, which are responsible for oxygen transportation.

IDEAL RANGE: 4.35M-5.65M per µl

Hematocrit: This marker measures the volume percentage of red blood cells in the blood. Too much of it will make your blood thick and give it an undesirable degree of viscosity.

IDEAL RANGE: 40-50%

Hemoglobin: Protein that is a part of RBCs and is responsible for the transportation of oxygen from the lungs to the rest of the body.

IDEAL RANGE: 13-18 g/dl

White Blood Cell Count: Marker that measures the number of circulating white blood cells.

IDEAL RANGE: 4000-10000 per µl

Platelet Count: Marker that measures the amount of circulating platelets, the cell fragments that help form blood clots.

IDEAL RANGE: 150000-450000 per µl

5. OTHER VALUES

Growth Hormone: Another hormone that needs no introduction, it is involved in pretty much every step of human development, healing, fat loss, cognitive health, sleep, muscle growth and recovery, etc…

IDEAL RANGE: 8-10 ng/ml (expect a lot more if you are on MK-677)

Insulin: Anabolic hormone that regulates the metabolism of all macronutrients by shuttling glucose into the liver, fat and muscle cells.

IDEAL RANGE: Below 25 mIU/L when fasted, up to 250 mIU/L after eating carbs.

Prolactin: Protein that enables mammals to produce milk. High prolactin can cause sexual dysfunction and gynecomastia in men. Can increase due to MK-677.

IDEAL RANGE: 5-10 ng/ml

IGF-1: Anabolic hormone that is closely linked to both GH and insulin. Promotes growth, muscle mass, bone health, cognitive health, etc…

IDEAL RANGE: 300-400 ng/ml (expect a lot more if you are on MK-677)

ON-CYCLE THERAPY

In this chapter we will be looking at how to mitigate or even completely avoid most of the side-effects that SARMs and other research chemicals can cause.

CONTROLLING CHOLESTEROL

One of the biggest problems with SARMs is their negative impact on our lipid panel. Having low HDL and elevated LDL is linked to cardiovascular disease, so keeping our cholesterol in check during the cycle should be a priority.

Unfortunately, most people will not be able to maintain both their HDL and LDL within the healthy range during a cycle regardless of what they take and what they do to control it, but keeping it as close as possible to those ranges is better than nothing and will facilitate the restoration of these levels after the cycle.

What can you do to mitigate the impact of SARMs on your lipid panel?

- You should keep your diet as clean as possible. Avoid processed foods and unhealthy fats as those can exacerbate the dyslipidemia caused by SARMs.

- You should do cardio whether you are bulking up or cutting.

What can you take to keep your cholesterol levels as healthy as possible?

- Firstly, you should take Omega 3 fatty acids. Whether it be in the form of fish oil, or preferably, in the form of Krill

oil. Take up to 6 capsules a day (the dose per capsule varies slightly for each brand, but that is not a problem) if you go with Fish Oil, or up to 3 capsules a day if you pick Krill Oil, which is absorbed better.

- Secondly, you could take Citrus Bergamot at 1000mg/day, split into two 500mg servings (morning and night).

- Other supplements worth considering are CoQ10 (up to 200mg/day) and Niacin (Nicotinic Acid) at 500mg/day. Be careful with Niacin though: It can cause insulin resistance (so do not use it if you are on MK-677) and it will cause skin flushing from time to time (not unhealthy but you do not want to be seen in public like that).

- Finally, the most powerful thing you can take for cholesterol is Cardarine (or GW0742) at 10 to 20mg per day. SR-9009 and SR-9011 can also help if they are administered properly.

TESTOSTERONE BASE

One of the most frequently asked questions from newcomers to this space is:

"How will testosterone suppression affect the way I feel?"

Even though you can run SARMs like Ostarine, Andarine and ACP-105 (possibly Ligandrol and Testolone too) without a testosterone base, if you want to take the more powerful SARMs you will definitely need one.

Let's take a look at the different forms of testosterone base you can use, from the least convenient to the most convenient:

1. TESTOSTERONE INJECTIONS

The least convenient yet most effective form of testosterone base is injecting actual testosterone during the cycle. Obviously, if you are already on TRT, you do not need to worry about testosterone suppression at all, so you can skip this part of the chapter as well as the next chapter.

The problem with testosterone is that you have to inject it and most SARM users choose them over steroids precisely because they do not want to pin themselves. Creams also exist but they are not as effective, and they come with more risks like rubbing them onto other people.

The typical dose of injectable Testosterone for a test base ranges between 100 and 150mg a week, but some people go all the way up to 250mg. Keep in mind that SARMs suppress SHBG and increase Free Testosterone, so the more

exogenous Testosterone you are using, the more Free Testosterone you will have and the more likely you will be to have high estrogen and high DHT symptoms like moodiness, water retention, gynecomastia and hair loss.

If you choose to inject testosterone and you are not on TRT or blasting & cruising, **you will DEFINITELY need a PCT.**

2. ORAL ESTROGEN

We need a test base not because we lack testosterone (which SARMs partly replace), but because we lack Estradiol (Estrogen). Testosterone converts into Estrogen, but SARMs do not. Therefore, we can technically add exogenous estrogen to fix that deficiency during a cycle.

You can either take oral estradiol or birth control pills. I would not recommend the latter because they also contain a progestin which can further suppress your Testosterone levels.

In fact, I would not recommend any form of oral estrogen because you would essentially be on the same protocol as male-to-female transsexuals and adjusting the dose to avoid feminization would be difficult. Not for newbies.

If you use birth control pills, **you will DEFINITELY need a PCT.**

3. HCG

Bodybuilders often use Human Chorionic Gonadotropin as part of their PCT protocol, to boost fertility or simply to keep their testicles from shrinking on cycle or on TRT.

However, some users have successfully used HCG as a test base for SARM cycles. If I were to use HCG as a Test Base I would inject 500iu every 3 days, always with an AI like Anastrozole, Arimistane or Exemestane in hand to prevent excess estrogen conversion if necessary.

This protocol will require a mild PCT with a SERM (more info on SERMs in the next chapter) because HCG will suppress your LH levels.

4. DIANABOL

Using an oral steroid like DBol is also an option because it converts into estrogen. The problem with this form of Test Base is that it is extremely suppressive, very liver toxic and can easily cause estrogenic side-effects. 10mg of DBol per day would be enough.

5. 4-ANDRO

Another oral alternative to testosterone injections is the pro-hormone 4-Andro. This substance converts into testosterone in the liver and is as close as we can get to an effective form of oral testosterone.

To use it as a test base, take 100 to 150mg of 4-Andro a day. If you take more than that, 4-andro will have anabolic effects of its own, but estrogenic and androgenic side-effects will be more likely to happen if you are not using an Aromatase Inhibitor.

To learn more about 4-andro and other Pro-Hormones, you can read my ebook on the subject by clicking here.

This form of testosterone base also **requires a PCT.**

6. DHEA

DHEA converts into a bunch of different hormones within the body, one of them being Estrogen. The logic behind taking DHEA as a base is that it would provide the same benefits as taking regular oral estrogen, but in a safer way.

Unfortunately, oral DHEA is not very bioavailable so finding a good dose could be difficult. Topical DHEA is a better option, but taking the oral form sublingually also works. Start at 25mg a day and work your way up to 100mg if necessary to feel good.

This method **should not always require a PCT** (Only if you are taking S-23, LGD-3303, YK-11 or Ligandrol and Testolone at high doses)

7. SARM + SERM

As you may or may not know, SERMs (Selective Estrogen Receptor Modulators) are used after AAS cycles and strong SARM cycles with the goal of kickstarting natural testosterone production and boosting the speed at which it recovers back to baseline.

In the last couple of years, a new protocol named “SARM+SERM cycle” has grown in popularity. As the name

indicates, SARM+SERM cycles are cycles where the SERM is used on-cycle to keep natural Testosterone levels elevated, eliminating symptoms of suppression and the need for a PCT (with some exceptions).

This is a very experimental protocol that goes against traditional enhanced bodybuilding knowledge, but hundreds upon hundreds of users are successfully running these kinds of cycles and reporting great results. However, this is not a risk-free approach as SERMs can have side-effects of their own (more on that in the next chapter).

The main concern with this protocol is that it can limit how much muscle the user can gain during a cycle because SERMs suppress IGF-1, which is one of the most anabolic hormones in the body. Fortunately, this can be fixed by running MK-677 alongside the SERM, but even those who opt not to use it rarely report a halt in their progress after adding a SERM to the cycle.

As a general rule of thumb, you should start taking the SERM as the first symptoms of suppression set in (lethargy, weaker erections, low sex drive…):

- For SARMs like Ostarine, Andarine, ACP-105 and AC-262,535, this usually occurs around week 6-7.

- For SARMs like LGD-4033 and RAD-140, this usually occurs around week 4-5.

- For SARMs like YK-11, LGD-3303 and S-23, this usually occurs around week 2-3.

Since SERMs have undesired side-effects, you should aim to keep SERM usage to 6 weeks, 8 weeks at most.

- If you are using a **mildly suppressing** SARM and add the SERM around week 6 or 7, take it for the last 2 to 3 weeks of the cycle. This will be more than enough to keep Testosterone elevated after the cycle in 99% of users.

- If you are using a **moderately suppressive** SARM and add the SERM around week 5, use it for the last 4 weeks of the cycle. This will also be more than enough to keep Testosterone elevated after the cycle in 99% of users.

- If you are using a **highly suppressive SARM** and add the SERM around week 3, use it for the last 6 weeks of the cycle + 2 weeks post-cycle.

  NOTE: Regardless of what you are stacking YK-11 with, consider it a highly suppressive cycle.

With the exception of the highly suppressive SARM cycles, you can almost certainly stop using the SERM the day you stop using the SARM without worrying about your testosterone levels declining again, especially if the SERM you use is Enclomiphene. If you use something else, you will probably be fine without a PCT too, but if you want to err on the side of caution or feel slight symptoms of suppression after the cycle, do not hesitate to take the SERM for another 2 weeks post-cycle.

In my opinion, the only SERM strong enough to be used as a testosterone base with a highly suppressive SARM cycle is Enclomiphene. If you are unable to get your hands on it and

want to run highly suppressive SARMs, opt for a different test base, but know that you will have to PCT.

These are the main SERMs that one could use as part of a SARM + SERM protocol (all these SERMs are covered in-depth in the PCT chapter):

- **Tamoxifen (Nolvadex):** A strong SERM. It will keep your testosterone levels in the upper half of the reference range if you are cycling mildly or moderately suppressive SARMs. Loss of libido and erectile dysfunction are possible but rarely reported, in general it is a very well tolerated drug. **No need to take more than 20mg/day.**

- **Clomiphene (Clomid):** Very strong SERM. It will keep your testosterone levels in the upper limit of the healthy range if you are cycling mildly or moderately suppressive SARMs. It may cause moodiness and it may affect your emotional state, which is why it is the most hated SERM. **25mg/day should be more than enough.**

- **Toremifene (Fareston):** Moderately strong SERM. It will keep your testosterone levels healthy enough to feel well during the cycle if you are running a mildly or moderately suppressive SARM. Most people tolerate it very well and feel no negative side-effects. **The dose should be around 30mg/day.**

- **Enclomiphene (Androxal):** This is by far the most powerful SERM. The previously mentioned SERM "Clomid" consists of two isomers: Zuclomiphene and Enclomiphene. The former is responsible for the

moodiness, whereas the latter is responsible for the boost in testosterone. By taking just Enclomiphene, you will get the benefits of Clomiphene without the emotional side-effects. It could potentially increase your testosterone levels beyond the upper limit of the reference range if you are running mildly or moderately suppressive SARMs, and well within the reference range if you are running a highly suppressive SARM. The main side-effect that people report is an increase in aggression, but other than that people tend to feel amazing on it. **Take 12.5mg/day.**

- **Raloxifene (Evista):** This SERM is very weak when it comes to boosting testosterone levels, but extremely effective at fighting gynecomastia. It could be used as a testosterone base for mildly suppressive SARMs, but I would not use it with anything stronger than that. Rarely causes any noticeable side-effects. **The ideal dose would be 30mg/day.**

Now, classic bodybuilding chemistry knowledge tells us that the SERM should always be tapered down (as in taking half the normal dose of the SERM during the last week) to prevent an estrogen rebound effect when coming off the drug.

This theory makes sense, but in my experience and based on what I have heard from other users, it does not matter at all because the effects of the SERMs do not stop right after you stop taking it. Instead, it takes at least a week for the effects to fade away, so there is no chance for them to cause a sudden rebound in estrogen levels.

Regardless of these theories, you CAN get away with cutting the Tamoxifen, Toremifene or Raloxifene dose by half during the last week of use. This has been done for a long time and we know for a fact that it does not hinder results.

The only SERMs you should definitely taper off of are:

- **Enclomiphene,** because of its very short half-life in comparison to the other SERMs.

- **Clomiphene,** because even though it has a 5-day half-life, the Enclomiphene in Clomiphene still has a very short half-life and the rest of the half-life is attributed to Zuclomiphene, which is estrogenic.

Are SARM+SERM cycles worth it?

I personally believe they are worth a shot if you have access to legitimate Enclomiphene and you know what you are doing. Always keep in mind that, even though most people are having successful experiences, this is a novel and experimental protocol that is not risk-free.

MITIGATING OTHER SIDE-EFFECTS

The side-effects I listed under the profiles of every SARM are the most common and predictable ones, but unfortunately there are way more potential side-effects that you should be aware of. In this section, you will learn what these side-effects are and how to manage them.

1. HAIR SHEDDING/ HAIR LOSS

Even though this is a very rare side-effect, losing hair due to SARMs is a possibility, especially in men who are prone to losing hair.

Hair loss is almost only reported with RAD-140, YK-11 and S-23. I personally theorize that these SARMs are not selective enough and can attach to androgen receptors in the scalp, causing hair loss in the same way that DHT would.

Another possibility is that hair loss simply occurs due to SARMs crashing SHBG, increasing Free Testosterone and in turn increasing DHT, which is the main hormone responsible for hair loss in men.

Luckily, there are some compounds you can take if you want to avoid or stop hair loss from occurring on-cycle.

The first one is Nizoral (Ketoconazole shampoo). Using this shampoo 2-3 times a week will keep dandruff at bay while acting as a mild topical anti-androgen in the scalp.

The second one is Finasteride, which is a 5-alpha-reductase inhibitor (meaning that it inhibits the reduction of Testosterone

into DHT). If my theory about SARMs acting directly on the scalp is right, Finasteride will be useless. Start taking 0.25mg a day and increase to 0.5mg if necessary. Some of the possible side-effects are low sex-drive, erectile dysfunction, lethargy and other symptoms similar to those of Testosterone suppression, but most men react fairly well to this drug.

The third and final compound is RU58841. Using this topical anti-androgen daily should enable you to almost completely eradicate the chances of hair loss occurring during a cycle. Learn more about it and how to use it in page 93 of this e-book.

2. LIVER TOXICITY

Most SARMs are likely to cause some degree of liver toxicity. Thankfully, the liver is one of the easiest organs to take care of and it can regenerate even after taking a lot of damage.

Liver damage can be mitigated by avoiding alcohol and non-essential liver toxic medications as well as by taking liver protection supplements like Milk Thistle (at 500-750 mg/day) or N-Acetyl Cysteine (NAC) (at 800-1200mg/day). Please note that Milk Thistle should not be taken alongside Tamoxifen or Raloxifene as it can interact negatively with those SERMs.

NAC helps the liver by increasing glutathione, one of the most powerful antioxidants in the liver. Injectable Glutathione is not easy to source, but it is the most effective compound for liver protection you can possibly use.

Liposomal Glutathione is an oral alternative that can also help, if you wish it instead of NAC take 500 to 1000mg a day.

Using TUDCA is very useful to completely heal the liver after a cycle (after PCT) but using it on-cycle could potentially cause the SARMs to be flushed out instead of being absorbed.

Some people argue that Milk Thistle can also cause this to a lesser extent, but it is not something I have personally observed. If you do not wish to take any chances, just opt for NAC.

3. GYNECOMASTIA (GYNO) & HIGH PROLACTIN

This is a rare but nasty side-effect that almost only affects those who already developed gyno in their teenage years, those who are very fat (the fatter you are, the more aromatase enzymes you have and the more Testosterone you will convert into Estrogen) and those who have naturally high estrogen.

If you have one of these risk factors, it is more than likely that you will have the other ones too.

The reason why SARMs can cause gynecomastia is very simple. They lower SHBG, which causes an increase in Free Testosterone, which then leads to a greater conversion of Testosterone into Estrogen. Having an unbalanced T-to-E ratio can cause gynecomastia as well as other feminizing side-effects.

One possible way to avoid gyno during a cycle is to take an AI (Aromatase Inhibitor). The problem with this solution is that it can crash your estrogen, which would exacerbate the symptoms of suppression if you are not using a Testosterone Base. If this is the option you want to opt for, take Arimistane at

25 mg/day as soon as symptoms appear, and stop using it a couple of days after symptoms disappear. Using an AI is generally better than using a SERM for treating gynecomastia and other high estrogen symptoms when you are on a test base.

The most practical solution for those who are not on a test base is using **Tamoxifen or Raloxifene** to completely block the development of breast tissue and shrink the little tissue that will have developed since the onset of gyno symptoms. Add Tamoxifen at 10mg/day **OR** Raloxifene at 30mg/day and keep taking it until the end of the cycle.

IMPORTANT: If you already have gynecomastia before starting a cycle, you should try to get rid of it before hopping on SARMs or any other anabolic. If you ignore this advice and start the cycle anyway, chances are your gyno will get worse.

To get rid of gynecomastia that you have had for months or even years, you will need **Raloxifene** and **Calcium D-Glucarate**. Take Raloxifene 60mg/day for 10 days, followed by 30mg/day for up to 3 months. Take the Calcium at 500mg/day for the same amount of time. If 3 months later your gynecomastia is still there, you will probably need surgery to get rid of it.

Prolactin-induced gyno due to MK-677 is also possible. I recommend using **Vitamin B6 (P5P form)** at 100mg before bed every single day of the cycle. Do this even if you think you are not prone to gyno, as this dose of P5P will not have any negative side-effects and will also have a good impact on overall health and sleep quality. If B6 does not work, try **Cabergoline** at 0.25mg every 3 days or **Pramipexole** at 0.125mg a day.

4. INSOMNIA

If you struggle to fall asleep during a cycle, you can take **Melatonin*** (2mg 30 minutes before bed), **L-Theanine** (200mg 30 minutes before bed) or **CBD Oil** (25 to 50mg 30 minutes before bed).

If you struggle to remain asleep, the supplements I just listed will help, but also consider taking **Magnesium** (300 to 500mg 30 minutes before bed), **Glycine** (1000mg 30 minutes before bed) and **Vitamin B6** (100mg 30 minutes before bed).

If you are in the mood for some experimentation, you can also use **DSIP** to induce the deepest sleep of your life. You can find more information about it in THE PEPTIDE HANDBOOK.

***NOTE:** It is possible for Melatonin to decrease your Testosterone levels, so avoid it if you are not using a Test Base with your cycle.

5. WATER RETENTION

The only compounds in this e-book that can cause this side-effect are Ibutamoren and Ligandrol (to a lesser extent). Even though water retention can be helpful, you may want to reduce it if it gets out of hand and starts working against you.

Firstly, **drink more water**. Secondly, **lower your carb and sodium intake** as much as possible (without compromising your diet and calorie intake) and finally, take **Potassium** at 200mg at least 5 times throughout the day.

You can also use natural diuretics like **Dandelion Root** (500mg/day), **Hawthorn Berry** (at around 500mg/day) or a more complex supplement with multiple ingredients like **Water Out by NOW Foods** (follow the usage instructions in the label) which contains some of the aforementioned supplements and more.

6. OTHER ANDROGENIC SIDE-EFFECTS

Hair loss is not the only androgenic side-effect that SARMs can cause. Increased aggression and acne breakouts are also possible, even though these two are not necessarily caused by androgenic reasons.

Aggression can be mitigated by taking L-Theanine (200mg up to 3 times a day), CBD (25mg 2-3 times a day) and Ashwagandha (250-500mg 2-3 times a day).

Acne is hard to treat and it is usually caused by the hormonal fluctuations that occur during the first few weeks of a cycle and/or after coming off and having a sudden increase in testosterone levels due to PCT.

Those who are prone to acne by default are more likely to suffer from breakouts during a cycle than those who are not. If you fall in this category, be careful when adding a test base or coming off a SERM. Slowly increase your test base dose during the first couple of weeks and taper off the dose of your SERM during the last week of PCT.

Having a good skincare routine and avoiding inflammatory foods is also essential. Only use hardcore medications like

Isotretinoin (Accutane) if your acne is severe and uncontrollable and always with the supervision of a doctor.

7. INSULIN SENSITIVITY

The low insulin sensitivity (aka insulin resistance) and high blood sugar levels caused by Ibutamoren can be mitigated by **taking 2 days off every week**. For example, you can take Ibutamoren from Monday to Friday, stay off it during the weekend and then resuming its use the next Monday. Alternatively, you can do 4 weeks on 1 week off.

If you do not want to take breaks, you can fight this side-effect by supplementing with **Berberine** (or a more advanced glucose disposal agent) at 300 to 500mg before a carbohydrate-heavy meal.

Alternatively, you can use **Ashwagandha** (250-500mg 2-3 times a day), **Chromium Picolinate** (200 micrograms 3 times a day) or **Cinnamon Bark** (600mg twice a day). Timing these supplements before carb-loaded meals is key for optimal results.

If you are using Ibutamoren on a calorie deficit for the purpose of losing fat, you can do intermittent fasting and/or decrease your carbohydrate intake to achieve better results while also keeping insulin resistance and high blood sugar in check.

8. KIDNEY DAMAGE

It is not rare for people to report random instances of kidney pain during a SARM cycle and elevated BUN & Creatinine levels in bloodwork after a cycle.

SARMs can cause slight kidney damage by either being excreted through urine (which may put a strain on the kidneys), or by causing dehydration. You can learn more about dealing with dehydration in the next page, but in a nutshell: Drink MORE water and keep your electrolytes in check!

In terms of supplements, NAC will help, and you should be using it anyway to take care of your liver. Other options include Niacin (which you can also use for Cholesterol) and a multi-ingredient supplement called Kidney Cleanse by NOW Foods. Take NAC and Niacin at the doses you would be taking them if you were using them for the liver and cholesterol, and take Kidney Cleanse as indicated in the label.

9. HIGH BLOOD PRESSURE

Having elevated blood pressure due to SARMs is not common, but it can happen. The main cause of high BP is water retention, but I believe that dry SARMs like RAD-140 and YK-11 can also cause it through other pathways.

Common symptoms of high BP include headaches, nosebleeds, lethargy, blood in the urine and dizziness.

If you are using wet compounds like Ligandrol and/or Ibutamoren and you are experiencing both water retention and high BP symptoms, go back to the section on water retention and follow the necessary steps to bring it down.

If you are not using wet compounds and you are experiencing high BP symptoms without having water retention, you can also use the supplements indicated for water retention and if those are not enough, add **L-Citrulline** at 5 to 10 grams a day or even **Tadalafil** (5mg every other day) or **Sildenafil** (25mg twice a day). **Avoid all stimulants** as well.

In my experience and based on what I have heard from other users, water retention from SARMs almost only happens when taking Ibutamoren with another SARM and stimulants, or when using an absurd dose of Ibutamoren on its own.

10. HEART PALPITATIONS

Heart palpitation are possible but rarely reported by SARM users. More often than not, they are caused by anxiety or high BP, so **treat those underlying causes** to fix the issue.

If the palpitations persist, discontinue the cycle.

11. DEHYDRATION

Experiencing dehydration during a SARM cycle is possible. The most common symptoms of dehydration are dizziness, fatigue, constant thirst, a dry mouth and brown urine.

Any SARM can cause this, but it is often reported by people who are researching with RAD-140, especially when it is suspended in **PG (Propylene Glycol)**, which can potentially exacerbate dehydration.

The solution is simple: **Drink more water and increase your electrolyte intake.**

12. HEADACHES

Headaches during a cycle are almost always a symptom of high BP but they can also happen for no reason whatsoever or as a result of taking a dose that your body will not tolerate.

Even though medications like **Ibuprofen** and **Aspirin** could mitigate the symptoms, they are only a temporary solution, and you should not take them daily during a cycle.

If **lowering blood pressure** does not get rid of the headaches try **lowering the dose** of whichever SARM(s) or research chemicals you are taking, especially Ibutamoren if it is part of your cycle. Discontinue the cycle if headaches persist after taking these steps.

13. DRY JOINTS

Dry joints are a common occurrence during RAD-140, S23 and YK-11 cycles. This unfortunate side-effect can limit your strength and make you prone to injuries.

The main supplement you can use to mitigate dry joints is **Fish Oil** at 6 capsules a day or **Krill Oil** at 3 capsules a day. You should already be taking one of these for cholesterol.

Other legal, over-the-counter options would be **MSM** (1000mg a day), **Undenatured Collagen** (40mg a day) or any supplement that combines these ingredients with others like **Glucosamine, Chondroitin, SAMe, etc…**

If you want to go down the research chemical route, you can use a GH secretagogue like **Ibutamoren** or a peptide such as

TB-500, BPC-157 or GHK-Cu. For more information about these compounds check out THE PEPTIDE HANDBOOK.

Be careful with Ibutamoren though, too much water retention will have a negative impact on the joints and it will exacerbate the problem.

Some people like to use Ostarine for this purpose as well, but I see no point in adding a suppressive compound that can worsen cardiovascular health for the sake of protecting the joints when safer and more effective alternatives exist.

14. BLOOD THICKNESS

It is possible for SARMs to make your blood thicker by increasing RBC (Red Blood Cell) count. If your bloodwork shows elevated RBC count and/or Hematocrit, you will have to donate blood to bring it down.

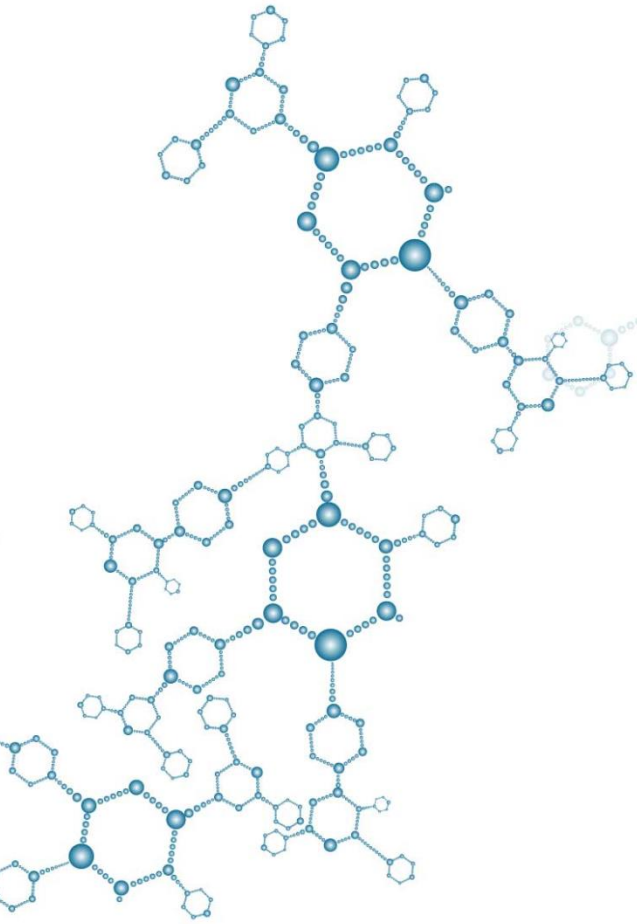
Blood thickness can cause headaches, high blood pressure, blood flow issues and dizziness in the short-term, as well as heart attack and other serious cardiovascular complications in the long run.

OCT CHEAT SHEET

	TEST BASE	LIVER SUPPORT	CHOLESTEROL CONTROL	KIDNEY SUPPORT	ANTI-WATER RETENTION	ANTI- HAIR LOSS (IF PRONE)	ANTI-GYNO (IF PRONE)	INSULIN SENSITIVITY CONTROL
MK-2866	OPT.	YES	YES	OPT.	NO	OPT.	YES	NO
LGD-4033	YES	YES	YES	YES	YES	OPT.	YES	NO
RAD-140	YES	YES	YES	YES	NO	YES	YES	NO
S-4	OPT.	YES	YES	OPT.	NO	OPT.	YES	NO
S-23	YES	YES	YES	YES	NO	YES	YES	NO
YK-11	YES	YES	YES	YES	NO	YES	YES	NO
LGD-3303	YES	YES	YES	YES	NO	YES	YES	NO
ACP-105	OPT.	YES	YES	OPT.	NO	OPT.	YES	NO
AC-262536	OPT.	YES	YES	OPT.	NO	OPT.	YES	NO
MK-677	NO	NO	NO	NO	YES	NO	YES	YES
GW-501516	NO	NO	NO	NO	NO	NO	NO	NO
SR-9009	NO	NO	NO	NO	NO	NO	NO	NO

NOTE: OPT. Stands for Optional. If something is optional, get the ancillaries required anyway. Better safe than sorry.

POST-CYCLE THERAPY



DO YOU NEED A PCT?

There is no universal answer to this question. The average 8-week Ostarine cycle at 20mg/day does not always require one, in fact most people just bounce back right away, and their testosterone is back to baseline within 4 weeks. The same thing can happen with Andarine or ACP-105, and less commonly with RAD-140 and LGD-4033.

However, this does not mean that you can go right ahead and start a cycle without having a PCT ready to go, there is always a chance that you will belong to the minority that does need it.

HIGHLY SUPPRESSIVE SARMS

The highly suppressive SARMs like S-23, LGD-3303 and YK-11 ALWAYS require a PCT. You will be using them with a testosterone base anyway, and unless you are using enclomiphene*, you will most certainly be fully shut down by the end of the cycle.

Bloodwork will probably show a two-digit Total Testosterone level (in ng/dl), meaning that whatever small amount of testosterone you are still producing will be mainly of adrenal origin and insufficient for your well-being.

*If you used Enclomiphene as a test base and you are feeling good by the end of the cycle and/or bloodwork shows that your Testosterone and LH are within the reference range, you can get away with a 2-week PCT. Otherwise, you will have do a full PCT 4-week PCT, but that is rare.

MILDLY & MODERATELY SUPPRESSIVE SARMS

The mildly and moderately suppressive SARMs require a bit more work when trying to determine whether a PCT is necessary or not. If you get bloodwork done and your Total Testosterone and LH are below the reference range you will need a PCT, regardless of how you feel.

If Total Testosterone and LH are within the reference range (even if they are close to the bottom), you can probably get away without doing a PCT. However, if you feel suppression symptoms despite having these levels in range, do a PCT anyway to get rid of these symptoms faster.

If you are unable to or refuse to get bloodwork done, you could probably get away without doing a PCT if you feel good, you have no sexual issues and no visible symptoms of Testosterone, but I would still urge you to do a PCT anyway for your peace of mind. Needless to say, you will definitely need a PCT if you feel suppressed after a cycle.

S-23, LGD-3303 and YK-11	Always do a proper PCT (unless you are on TRT). Testosterone base is mandatory. HCG can be used as part of the PCT protocol.
Other SARMs	You will need PCT if you are feeling very lethargic, sexually dysfunctional and/or your bloodwork shows low LH and FSH. Testosterone base is optional.

If you are stacking multiple SARMs, you MUST do a PCT.

THE SERMs

SERMs, also known as Selective Estrogen Receptor Modulators, are a class of drugs that exert antagonistic (and sometimes agonistic) actions on the estrogen receptor. SERMs are primarily used for the treatment of estrogen-related diseases such as osteoporosis, infertility and breast cancer in women.

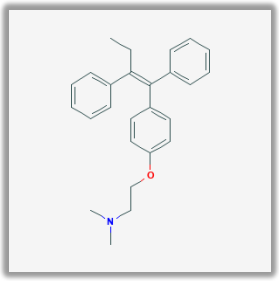
But why are SERMs used by bodybuilders? To put it simply, SERMs can stimulate endogenous Testosterone production in males by blocking the hypothalamic estrogen receptor. This action tricks the brain into thinking that estrogen levels are low, and since estrogen is primarily acquired through the aromatization of Testosterone, the hypothalamus secretes GnRH which stimulates the pituitary causing it to release LH and FSH which boost Testosterone levels and sperm production.

SERMs like Tamoxifen and Raloxifene are also used to prevent and/or treat gynecomastia, which is a possible side-effect of AAS and SARMs. They do this by blocking the estrogen receptor in the breast, which can prevent and even reverse the development of breast tissue.

In the following pages you will learn everything you need to know about each SERM when used in a bodybuilding / Post-Cycle Therapy context.

TAMOXIFEN (NOLVADEX)

2-[4-[(Z)-1,2-DIPHENYLBUT-1-ENYL]PHENOXY]-N,N-DIMETHYLETHANAMINE



HALF-LIFE: 5-7 days

DOSE: 5-20 mg/day (Morning)

PCT LENGTH: 4-6 weeks

BENEFITS

STIMULATES TESTOSTERONE PRODUCTION

As explained in this scientific paper, Tamoxifen can increase Testosterone levels by stimulating the release of LH and FSH. Off-label use of Tamoxifen by bodybuilders also confirms this phenomenon, with thousands upon thousands of men reporting good results and a complete reversal of their testosterone suppression after a PCT with Tamoxifen.

TREATS GYNECOMASTIA

As proven by this study, Tamoxifen is effective at preventing gynecomastia and reducing the size of already existing breast tissue. It has been used by thousands if not millions of bodybuilders to prevent gynecomastia and to reduce its size if it has already developed. You can find more information about

the use of Tamoxifen for gynecomastia in the *On-Cycle Therapy* chapter.

REDUCES CHOLESTEROL

As shown in this study, Tamoxifen can reduce total cholesterol and LDL cholesterol, but its effects on HDL are unclear. This benefit can help reverse the negative impact of the SARMs on your lipid panel.

It can increase Triglycerides though.

SIDE-EFFECTS

LOWER IGF-1

Tamoxifen can lower IGF-1, one of the most anabolic hormones in the human body. This can limit gains in muscle mass, but it can easily be avoided by using MK-677.

MOOD SWINGS AND SEXUAL DYSFUNCTION

Even though there is no scientific data to prove that Tamoxifen can cause mood swings and sexual dysfunction in men, a small percentage of users report these side-effects. Brain fog is commonly reported, and there is some scientific evidence indicating that Tamoxifen can cause it.

HOT FLASHES AND NIGHT SWEATS

Tamoxifen has been proven to cause hot flashes and night sweats in women with Breast Cancer. There is no scientific data about the occurrence of these side-effects in men who take Tamoxifen, but according to anecdotal reports it is entirely possible.

BLOOD CLOTS

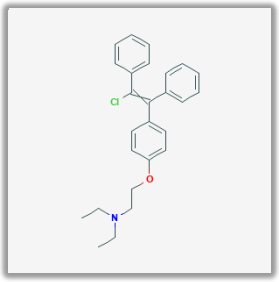
Tamoxifen was proven to increase the chances of developing deep vein thrombosis and pulmonary embolism in elderly women with breast cancer. If you have a family history of DPV or PE, stay away from Tamoxifen and only use it for short periods of times if absolutely necessary. Fortunately, this is a rare side-effect even in women with breast cancer who take Tamoxifen for years.

MILDLY LIVER TOXIC

Tamoxifen could potentially increase AST and ALT levels but having a significant degree of liver toxicity due to Tamoxifen is extremely unlikely. Running NAC during PCT is always advisable.

CLOMIPHENE (CLOMID)

2-[4-[2-CHLORO-1,2-DIPHENYLETHENYL]PHENOXY]-N,N-DIETHYLETHANAMINE



HALF-LIFE: 5-6 days

DOSE: 12.5-50 mg/day (Morning)

PCT LENGTH: 4-6 weeks

BENEFITS

STIMULATES TESTOSTERONE PRODUCTION

Clomiphene is extremely effective at boosting Total Testosterone and Free Testosterone levels. In fact, it is often prescribed as an alternative to testosterone injections in men with hypogonadism. Clomiphene is reportedly more effective than Tamoxifen at increasing Testosterone levels, and it is also more effective at improving fertility. It has been a staple of PCT protocols for decades.

MAY TREAT GYNECOMASTIA

Clomiphene may be useful at treating gynecomastia, but it is nowhere near as effective as Raloxifene or Tamoxifen at doing so.

SIDE-EFFECTS

LOWERS IGF-1

Clomiphene can lower IGF-1, one of the most anabolic hormones in the human body. This can limit gains in muscle mass, but it can easily be avoided by using MK-677.

MOOD SWINGS AND SEXUAL DYSFUNCTION

Clomiphene is infamous for causing terrible mood swings, anxiety and depression in a very significant percentage of users.

Despite providing a modest increase in sexual function in some users, it is also possible for Clomiphene to have a negative impact on sex drive and erectile function.

HOT FLASHES AND NIGHT SWEATS

Clomiphene can cause both hot flashes and night sweats in a small percentage of users.

MILDLY LIVER TOXIC

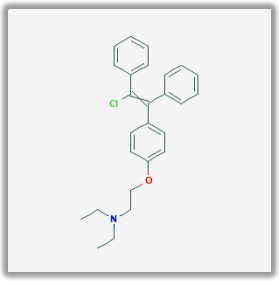
Clomiphene could potentially increase AST and ALT levels, but having a significant degree of liver toxicity due to Clomid is extremely unlikely. Running NAC during PCT is always advisable.

VISUAL DISTURBANCES

As show in this study, Clomiphene caused visual disturbances such as blurring, spots and flashes in a small percentage of subjects. According to this paper, these side-effects subsided after discontinuing Clomiphene.

TOREMIFENE (FARESTON)

2-[4-[(Z)-4-CHLORO-1,2-DIPHENYLBUT-1-ENYL]PHENOXY]-N,N-DIMETHYLETHANAMINE



HALF-LIFE: 5 days

DOSE: 15-60 mg/day (Morning)

PCT LENGTH: 4-6 weeks

BENEFITS

STIMULATES TESTOSTERONE PRODUCTION

As shown by this scientific paper, Toremifene can increase Testosterone levels by stimulating the release of LH and FSH. According to anecdotal information, Toremifene is not as strong as Tamoxifen or Clomiphene, but it is strong enough to restore Testosterone levels after a mildly or moderately suppressive SARM cycle.

MAY TREAT GYNECOMASTIA

Toremifene is useful at treating gynecomastia, but it isn't as effective as Tamoxifen and Raloxifene. It can probably help you reverse gynecomastia if you catch it early enough, but I'd recommend having Tamoxifen or Raloxifene in hand instead.

REDUCES CHOLESTEROL

As shown in this study, Toremifene can reduce total cholesterol and LDL cholesterol while increasing HDL cholesterol levels. This benefit can help reverse the negative impact of the SARMs on your lipid panel.

SIDE-EFFECTS

LOWERS IGF-1

Toremifene can lower IGF-1, one of the most anabolic hormones in the human body. This can limit gains in muscle mass, but it can easily be avoided by using MK-677.

MOOD SWINGS AND SEXUAL DYSFUNCTION

These side-effects are possible with any SERM, but they are rarely reported by users of Toremifene. This SERM is one of the least likely to cause such side-effects.

HOT FLASHES AND NIGHT SWEATS

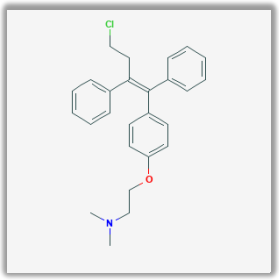
Toremifene can cause hot flashes (and consecuently night sweats) in a very small percentage of users. This is a side-effect that Toremifene users rarely report.

MILDLY LIVER TOXIC

Toremifene could potentially increase AST and ALT levels, but having a significant degree of liver toxicity due to Toremifene is extremely unlikely. This other study showed that Toremifene could protect the liver in alcoholic rats.

RALOXIFENE (EVISTA)

[6-HYDROXY-2-(4-HYDROXYPHENYL)-1-BENZOTHIOPHEN-3-YL]-[4-(2-PIPERIDIN-1-YLETHOXY)PHENYL]METHANONE



HALF-LIFE: 28-33 hours

DOSE: 15-60 mg/day (Morning)

PCT LENGTH: 6-12 weeks

BENEFITS

STIMULATES TESTOSTERONE PRODUCTION

Raloxifene is somewhat effective at boosting Testosterone, but it isn't strong enough to be used as a PCT. It could work as a PCT after a mildly/moderately suppressive cycle, but in my opinion you are better off saving for fighting gynecomastia.

TREATS GYNECOMASTIA

Raloxifene is, hands down, the most effective SERM when it comes to preventing and reversing gynecomastia. Unlike Tamoxifen which is primarily useful at treating gynecomastia in its early stages, Raloxifene can reverse and shrink pubertal gynecomastia that has existed for years. You can find more information on how to use Raloxifene for gyno in the chapter about *On-Cycle Therapy*.

REDUCES CHOLESTEROL

As shown in this study, Raloxifene can reduce total cholesterol and LDL cholesterol. This benefit can help reverse the negative impact of the SARMs on your lipid panel.

SIDE-EFFECTS

LOWERS IGF-1

Raloxifene can lower IGF-1, one of the most anabolic hormones in the human body. This can limit gains in muscle mass, but it can easily be avoided by using MK-677.

MOOD SWINGS AND SEXUAL DYSFUNCTION

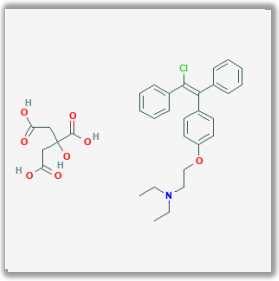
Raloxifene did NOT cause any significant changes in mood in this study. This side-effect is very rarely reported by men using it to reverse gynecomastia. There is no scientific or anecdotal data indicating that Raloxifene could have a negative impact on sexual function.

MILDLY LIVER TOXIC

Raloxifene could have an impact on the liver, but according to this scientific paper, the elevation of liver enzymes due to Raloxifene is uncommon.

ENCLOMIPHENE (ANDROXAL)

2-[4-[2-CHLORO-1,2-DIPHENYLETHENYL]PHENOXY]-N,N-DIETHYLETHANAMINE



HALF-LIFE: 10 hours

DOSE: 6.25-25 mg/day (Morning)

PCT LENGTH: 4-6 weeks

BENEFITS

STIMULATES TESTOSTERONE PRODUCTION

Enclomiphene is the only SERM that is being seriously studied as a treatment for hypogonadism. It is extremely effective at boosting Testosterone levels, and more and more anecdotal data is coming out proving that it is an excellent PCT option as well as an excellent test base for SARM cycles.

It is also extremely effective at increasing fertility and sperm count.

MAY TREAT GYNECOMASTIA

There is no scientific or anecdotal information about Enclomiphene and its effects on gynecomastia, but if Clomiphene has mild anti-gyno properties, it is safe to assume that Enclomiphene does too. After all, Clomiphene is 62%

Enclomiphene and 38% Zuclomiphene. The former is pro-androgenic and the latter is estrogenic, so we can easily conclude that Clomiphene's anti-gyno properties are derived from Enclomiphene.

Despite this, I have seen reports of guys whose nipples got puffy on Enclomiphene. This does not necessarily mean it causes gynecomastia, since many factors can modulate the volume and shape of the nipples.

MUSCLE GAINS

There is no scientific to prove that Enclomiphene can directly cause muscle growth, but it can increase Testosterone so much that I personally believe it can help with gaining muscle (despite the IGF-1 drop). The same could be said about other SERMs, but they are not as powerful as Enclomiphene so I would not expect the same results.

SIDE-EFFECTS

LOWERS IGF-1

As shown in this study, Enclomiphene will lower IGF-1 levels significantly. As mentioned before, this side´-effect does not seem to stop Enclomiphene from potentially causing muscle growth. MK-677 can potentially reverse that side-effect.

MOOD SWINGS AND SEXUAL DYSFUNCTION

There is no scientific information about the impact of Enclomiphene on mood and sexual performance, but according to anecdotal reports, it can cause something similar to what is commonly known as “Roid Rage”. Users report feeling more masculine, aggressive and impatient.

High libido is also commonly attributed to Enclomiphene use.

HOT FLASHES AND NIGHT SWEATS

There is no scientific or anecdotal information indicating that Enclomiphene could cause hot flashes and night sweats.

MILDLY LIVER TOXIC

There is no scientific or anecdotal information indicating that Enclomiphene could be hepatotoxic but seeing how most SERMs can have a small impact on liver enzymes, it is safe to assume that Enclomiphene is no exception, especially if we consider that it is significantly stronger than its counterparts.

HOW TO RUN A PCT

Now that you have the knowledge to know whether you need a PCT or not and you understand how each SERM works, you can plan your very own PCT protocol, which will vary depending on what SARM(s) you took. A PCT for a SARM cycle only requires a SERM (sometimes two), you do not need any other drugs or supplements to get the job done, although some can be added to improve the PCT experience.

All SERMs are taken orally. They are typically administered in the morning, but the timing does not really matter as long as you are consistent with it. Taking SERMs before bed may have a stronger effect because our natural testosterone production peaks while we sleep, but that is just a theory of mine.

MILDLY SUPPRESSIVE CYCLES

For a mildly suppressive SARM cycle **(Ostarine, ACP-105, Andarine, AC-262,536)**, any SERM can work as a PCT, even Raloxifene. I would personally pick between Tamoxifen, Toremifene or Enclomiphene for optimal results.

	WEEK 1	WEEK 2	WEEK 3	WEEK 4
TAMOX.	10mg/day	10mg/day	5mg/day	-
ENCLOM.	6.25mg/day	6.25mg/day	3.125mg/day	-
TOREM.	30mg/day	30mg/day	15mg/day	-
CLOMID.	25mg/day	25mg/day	12.5mg/day	-
RALOX.	30mg/day	30mg/day	15mg/day	-

As you can see, whichever SERM you pick can be used at a low dose for just 3 weeks. This will be more than enough to restore your testosterone levels after a mild cycle.

NOTE: Red = Works but I would not recommend it.

MODERATELY SUPPRESSIVE CYCLES

Moderately suppressive SARM cycles (LGD-4033 or RAD-140) only need one SERM, but you will have to take it at a higher dosage and for a longer period of time. Any SERM can work as PCT, even Raloxifene (though I would not recommend picking it over any of the others).

I would personally recommend using Tamoxifen or Enclomiphene. Toremifene could work but you will feel better on the other two. Clomiphene could also work but I see no reason to use it if you have access to Enclomiphene.

	WEEK 1	WEEK 2	WEEK 3	WEEK 4
TAMOX.	20mg/day	20mg/day	20mg/day	10mg/day
ENCLOM.	12.5mg/day	12.5mg/day	12.5mg/day	6.25mg/day
TOREM.	30mg/day	30mg/day	30mg/day	15mg/day
CLOMID.	50mg/day	50mg/day	50mg/day	25mg/day
RALOX.	60mg/day	60mg/day	60mg/day	30mg/day

HIGHLY SUPPRESSIVE CYCLES

Highly suppressive SARM cycles (YK-11, S-23, LGD-3303) tend to require two SERMs, but I have seen enough anecdotal evidence to believe that just using Enclomiphene for PCT can

also work IF it was also used on cycle to mitigate testosterone suppression.

These kinds of cycles have typically been followed by a Tamoxifen + Clomiphene PCT, but you can replace the Clomiphene with Enclomiphene.

Enclomiphene + Raloxifene or Enclomiphene + Toremifene combinations may work, but I have never seen these stacks being used after highly suppressive cycles, so I would not recommend them when better alternatives exist. Avoid any other combination.

	WEEK 1	WEEK 2	WEEK 3	WEEK 4
TAMOX. + ENCLOM.	20mg/day 12.5mg/day	20mg/day 12.5mg/day	20mg/day 12.5mg/day	10mg/day 6.25mg/day
TAMOX. + CLOMI.	20mg/day 50mg/day	20mg/day 50mg/day	20mg/day 50mg/day	10mg/day 25mg/day
RALOX. + ENCLOM.	60mg/day 12.5mg/day	60mg/day 12.5mg/day	60mg/day 12.5mg/day	30mg/day 6.25mg/day
TOREM. + ENCLOM.	30mg/day 12.5mg/day	30mg/day 12.5mg/day	30mg/day 12.5mg/day	15mg/day 6.25mg/day

OTHER SARM CYCLES

If you stack two or more SARMs with each other and/or you use a suppressive Test Base with your SARM(s), treat it as a highly suppressive cycle and follow the instructions I just laid out.

IS HCG NECESSARY?

Human Chorionic Gonadotropin (HCG) is a naturally occurring hormone that is commonly used during and after AAS cycles to maintain fertility and testicular activity. It works by acting as an analogue of LH (Luteinizing Hormone). After a cycle, using HCG facilitates the recovery of endogenous Testosterone levels.

Can it be used as part of a PCT protocol for a cycle of SARMs? Absolutely, but in most cases it is completely unnecessary.

It can be useful during and after a highly suppressive SARM cycle, but it is not a replacement for the SERMs. In fact, HCG requires the usage of a SERM after its discontinuation because it suppresses our natural LH, causing Testosterone to decrease when we come off. The SERMs increase endogenous LH, which restores the balance and allows Testosterone to keep increasing after HCG use.

If you want to use HCG after a highly suppressive SARM cycle, take 500 IU every 3 days for 2 weeks right after the cycle is over, followed by a SERM of your choice. The good thing about using HCG after a highly suppressive cycle is that it will allow you to get away with only using one SERM.

The same is true if you just run HCG as a test base.

PCT ADD-ONS

SERMs will take care of your hormones, but you will also need to restore all your other health markers during PCT.

Keep running whatever supplements you used on-cycle for at least 4 weeks after the cycle. N-Acetyl Cysteine for the liver, Krill Oil and Citrus Bergamot for cholesterol, Kidney Cleanse for the kidneys, etc. All at the same doses you used on-cycle.

If 4 weeks later your liver enzymes are not close to baseline, use TUDCA at 500mg/day. Considering Cardarine or GW-0742 at 20mg/day for 4 weeks if your lipid panel values have not been restored 4 weeks after the cycle.

MAINTAINING YOUR GAINS AFTER A CYCLE

In order to maintain your new hard-earned gains, you just have to follow a good PCT protocol, train as hard as you did during the cycle and be on a calorie surplus for at least 4 weeks after the cycle.

It is very rare for someone who does all these things right to lose a substantial percentage of his new gains, but do not be surprised if you lose some muscle fullness and a couple pounds of weight due to glycogen retention decreasing after coming off the cycle.

If you are paranoid about losing your gains and you want to completely ensure it does not happen, you can use Ibutamoren alongside your PCT at the same dose and with the same ancillaries you would be using on-cycle.

OTHER FORMS OF PCT

There is a good chance that you have already come across or even purchased an over-the-counter PCT product with a bunch of natural ingredients and/or Arimistane.

"PCT" products with herbs, minerals and vitamins should never be used as an alternative to a SERM, because their ingredients are not strong enough to take someone's Testosterone back to baseline. If you use these products alongside an actual SERM, you may experience better libido and energy.

Arimistane is an over-the-counter aromatase inhibitor commonly sold as a PCT in supplement stores. The logic behind using Arimistane as a PCT is that by crashing estrogen, it forces your body to kickstart testosterone production through the HPTA. There are many reports of people successfully using it as a PCT after very mild cycles, but in my opinion their testosterone levels would have bounced back up without it as well.

In practical terms, Arimistane will rarely be enough to restore testosterone levels and it could potentially exacerbate symptoms of suppression by decreasing your estrogen levels, so use a SERM instead.

SARMs FOR WOMEN

According to Instagram, only 6% of my followers are females. I rarely get DMs from women asking for advice, but what I have realized is that there is not much information regarding the safe usage of SARMs for females. For this reason, they often follow the same protocols as men end up having to deal with unnecessary side-effects.

If you know anything about female competitive bodybuilding, you will know that Anavar is one of the most commonly used AAS among female athletes. Unlike most AAS, Anavar poses a very low masculinization risk and it provides incredible gains even at very low doses.

With SARMs, women can achieve the benefits of Anavar with only a fraction of the side-effects and with absolutely no risk of masculinization (with some exceptions)

The best SARMs for women are Ostarine, Andarine, Testolone and Ligandrol. I have never seen a female run S-23, YK-11 or LGD-3303, but I assume that they would be way more likely to cause masculinization than the aforementioned SARMs.

Let's take a look at the 4 SARMs that females should stick to:

OSTARINE (MK-2866)

Ostarine is, in my opinion, the first SARM that a female bodybuilder should take if she wants to delve into the world of PEDs. At 5mg a day it will provide a nice boost in strength and performance, as well as a significant increase in muscle mass. At a calorie deficit, it will retain muscle mass while increasing vascularity and muscle hardness.

Doses of up to 10mg a day are usually well-tolerated, with users reporting a significant improvement in terms of benefits compared to 5mg, with only slightly more serious side-effects. Once a day dosing is fine.

ANDARINE (S-4)

Andarine is also popular among female athletes. It will provide the same benefits as Ostarine, but with a noticeably harder and more vascular look, making it ideal for contest prop or a photoshoot.

The ideal dose ranges from 10 to 25mg. As you probably already know, Andarine will cause a yellow tint that can impair vision in certain situations. Its half-life in humans is unknown, so dividing the dose between morning and night would be wise.

TESTOLONE (RAD-140)

RAD-140 is one of the most powerful SARMs a woman can take without suffering from masculinization. It is like Ostarine but much stronger, and that is reflected in both the positive results and the side-effects.

The ideal dose for females is 5mg/day. It is possible to successfully run it at 10mg/day without experiencing masculinization, but 5mg tends to be more than enough. It has a long half-life, so you can dose it once a day.

LIGANDROL (LGD-4033)

LGD-4033 is the SARM that will put the biggest amount of weight on a woman, partly due to water retention. You can expect a big increase in strength and performance as well.

The only thing that you should be careful with is the dose. LGD is extremely powerful even at low doses. Men can take 2.5mg a day and have insane results if their diet and training are right. Therefore, I believe that most women do not need to take more than that. Its half-life is long enough, so take it once a day.

SIDE-EFFECTS AND PCT

As a female, you do not have to worry about Testosterone suppression or any of the negative symptoms that come with it.

You will mainly face dyslipidemia (low HDL, high LDL) and liver toxicity, but dry joints, acne, aggression and even hair loss are possible with RAD-140 at a high dose.

Masculinization is extremely unlikely to occur as long as you stick to my guidelines, so you should not be concerned about getting a deeper voice, facial hair or clitoral enlargement.

The one side-effect that a lot of women report is a change in their menstrual cycles. In some cases menstruation happens sooner than it should, and in other cases it happens later than it should. This side-effect disappears after the cycle.

In terms of PCT, you do not need to follow any PCT protocol, but a lot of women like to taper off the dose during the last week of the cycle.

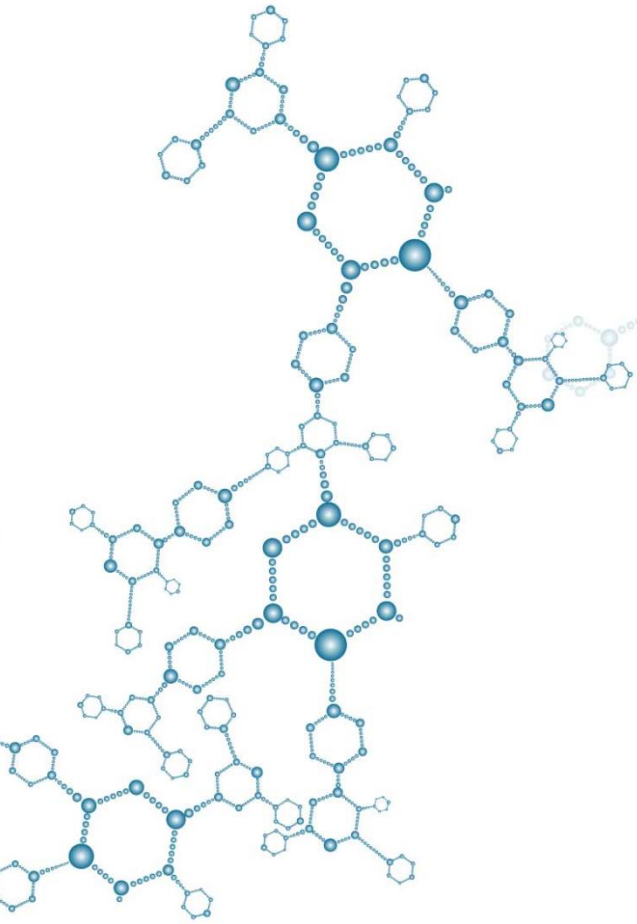
OTHER RESEARCH CHEMS

Research chemicals like MK-677, Cardarine, Stenabolic, GW0742 and SR-9011 can all be used by women. They do not affect sex hormones (except for prolactin with MK-677) so masculinizing side-effects will never happen.

The endurance-boosting RCs like Cardarine and Stenabolic can be dosed at the same doses that men take, so 10 to 20mg of Cardarine or GW-0742 and around 20mg of Stenabolic or SR-9011.

MK-677 can increase prolactin, which could cause irregular menstrual cycles, involuntary lactation and vaginal dryness. It could also accelerate body hair growth. It will also increase blood sugar levels and cause insulin resistance. For these two reasons, I believe that women should take between 5 and 10mg a day, always with Vitamin B6 (P5P) at 50mg before bed and 300mg of Berberine before every carb-loaded meal.

CYCLE EXAMPLES



BULKING CYCLES

BEGINNER BULKING CYCLE + PCT

WEEK	LIGANDROL	TAMOXIFEN
1	5mg/day	
2	5mg/day	
3	5mg/day	
4	5mg/day	
5	5mg/day	
6	5mg/day	
7	5mg/day	
8	5mg/day	
9		20mg/day
10		20mg/day
11		20mg/day
12		10mg/day

This is an extremely effective bulking cycle for beginners who want to experience a serious physical transformation while keeping side-effects to a minimum.

Some users will not require a PCT but having a SERM on hand is always a good idea. In this particular example I have included Tamoxifen, but any other SERM could have been used, check out the Post-Cycle Therapy section of this e-book to find the doses for the other SERMs.

In terms of health supplements, the must-have essentials would be Fish Oil (or Krill Oil) and NAC.

INTERMEDIATE BULKING CYCLE (SERM+SARM)

WEEK	TESTOLONE	IBUTAMOREN	ENCLOMIPHENE
1	10mg/day	10mg/day	
2	10mg/day	10mg/day	
3	10mg/day	10mg/day	
4	10mg/day	10mg/day	
5	15mg/day	10mg/day	12.5mg/day
6	15mg/day	10mg/day	12.5mg/day
7	15mg/day	10mg/day	12.5mg/day
8	15mg/day	10mg/day	6.25mg/day
9		10mg/day	
10		10mg/day	
11		10mg/day	
12		10mg/day	

This one features a slightly more powerful SARM and Ibutamoren, which will enhance the results of the cycle and boost hunger to allow for a greater calorie intake.

If the dose of 10mg/day of Testolone is well tolerated (meaning bad side-effects do not happen) during the first 4 weeks, it can be increased up to 15mg/day for the second half of the cycle, but due to the increase in the dose, adding a test base would be beneficial in order to manage the suppression of testosterone. In this particular example Enclomiphene is being used but any other SERM would work. The Ibutamoren can be taken for 4 more weeks after the cycle to help preserve gains.

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil), NAC, Berberine and Vitamin B6 (P5P).

ADVANCED BULKING CYCLE (SERM+SARM)

WEEK	LGD-3303	YK-11	ENCLOMIPHENE
1	10mg/day		
2	10mg/day		
3	10mg/day		12.5mg ED
4	10mg/day		12.5mg ED
5	15mg/day	5mg/day	12.5mg ED
6	15mg/day	5mg/day	12.5mg ED
7	15mg/day	5mg/day	12.5mg ED
8	15mg/day	5mg/day	12.5mg ED
9			12.5mg ED
10			6.25mg ED
11			

This is a very powerful cycle containing a steroidal SARM, YK-11, and the most powerful bulking SARM which is LGD-3303.

If the dose of 10mg/day of LGD-3303 is well tolerated (meaning bad side-effects do not happen) during the first 4 weeks, it can be increased up to 15mg/day for the second half of the cycle. YK-11 will not build as much muscle as LGD, but it will lower myostatin which will significantly enhance your results.

This cycle is extremely suppressive, so injecting testosterone and doing a PCT is recommended. Alternatively, you can take a SERM like Enclomiphene (as seen in the grid), or 4-Andro at 150mg/day followed by a 4-week PCT (with two SERMs).

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil) and NAC, but I would add MSM for additional joint protection.

CUTTING CYCLES

BEGINNER CUTTING CYCLE (PCT)

WEEK	OSTARINE	TAMOXIFEN
1	20mg/day	
2	20mg/day	
3	20mg/day	
4	20mg/day	
5	20mg/day	
6	20mg/day	
7	20mg/day	
8	20mg/day	
9		20mg/day
10		20mg/day
11		20mg/day
12		10mg/day

This is an extremely effective cutting cycle for beginners who want to lose fat and preserve muscle with the least amount of side-effects possible. The PCT is only necessary if your bloodwork shows that you need it and/or you feel symptoms of suppression. Alternatively, the SERM can also be taken from week 4 to 8 as a SARM+SERM combination.

A different SERM would also work, and you could even use DHEA from week 4 to 8 as a non-suppressive test base.

In terms of health supplements, the must-have essentials would be Fish Oil (or Krill Oil) and NAC.

INTERMEDIATE CUTTING CYCLE (SERM+SARM)

WEEK	TESTOLONE	TAMOXIFEN
1	10mg/day	
2	10mg/day	
3	10mg/day	
4	10mg/day	
5	10mg/day	20mg/day
6	10mg/day	20mg/day
7	10mg/day	20mg/day
8	10mg/day	10mg/day

This intermediate cutting cycle, like its bulking counterpart, uses Testolone. Ibutamoren has not been included because most people struggle with the hunger when cutting, but it could be used at 10mg/day to burn more fat and improve recovery.

As you can see, the dose stays at 10mg/day during the entire cycle. This dose is more than enough to yield incredible results during a cut. Expect to gain some strength and a pound or two of muscle during the first few weeks. As the cycle progresses and you drop the calorie intake, your strength will probably go back to baseline and you will simply maintain your gains.

Testolone suppression is not mild, and the calorie deficit will make it worse, so using a test base is definitely a good idea. In this particular example, Tamoxifen is being used, but any other SERM could work. Alternatively, you could use a different test base or not test base at all and use the SERM to PCT.

In terms of health supplements, the must-have essentials would be Fish Oil (or Krill Oil) and NAC.

ADVANCED CUTTING CYCLE (SERM+SARM)

WEEK	S-23	ENCLOMIPHENE
1	20mg/day	
2	20mg/day	
3	20mg/day	12.5mg ED
4	20mg/day	12.5mg ED
5	30mg/day	12.5mg ED
6	30mg/day	12.5mg ED
7	30mg/day	12.5mg ED
8	30mg/day	12.5mg ED
9		12.5mg ED
10		6.25mg ED

In this advanced cutting cycle, we have S-23 on its own taken at 20mg for the first 4 weeks and then at 30mg for the last 4 weeks.

S-23 is the ultimate cutting SARM because it provides a lean, dry and vascular look while severely depleting glycogen stores. This effect will cause muscle flatness, but it can potentially aid in losing fat. You may experience minor gains in muscle mass and strength despite the glycogen depletion and dry joints.

Testicular shutdown is to be expected with this cycle unless a powerful SERM like Enclomiphene is used. I would not recommend using any other SERM, but you could use a test base like 4-Andro followed by a two SERM PCT.

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil) and NAC, but I would add MSM for additional joint protection.

NOTE ABOUT CARDARINE IN CUTTING CYCLES

Cardarine can be added at 10 to 20mg/day during the entirety of any cutting cycle. Doing so will aid with fat loss and make cardio easier and more effective, whilst improving your cardiovascular health. Unfortunately, there are some risks involved with taking Cardarine that you should already be aware of, so be cautious if you choose to use it.

ALTERNATIVE CYCLES

ALT. BEGINNER CUTTING CYCLE (PCT)

WEEK	ANDARINE	TAMOXIFEN
1	30mg/day	
2	30mg/day	
3	30mg/day	
4	30mg/day	
5	50mg/day	
6	50mg/day	
7	50mg/day	
8	50mg/day	
9		20mg/day
10		20mg/day
11		20mg/day
12		10mg/day

This is an alternative beginner cutting cycle for those looking to get extra peeled and veiny. S-4 will provide a better look than Ostarine, but it comes with the visual side-effects. Not everyone will need a PCT, and the Tamoxifen could be used from week 5 to 8 as part of a SARM + SERM protocol.

Any other SERM could work, and you could even throw DHEA at 25-50mg/day from week 5 to 8 if you prefer to use Tamoxifen after the cycle rather than on-cycle.

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil) and NAC.

ALT. ADVANCED CUTTING CYCLE (SERM+SARM)

WEEK	YK-11	S-23	ENCLOMIPHENE
1		20mg/day	
2		20mg/day	
3		20mg/day	12.5mg ED
4		20mg/day	12.5mg ED
5	10mg/day	20mg/day	12.5mg ED
6	10mg/day	20mg/day	12.5mg ED
7	10mg/day	20mg/day	12.5mg ED
8	10mg/day	20mg/day	12.5mg ED
9			12.5mg ED
10			6.25mg ED

Similar to the previously covered advanced cutting cycle uses S-23 as the main anabolic and adds YK-11 during the second half of the cycle for decrease myostatin, an even drier look and slightly faster fat loss due to myostatin inhibition.

This kind of cycle is extremely suppressive and likely to cause a wide variety of side-effects, so it should only be considered by experienced users.

Testicular shutdown is to be expected with this cycle unless a powerful SERM like Enclomiphene is used. It should be taken from week 3 until 2 weeks post-cycle. 4-Andro could be used at 150mg/day, along with a 4-week PCT (with two SERMs), if you do not have access to Enclomiphene.

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil) and NAC, but I would add MSM for additional joint protection.

ALT. BEGINNER BULKING CYCLE (PCT)

WEEK	OSTARINE	IBUTAMOREN	TAMOXIFEN
1	20mg/day	15mg/day	
2	20mg/day	15mg/day	
3	20mg/day	15mg/day	
4	20mg/day	15mg/day	
5	20mg/day	15mg/day	
6	20mg/day	15mg/day	
7	20mg/day	15mg/day	
8	20mg/day	15mg/day	
9		15mg/day	20mg/day
10		15mg/day	20mg/day
11		15mg/day	20mg/day
12		15mg/day	10mg/day

This alternative bulking cycle uses a milder SARM, Ostarine, in conjunction with Ibutamoren for increased hunger, better recovery and higher IGF-1 levels. Not as effective as a solo LGD-4033 run, but less supressive.

Not everyone will need a PCT, and the Tamoxifen could be used from week 5 to 8 as part of a SARM + SERM protocol. Any other SERM could work, and you could even throw DHEA at 25-50mg/day from week 5 to 8 if you prefer to use Tamoxifen after the cycle rather than on-cycle.

This is optional, but Ibutamoren could be used from week 9 to 12 to keep cutting without losing muscle.

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil), NAC, Berberine and Vitamin B6 (P5P).

ALT. ADVANCED BULKING CYCLE (SERM+SARM)

WEEK	LGD-4033	YK-11	ENCLOMIPHENE
1	5mg/day		
2	5mg/day		
3	5mg/day		
4	5mg/day		
5	10mg/day	10mg/day	12.5mg ED
6	10mg/day	10mg/day	12.5mg ED
7	10mg/day	10mg/day	12.5mg ED
8	10mg/day	10mg/day	12.5mg ED
9			12.5mg ED
10			6.25mg ED
11			
12			

This is a very powerful cycle containing a steroidal SARM, YK-11, and one of the most powerful bulking SARMs, LGD-4033.

If the dose of 5mg/day of LGD-4033 is well tolerated during the first 4 weeks, it can be increased up to 10mg/day for the second half of the cycle. YK-11 will not build as much muscle as LGD, but it will allow LGD to build even more muscle by inhibiting myostatin.

This cycle is extremely suppressive, so injecting testosterone and doing a PCT is recommended. Alternatively, you can take a SERM like Enclomiphene during the cycle (as shown in the grid), or use 4-Andro at 150mg/day followed by a 4-week PCT.

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil), NAC, and MSM for additional joint protection.

HARDCORE CYCLES

"ALL ABOUT MASS" (PCT)

WEEK	LGD3303	YK-11	4-ANDRO	MK-677	ENCLOM TAMOX
1	15mg/day		100mg/day	15mg/day	
2	15mg/day		100mg/day	15mg/day	
3	15mg/day		100mg/day	15mg/day	
4	15mg/day		100mg/day	15mg/day	
5	20mg/day	10mg/day	100mg/day	15mg/day	
6	20mg/day	10mg/day	100mg/day	15mg/day	
7	20mg/day	10mg/day	100mg/day	15mg/day	
8	20mg/day	10mg/day	100mg/day	15mg/day	
9					12.5/20
10					12.5/20
11					12.5/20
12					6.25/10

This is one of the most hardcore bulking cycles you can put together by using only research chemicals and a PH.

The combination of MK-677 + LGD-3303 + YK-11 will provide unimaginable amounts of muscle mass and volume, and the 4-andro will serve as a testosterone base to make you feel good and keep your joints lubricated (thanks to conversion into E2).

PCT is mandatory, and you will need two SERMs.

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil), NAC, MSM, Berberine and Vitamin B6 (P5P).

"GOD OF AESTHETICS" (PCT)

WEEK	S-23	PROVIRON	4-ANDRO	ENCLOM TAMOX
1	20mg/day		100mg/day	
2	20mg/day		100mg/day	
3	20mg/day		100mg/day	
4	20mg/day		100mg/day	
5	30mg/day	50mg/day	100mg/day	
6	30mg/day	50mg/day	100mg/day	
7	30mg/day	50mg/day	100mg/day	
8	30mg/day	50mg/day	100mg/day	
9				12.5/20
10				12.5/20
11				12.5/20
12				6.25/10

If your goal is to get as shredded as possible plus looking extremely freakish, this is the cycle for you.

S-23 is the main compound of the stack, and it will provide small gains in lean muscle mass during a cut. By adding Proviron towards the end of the cycle, you can bring out your striations and veins even more while improving well-being and sex drive.

You could use any kind of test base (I would not use a SERM, I personally get ED when I mix Proviron and a SERM), but in this example 4-Andro is used followed by a two SERM PCT.

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil), NAC and MSM for additional joint protection.

ANTI-AGING CYCLES

"STRENGTH & MOBILITY" (PCT)

WEEK	OSTARINE	IBUTAMOREN	DHEA	TAMOX
1	10mg/day	10mg/day		
2	10mg/day	10mg/day		
3	10mg/day	10mg/day		
4	10mg/day	10mg/day		
5	10mg/day	10mg/day	50mg/day	
6	10mg/day	10mg/day	50mg/day	
7	10mg/day	10mg/day	50mg/day	
8	10mg/day	10mg/day	50mg/day	
9				20mg/day
10				20mg/day
11				20mg/day
12				10mg/day

This cycle is meant for men in their 40s, 50s and 60s who want to regain some of the strength, mobility and youthfulness that they had in their 20s and 30s. The goal with this cycle is not to gain massive amounts of muscle mass, but to improve performance, joint & bone strength, as well as quality of life without totally compromising health. DHEA can be used as a Test Base, followed by a SERM PCT (Any SERM would work).

NOTE: If you are 50+, get an MRI scan to rule out tumors before using Ibutamoren. In terms of health supplements, the essentials would be Fish Oil (or Krill Oil), NAC, Berberine and Vitamin B6 (P5P).

"NON-SUPPRESSIVE STACK" (NO PCT)

WEEK	CARDARINE	IBUTAMOREN
1	20mg/day	10mg/day
2	20mg/day	10mg/day
3	20mg/day	10mg/day
4	20mg/day	10mg/day
5	20mg/day	10mg/day
6	20mg/day	10mg/day
7	20mg/day	10mg/day
8	20mg/day	10mg/day
9		
10		
11		
12		

This cycle is barely anabolic and should not be chosen by someone whose main goal is to build muscle mass and gain strength. Instead, this cycle is ideal for men who want to maximize their athletic performance, improve their cardiovascular health, look younger, sleep better and just improve quality of life in general. For that reason, it is especially useful for older men who want to become as fit and healthy as possible.

NOTE: If you are 50+, get an MRI scan to rule out tumors before using Ibutamoren.

In terms of health supplements, the essentials would be Berberine and Vitamin B6 (P5P).

CYCLES FOR WOMEN

CUTTING CYCLE

WEEK	OSTARINE	CARDARINE
1	5mg/day	10mg/day
2	5mg/day	10mg/day
3	5mg/day	10mg/day
4	5mg/day	10mg/day
5	10mg/day	10mg/day
6	10mg/day	10mg/day
7	10mg/day	10mg/day
8	5mg/day	10mg/day
9		
10		
11		
12		

This is a simple and relatively safe cutting cycle for women in which Ostarine is used in conjunction with Cardarine for the retention of muscle mass and strength while losing fat.

Since women do not need a PCT and just need to taper off the dose during the last week, simply go back to taking 5mg/day of Ostarine during the last week in order to have an easier time when coming off. This cycle will mainly cause dyslipidemia and possibly mild liver toxicity as well.

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil) and NAC.

BULKING CYCLE

WEEK	LGD-4033	IBUTAMOREN
1	1.25mg/day	5mg/day
2	1.25mg/day	5mg/day
3	1.25mg/day	5mg/day
4	1.25mg/day	5mg/day
5	2.5mg/day	10mg/day
6	2.5mg/day	10mg/day
7	2.5mg/day	10mg/day
8	1.25mg/day	10mg/day
9		
10		
11		
12		

This cycle is for women who want to put on a serious amount of mass. Muscle gains will be outstanding and strength will shoot through the roof, but you can expect water retention to increase substantially.

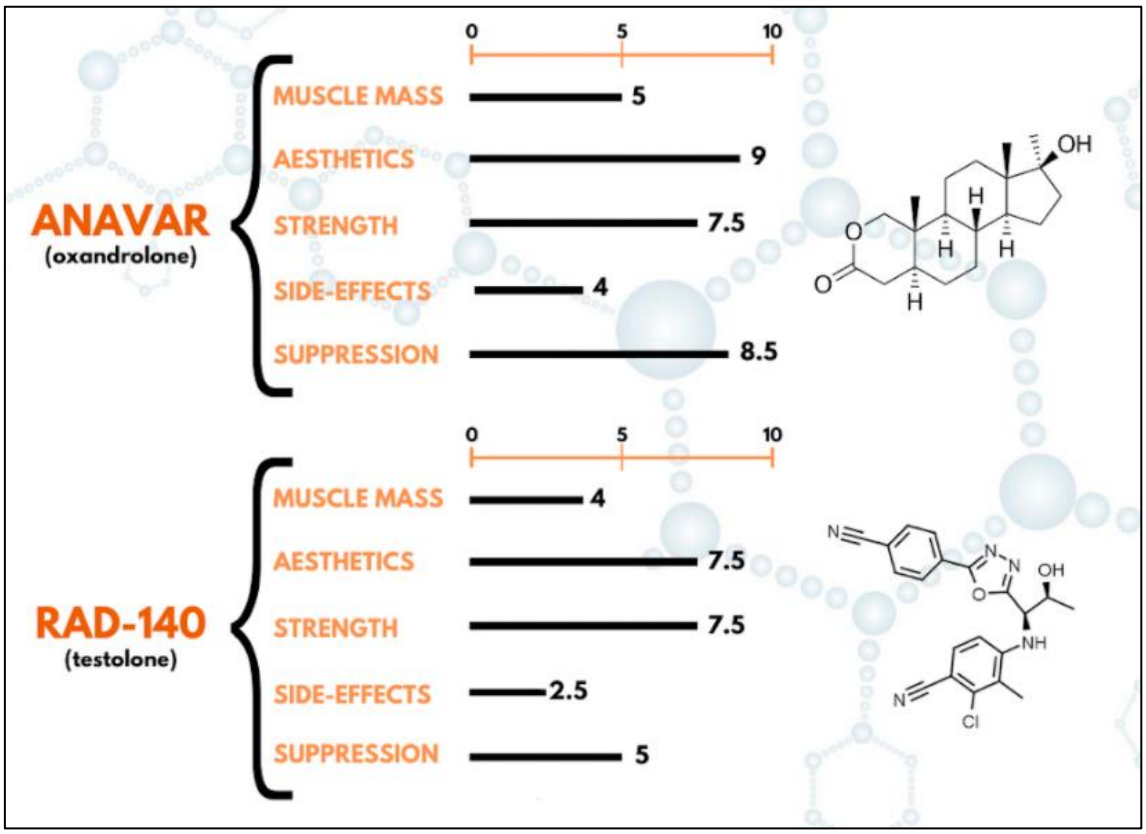
In terms of side-effects, you will experience dyslipidemia and mild liver toxicity from Ligandrol plus high blood sugar and a prolactin increase due to MK-677. Thankfully, these two side-effects can be easily prevented with Berberine and P5P.

No PCT necessary, simply taper off the Ligandrol during the last week of the cycle

In terms of health supplements, the essentials would be Fish Oil (or Krill Oil), NAC, Berberine and Vitamin B6 (P5P).

COMPARING SARMs WITH SIMILAR ORAL STEROIDS

ANAVAR VS RAD-140

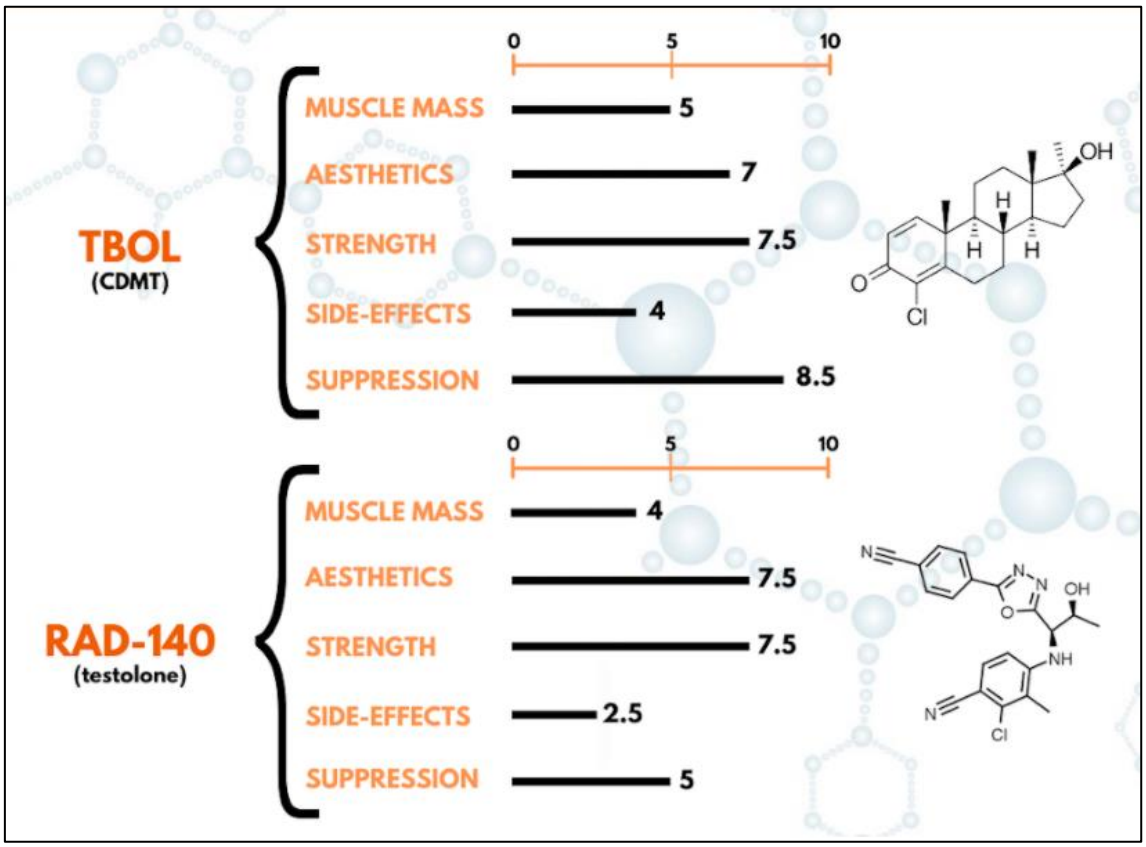


As you can see in this comparison, both compounds are quite similar in terms of benefits. Anavar is clearly superior when it comes to building muscle and improving aesthetics, but RAD-140 may be just as good when it comes to increasing strength. As always, keep in mind that everyone's experience will be different and the results that one gets depend on many factors.

RAD-140 is less suppressive than Anavar, but way more hepatotoxic. In terms of dyslipidemia, both will suppress HDL and increase LDL to a similar extent.

RAD-140 is the better choice for beginners.

TURINABOL VS RAD-140



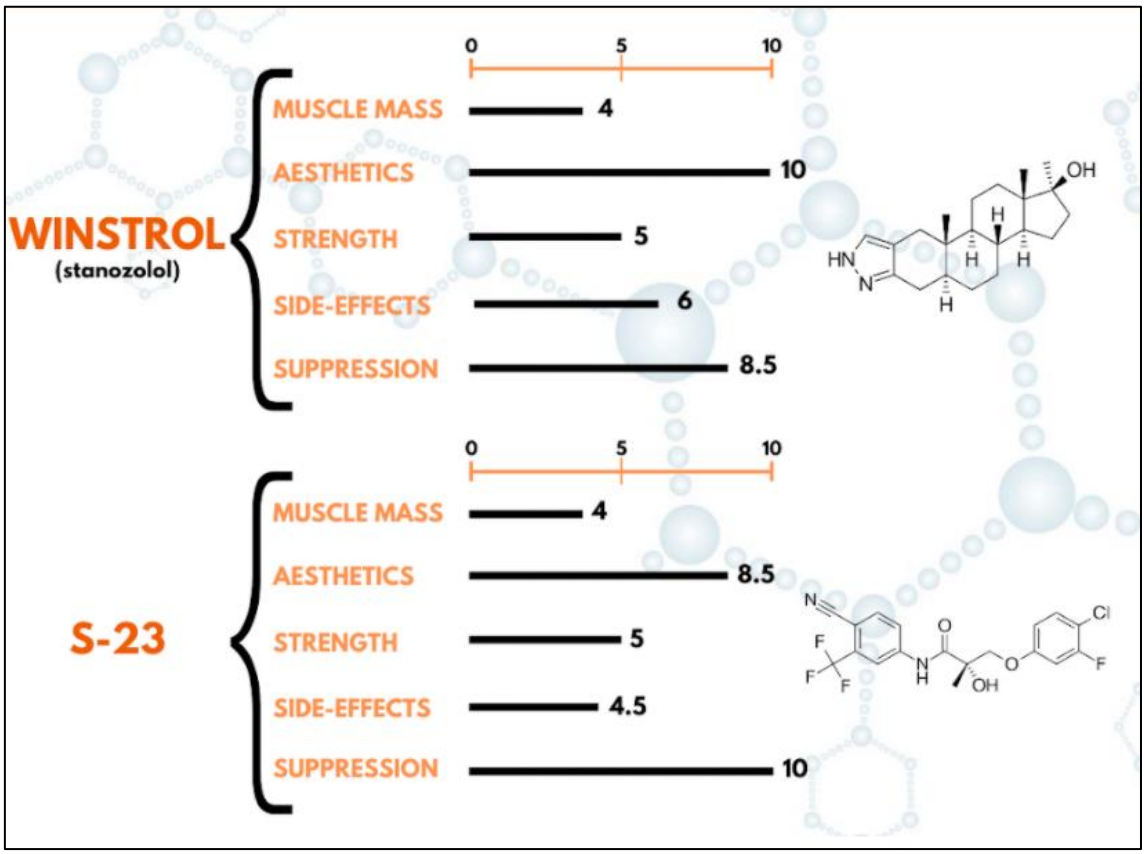
Turinabol and RAD-140 are also quite similar, and I feel like they are closer to each other than RAD-140 and Anavar.

As you can see, they are pretty much the same in terms of strength, TBol is better for muscle mass, but RAD-140 wins in the aesthetics department. Even though TBol is a dry compound, the look that it provides is not as pronounced as that of RAD-140.

In my experience, TBol provides a fuller look, whereas RAD is better for bringing out striations and veins. The side-effects of TBol are very tolerable, but it is more suppressive and hepatotoxic than RAD-140. TBol is, however, safer for the hair.

RAD-140 is a better choice in most scenarios.

WINSTROL VS S-23



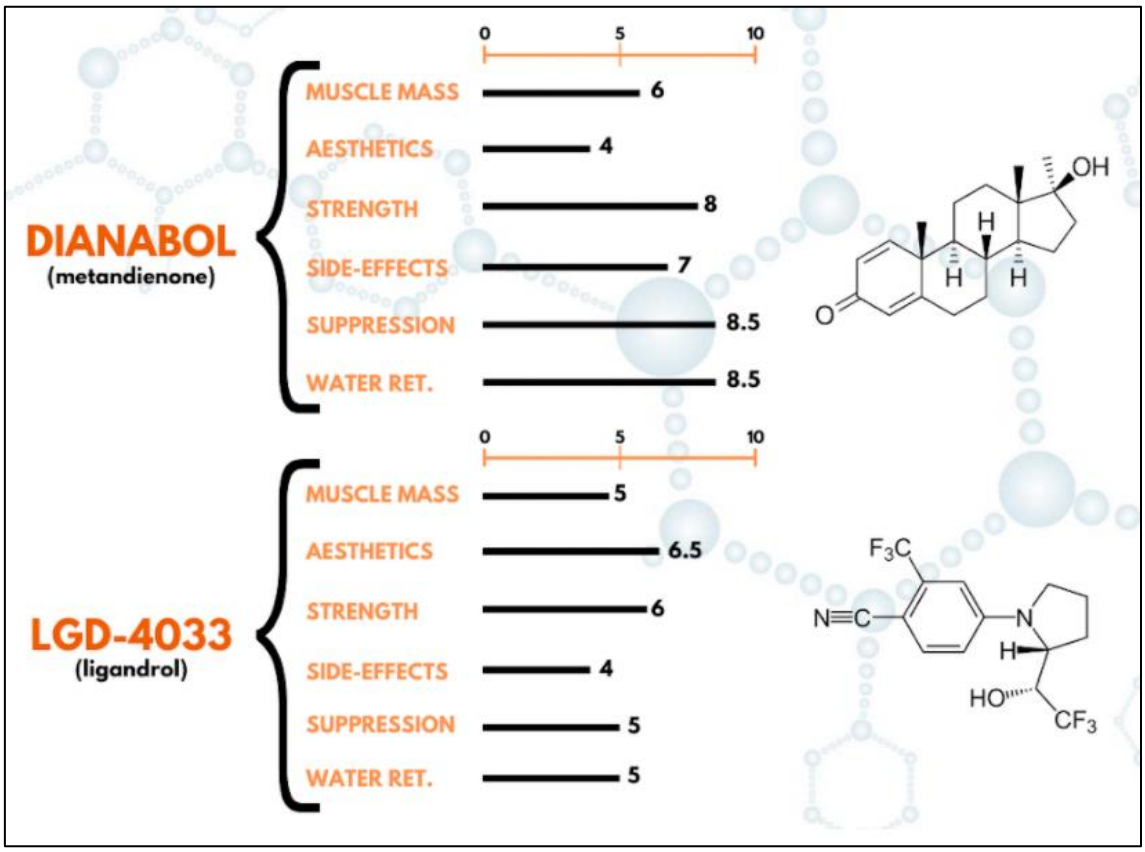
S-23 is often called the "Winstrol of SARMs" and I could not agree more. When it comes to bringing out the veins and striations, S-23 is the SARM to go for, and Winstrol the oral Steroid of choice for most people.

From my observations, I would conclude that both are quite similar in terms of how much muscle they can build and how much they can increase strength, but Winstrol is slightly better at improving aesthetics.

Regarding side-effects, I'd say that Winstrol is more likely to cause hair loss and significant liver toxicity, but S-23 is more suppressive. Both will seriously compromise your joints.

I would personally choose Winstrol over S-23.

DIANABOL VS LGD-4033



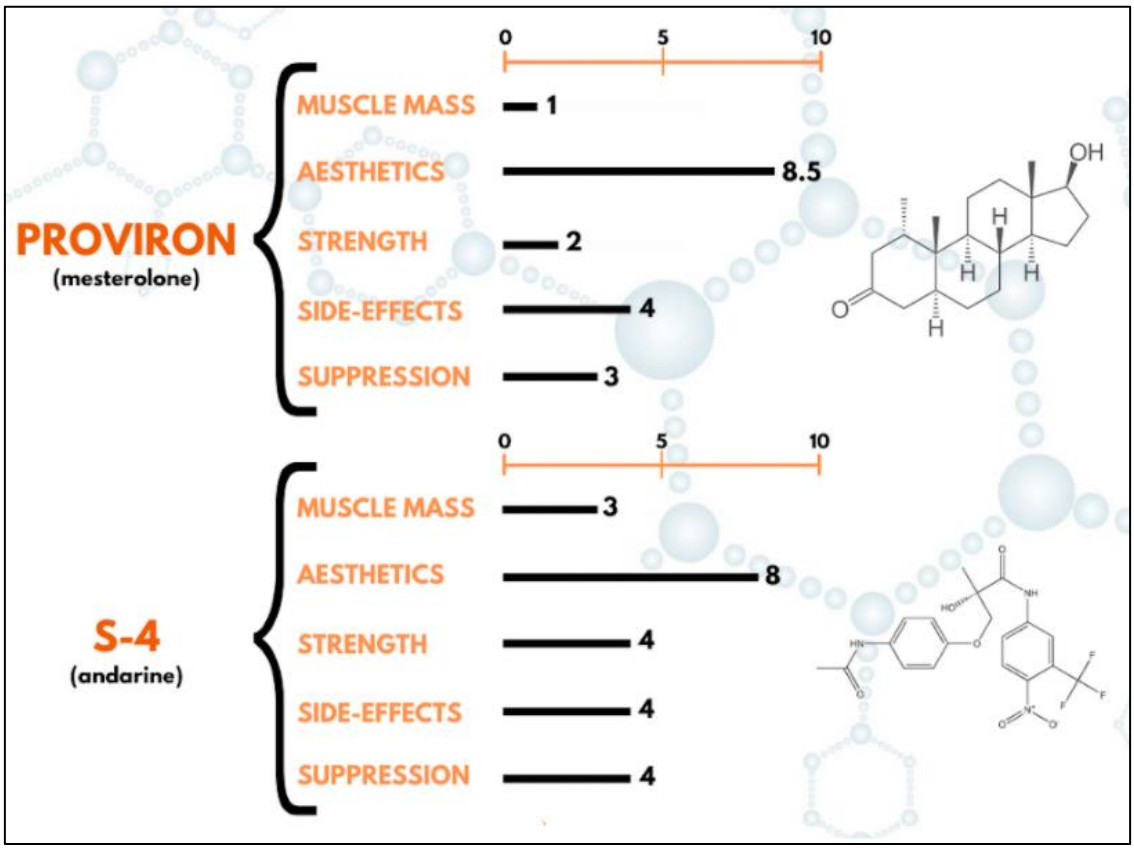
DBol and LGD-4033 are the wet bulking agents *par excellence* in their respective categories, so a comparison is fair even though one is much stronger than the other.

On the one hand, we have Dianabol, which will blow you up in size (mostly water) and make you look much bigger and fuller as well as make you stronger than LGD-4033. LGD-4033 will also retain water and cause a slightly puffy look, but unlike with DBol, most of what you gain will be muscle mass.

The side-effects of DBol are way more serious, with gyno, acne, and serious liver toxicity being a very real threat. It is also more suppressive.

I'd personally use LGD over DBol.

PROVIRON VS S-4



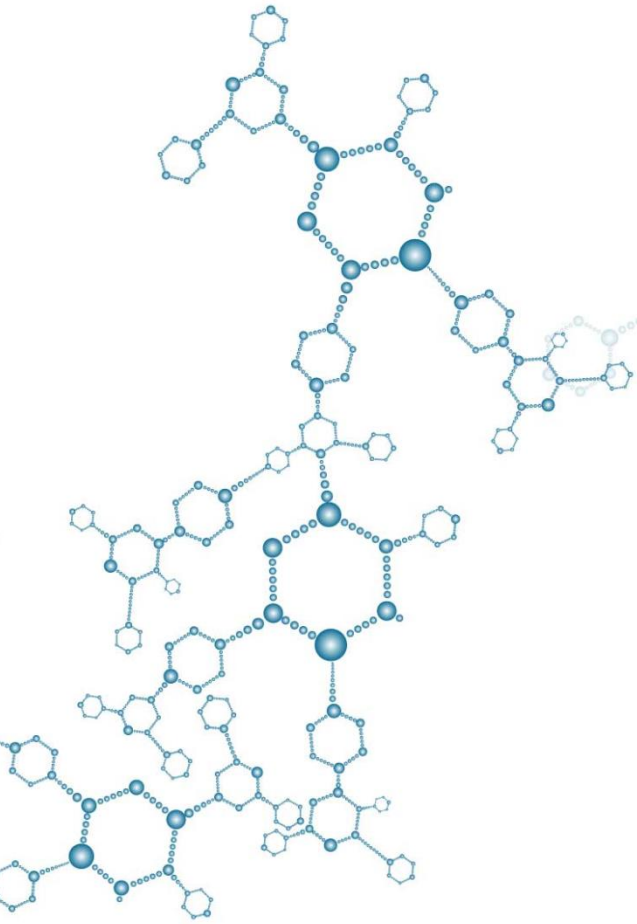
S-4 and Proviron are also quite different, but both are weak anabolics known for providing a lean, dry and vascular look.

S-4 is much better for gaining muscle and strength, because Proviron will barely do anything in those departments, but in terms of aesthetics Proviron is slightly better.

Both compounds are very safe and have relatively few side-effects, with hair loss being the most concerning side-effect of Proviron and a yellow vision tint being the most common complaint of S-4 users. Both are mildly suppressive, but Proviron tends to cause less suppression in the short to medium-term.

I personally prefer Proviron due to its sexual benefits.

FREQUENTLY ASKED QUESTIONS



WHEN SHOULD I TAKE MY SARMs?

Most SARM companies sell liquid solutions because it is hard to justify that capsules or tablets are NOT for human consumption, so the legal risk of selling caps/tabs is greater.

Solutions allow the user to adjust the dose as desired, whereas capsules only allow the users to take 10, 20, 30mg… But never 5, 15 or 25 unless the capsules are opened, which is a pain in the ass. The main pro of capsules is ease of use and the lack of a disgusting taste.

Regardless of what format you choose, you should always take the SARMs in the morning, but it does not matter whether you have an empty stomach or not.

If the SARM you are taking has a short or unclear half-life, you should split the dose and take 1/3 in the morning, 1/3 after lunch and 1/3 before bed. If that is not possible, just do morning and evening.

If the compound you are taking has a half-life between 10 and 18 hours, take half the dose in the morning and the other half before bed.

Lastly, if the compound you are taking has a half-life longer than 18 hours, just take the entire daily dose in the morning.

Some people claim that taking SARMs with a short half-life before a workout gives them a boost in performance, so if you want to try that out, take 1/2 or 1/3 of the daily dose 1 hour before working out.

Ibutamoren (which is not a SARM) can be taken either in the morning or at night. By taking it at night you may be able to

avoid feeling hungry the next day, but if you are bulking up and need a hunger boost, take it first thing in the morning.

HOW EXACTLY SHOULD I TAKE MY SARMs?

Capsules and tablets are self-explanatory, just swallow them with some water. Administering liquids is also simple:

Unless you are consuming SR-9009 or SR-9011, simply put the liquid in your mouth with a dropper or a dispenser, swallow and then chase it with water or a tasty drink (preferably without sugar since that could interfere with your macros) to get rid of the nasty taste and prevent throat irritation. ALWAYS SHAKE THE BOTTLE BEFORE USE.

If you are using one of the two SRs, put the liquid (or the powder) under your tongue and hold it there for up to 2-3 minutes. You can then spit out the remaining liquid/powder and drink some water to flush your mouth.

WHAT DOES MG/ML STAND FOR?

Liquid SARM bottles always have an mg/ml value in their label. This value indicates how many milligrams (mg) of the SARM are suspended in each millilitre (ml). The label will also specify how many ml the bottle contains in total.

Understanding these values is crucial for being able to dose the SARM properly, for example:

If a bottle has a total capacity of 30ml and the mg/ml concentration is of 20mg/ml, this means that each ml contains 20mg of the SARM, and the bottle contains a total of 600mg of the SARM (20mg x 30ml).

If you want to take 10mg/day of this particular SARM, you must take 0.5ml of liquid a day, which usually equates to half a dropper. If you want to take 20mg/day, you will have to take 1ml of liquid a day, so a full dropper.

With all due respect, you should not be using SARMs if you have a hard time understanding this concept.

HOW LONG DOES IT TAKE FOR SARM TO KICK IN?

Some people say that it takes up to 4 weeks for the effects of SARMs to kick in, whereas others claim they can feel the positive effects the first day of a cycle.

Most people feel a boost in strength and performance during the first week, and noticeable gains in muscle mass around week 3. Immediate gains in strength are usually just a placebo effect, but there is nothing wrong with it so embrace it.

ARE SARMs WEAKER THAN STEROIDS?

In general, steroids blow SARMs out of the water. You can reach a level of muscular development with Steroids that is simply unobtainable with SARMs.

However, some SARMs are stronger than some Steroids. For example:

LGD-3303 is probably as strong if not stronger than orals like Anavar, Turinabol and Epistane.

RAD-140 is stronger than Proviron and will definitely build more muscle in 8 weeks than Primobolan and maybe even Equipoise.

We could argue that the strongest SARMs are stronger than the weakest Steroids when each compound is used at its recommended dosage.

It is also worth noting that most SARMs are stronger than most Steroids milligram per milligram. For example, taking 5 mg/day of Ligandrol will yield more gains than taking 5mg/day of almost any Steroid.

ARE SARMs SAFER THAN STEROIDS?

In general, steroids are more dangerous than SARMs.

S-23, YK-11 and LGD-3303 are the only SARMs that have side-effects comparable to those of AAS.

The rest of SARMs, however, are way safer than the majority of AAS, maybe with the exception of Proviron. They do not cause shutdown, they do not affect cholesterol as much as most steroids do, they are less liver toxic and they are less likely to cause side-effects like acne, gynecomastia and hair loss.

Some people argue that steroids are safer than SARMs because they have been around for so long that we know exactly what side-effects they have in the short and long term,

whereas SARMs are so new that we only know the short term side-effects, but ignore the long-term ones. This is a good point, but the same people who say this tend to use Steroids like Equipoise and Trenbolone which were developed for horses and cattle and have no human clinical trials whatsoever.

ARE INJECTABLE SARMs WORTH IT?

Injectable SARMs gained a lot of popularity in late 2019. For a couple of months, it was the most discussed topic in the enhanced bodybuilding community, and everyone wanted to learn more about them because they were being marketed as being way stronger than the orals while having less side-effects. In early 2020, injectable SARMs went out of fashion when it became clear that such claims were not 100% accurate. Even though countless anecdotal reports show that injectable SARMs are more powerful than the orals on a mg-to-mg basis, the side-effects are equally if not more devastating.

Only liver toxicity is milder with the injectables than with the orals since the former skip the first pass of the liver. Testosterone suppression and dyslipidemia will still happen, and side-effects like hair loss and acne are way more prevalent and severe with injectable SARMs than with the orals. The modest improvement in gains does not justify the increased side-effects and the inconvenience of injections in the eyes of most researchers. Only YK-11 appears to be significantly better when injected, with many reporting more gains with similar side-effects.

In terms of non-SARM research chemicals, both injectable MK-677 and Cardarine are similar to their oral formulations, and only injectable SR-9009 and SR-9011 shine in comparison to their oral counterparts. The juice is not worth the squeeze with most injectable SARMs. After all, most SARMs already have great oral bioavailability. Only consider using Injectable SARMs if you are very experienced with a wide variety of oral and injectable anabolics.

WILL SARMs STAY LEGAL FOR MUCH LONGER?

There is a bill waiting to be passed in the USA which would put SARMs in the same category as Steroids and thus make them illegal. If the USA passes this bill, most European countries will do the same. Some SARMs and research chemicals are already banned in Australia and Russia.

Furthermore, China recently banned the production of most SARMs, so the supply chain has been interrupted. If no other country begins producing them, there will soon be a huge drop in supply. If the demand for SARMs does not decrease, the prices of SARMs will probably skyrocket.

As of May 2021, a handful of relatively popular SARM brands have received warning e-mails and letters from the FDA asking that they stop the sale of SARMs or face legal consequences. These companies were either selling capsules or marketing their products in a way that suggested that these products are for human consumption. Brands that only sell liquids have not been targeted so far.

HOW LONG SHOULD I WAIT BETWEEN CYCLES?

The answer is very simple. TIME ON = TIME OFF.

In other words, if you do an 8-week cycle, you should rest for 8 weeks before starting another cycle. The reason why is obvious: By taking a rest period equal in length to your cycle, you ensure that your testosterone levels, your HDL and LDL, and a myriad of other markers recover back to baseline. If you were to start another cycle without having recovered fully, you would accumulate part of the damage of the previous cycle with the damage of the new cycle, and you would have health complications down the line.

If you get bloodwork done 4 weeks after the cycle is over and everything is back to baseline, you can start a new cycle without waiting 4 more weeks, but the reality is that most users do not get bloodwork done and the vast majority of those who do, need more than 4 weeks to recover.

CAN I STACK CREATINE WITH SARMs?

Yes. Creatine can be stacked with SARMs. They won't interfere with each other, but the benefits of Creatine won't be very noticeable compared to those of the SARMs. The water retention may or may not be helpful, depending on your goals.

Other natural supplements like BCAAs, any kind of protein, multi-vitamins and even natural anabolics like Turkesterone can be stacked with SARMs.

SHOULD THOSE UNDER 21 TAKE SARMs?

On paper, no one should take SARMs, but those under 21 should definitely not take them, for multiple reasons:

Firstly, their testosterone levels are high enough to provide incredible muscle gains naturally. If someone under 21 has bad testosterone levels, he can easily fix those with proper dieting, sleep and training, something that every bodybuilder, natural or enhanced, should do.

Secondly, they are so young that chances are they have not reached their genetic potential yet, so natural gains are still possible. It is also common for guys under 21 to be relatively new to the gym, and I believe that one should fall in love with the process before jumping on PEDs.

Finally, most teens are not mature enough to realize how important health is. This attitude often means that those under 21 see SARMs as just another supplement, and they do not prepare accordingly when planning a cycle.

CAN I STACK STEROIDS WITH SARMs?

I would not recommend stacking any SARM with any oral steroid with the exception of YK-11.

If you are on a heavy steroid cycle, adding a SARM won't do much. For example, if you are taking 250mg of Test per week, 350mg of Tren Ace a week, 50mg of Winstrol a day and 100mg of Proviron a day, adding something like Testolone or even a stronger SARM like S-23 would be pointless.

In my opinion, Testosterone is the only Steroid that SARMs are really worth stacking with, but I would not recommend taking more than 250mg/week of Testosterone with a SARM since the SARM has a higher binding affinity for SHBG and for the androgen receptor, meaning that your free Testosterone will skyrocket which can lead to serious estrogenic and androgenic side-effects in some people.

CAN S-23 CAUSE PERMANENT INFERTILITY?

I have not come across a single case of permanent infertility due to S-23. Fertility is always restored after PCT.

CAN S-4 CAUSE BLINDNESS?

It is possible for Andarine to cause temporary blindness if overdosed. As far as I know, there are no cases of people having permanent vision issues due to S-4.

WHAT'S THE SAFEST SERM?

All SERMs are generally safe. Clomiphene and Tamoxifen are prescribed to millions of women every year, and they have been used for a long time. They are very well-studied and very well understood, so the risk for serious irreversible side-effects with these two drugs is very small. Toremifene is not as common and not as researched as Clomiphene and Tamoxifen, but it is considered milder and safer, and according to anecdotal

reports it causes fewer temporary side-effects than the other two.

Raloxifene is also well known and well-studied, and it is famous for its effectiveness at treating gynecomastia, breast cancer and osteoporosis.

Finally, we have Enclomiphene. This one does not have a lot of studies to back up its safety, but since it is an integral part of regular Clomiphene, we can assume that the former is as safe as or safer than the latter when used at equivalent doses.

CAN OLDER MEN TAKE SARMs?

SARMs were originally developed with the idea of helping people with muscle wasting diseases and osteoporosis, so old people are one of the target demographics that SARMs were developed for (from a therapeutic standpoint).

If we are talking about men in their 40s, 50s or even 60s using SARMs for performance enhancing purposes, then a few things must be taken into consideration:

The older we get, the more our health deteriorates. Most men in their twenties and thirties do not have to worry about their cholesterol, but men over 40 often have to be more careful with their cardiovascular health. For this reason, I believe that men over 40 must ALWAYS get bloodwork done before and after a cycle, to assess what their baseline is, to see what the impact of the SARM is and to see whether they have recovered or not. Cardio is especially important for older SARM users.

Testosterone is also something that declines with age, so men over 40 should monitor their levels and they should stay away from the more suppressive SARMs. Doing PCT would be wise, regardless of the cycle. In my opinion, men over 40 should only try the stronger SARMs if they are on TRT.

I AM ON A SARM-ONLY CYCLE, NO TEST BASE, HOW CAN I KEEP MY SEXUAL PERFORMANCE UP?

If, for whatever reason, you cannot or you do not want to use a Testosterone Base with your SARMs and you are worried about losing your libido and your erections, you can use Tadalafil (Cialis) or Sildenafil (Viagra) to enhance your sexual performance, and you can use natural ingredients like Maca Root Extract (500mg 3 times a day) and Ashwagandha (500mg 2-3 times a day) to boost your sex drive. I highly recommend using a Test Base anyway.

CAN I STACK MULTIPLE SARMs?

You have to keep a very important concept in mind when designing your cycle: SYNERGY. If you stack SARMs that provide similar effects like, for example, RAD-140 and LGD-4033, or Ostarine and ACP-105, you will not get 2x more gains, but you may get 2x more suppression and side-effects.

Use synergistic compounds that work through different pathways to achieve better results with less side-effects. I personally like to combine any SARM with YK-11 and/or MK-

677 and/or Cardarine and/or SR-9009. All these compounds have a unique mechanism of action that doesn't interfere with the others.

THERE ARE SOLID CHUNKS IN MY LIQUID SARM!

Due to changes in temperature, solutions may precipitate and/or crystallize. If that happens, you may see some chunks floating around and getting stuck to the dropper when you pull it out.

Simply heat up some water to the point where steam is coming out, but do not let it boil. Then leave the bottle inside for 1-2 minutes and after that, shake it well before examining the solution again. The particles should be almost fully gone. If, for whatever reason, you are unable to completely get rid of these particles, simply shake the SARM well before every use and take it anyway.

HOW DO I RETAIN MY GAINS AFTER A CYCLE?

It is uncommon for SARM users to lose a significant percentage of their gains after a cycle.

More often than not, you will lose some weight and perhaps some muscle fullness, depending on what SARM you took, but rarely will you lose a noticeable amount of actual muscle.

To make sure that you keep as much muscle as possible, you must eat at maintenance or at a surplus, you must keep training hard and sleeping properly, and you must PCT correctly.

Taking Ibutamoren after a SARM cycle is another way of protecting your hard-earned gains.

CAN I CUT AFTER A CYCLE?

As I just mentioned, eating at maintenance calories or a surplus is necessary in order to preserve gains after a cycle.

By cutting after a cycle, you will lose muscle and slow down the recovery of your testosterone levels.

Adding in Ibutamoren and doing a PCT may minimize how much muscle you lose if you choose to cut after a cycle.

HOW DO I KNOW IF I AM HEALTHY ENOUGH TO START A CYCLE?

Assuming that this is your first cycle, there are some things you may want to check before joining the dark side…

Ideally, you should get a full comprehensive bloodwork panel done and see what your natural baseline levels are. If these levels are not healthy, you should find a way to fix them naturally before starting a cycle.

You should also make sure your mental health is on point before a cycle since testosterone suppression and PCT can exacerbate depression and other mental health issues.

Besides ensuring that your health is on point, you should never start a cycle if you do not have all the ancillaries and health supplements that it requires. There is nothing worse than getting gyno mid-cycle and having to wait 2 weeks to receive your Raloxifene. If you are broke and trying to buy the bare minimum to do a cycle, chances are you will not bother to buy certain ancillaries and supplements. Therefore, you should not start a cycle until your finances are in order.

HOW SHOULD I TRAIN AND EAT ON CYCLE?

A lot of people think that hopping on PEDs means they must radically change their approach to training and dieting. That is not exactly the case, but these are some key things to keep in mind while running a cycle:

- Keep your protein intake elevated so that you can take full advantage of the increased protein synthesis that SARMs provide.

- Do not neglect healthy fats, they are necessary for well-being and hormonal recovery after a cycle. Keep an eye on your carb intake if you are running MK-677, always have Berberine in hand.

- You do not have to change your training routine but try to push yourself harder in the gym every single session (you

should be doing that whether you are natty or not). Never forget that your joints/tendons/ligaments may have a hard time catching up or the may feel stiff depending on what SARM you are taking.

- Cardio is important even when bulking up because it mitigates the negative impact of the SARMs on your lipid panel.

- After a cycle, your strength and your intensity will drop, so do whatever it takes to keep them up to ensure that you keep as much muscle as possible.

WHAT SUPPS SHOULD I TAKE AFTER A CYCLE?

Hormonal recovery should not be your only priority after a cycle. Do not forget that your lipid panel, your liver enzymes and a bunch of other important health markers will simply NOT recover in two days after ending the cycle.

You will have to take certain supplements to bring them back to baseline as soon as possible.

I always recommend that you take NAC both on-cycle (to minimize liver toxicity) and post-cycle (to reverse the damage), along with Omega 3s (Fish Oil or Krill Oil) for Cholesterol. Cardarine, GW0742 and the two SRs are also an option if you are struggling with dyslipidemia.

HOW CAN I TRAVEL WITH SARMS?

It is 100% possible to travel with SARMs, as long as they are legal (as research chemicals) in your country and your destination country. Still, it is normal for people to worry when preparing for a flight in which they intend to carry SARMs or other research chemicals, so here's a quick guide on how to do it for your ease of mind.

STEP 1: Do a quick Google search to make sure they are 100% legal (at least as research chemicals) in your destination country.

STEP 2: Put your RCs in your checked luggage and you are set. If you prefer to or you have to leave them in your carry-on bag, just put them in a smaller bag with other supplements or cosmetic products. There is nothing suspicious about the shape of the bottles, so you will not raise an eyebrow.

If they check manually and ask you what these products are, tell them that they are gym supplements. In the worst case scenario they will not know what these are, so they will test them to make sure they contain no illegal substances. I have yet to hear from someone who has experienced this, but if you do you will be fine (RCs are legal).

If you want to mitigate all risk, you can always put your SARMs in vitamin or skin serum containers.

WHAT'S THE SHELF LIFE OF SARMS?

Unfortunately, you will not find an accurate answer to this question. Different brands use different solvents, and each company claims their products have a different shelf life. For the most part, sealed liquid research chemical bottles are believed to have a shelf-life of 1 to 2 years and around 3 months if unsealed.

After this period, these products can still be used but they will have lost a ton of potency and they will continue to lose it as time goes on. There is no clear data on what the shelf life of SARM capsules/tabs is.

Keep in mind that these are just estimations based on what various companies have claimed and my own observations.

On a personal note, I have noticed a serious loss in potency from some products when using them a few months after they were unsealed and used for the first time. I have also tried sealed products from reputable brands that were 2+ years old and I barely got any effects from them.

WILL I FAIL A DRUG TEST IF I AM ON SARMS?

None of the compounds discussed in this ebook will cause you to fail workplace, military, police or firefighter drug tests. You will only be caught if you are tested for doping agents by a sports organization that has explicitly banned SARMs and/or follows WADA's anti-doping policies.

FINAL NOTES

I would like to end this e-book by reiterating that nothing that is written in it should be seen as medical advice. I want you to think twice before deciding to take SARMs, and if you have already used them, I hope that after reading this e-book you will be better equipped to use them in the safest way possible.

This e-book covers all the known side-effects that SARMs can cause, but there is always a possibility of having a rare side-effect that no one else has ever had. There is no reason for you to think that you can do a cycle and be completely fine. There is always a small chance that things will go very wrong.

Mainstream science is constantly evolving, and SARMs are no exception. I will keep updating and expanding this e-book for free as long as SARMs remain popular and more information (whether preclinical, clinical or anecdotal) keeps coming out.

If there is something you would like to ask, do not hesitate to get in touch by messaging me at @sarmsinfo on Instagram.

SOLUTION GUIDE

WHAT YOU NEED:

- Propylene Glycol (PG) and DMSO.
- A glass vial with a dropper.
- The raw powder of the SARM or Research Chem.
- An accurate scale.
- A cooking pot

Before you make your own solution, you have to decide what concentration you are going for. For example, if you have 300mg of LGD-4033 and your bottle has a capacity of 30ml, then you'd be able to mix the LGD with 30ml of solvent, and the end result would be a concentration of 10mg per ml (10mg/ml).

Depending on what compound you are trying to dissolve, some concentrations work better than others. LGD is almost always dosed at 10mg/ml, RAD at 20mg/ml, Ostarine at 20mg/ml, Ibutamoren at 20mg/ml, Andarine at 50mg/ml and so on…

Let me also clarify that if a solution has 30ml and each ml has 10mg (10mg/ml), then taking 1 ml (full dropper) would mean you are taking 10mg. Taking 2ml would mean you are taking 20mg. Taking 0.5ml would mean you are taking 5mg.

Now that the basic science is clear, you can get started with making your own solution. Simply follow the steps in the next page…

STEPS:

1. Choose a concentration for your solution.

2. While taking into account the total capacity of the bottle and the concentration that you have chosen, figure out how much powder you need. If you are doing 10mg/ml and the bottle can only fit 30ml, you will need 10x30 = 300mg of raw powder. Measure out the powder: If you have a total of 1000mg, use a scale to measure out the total amount of powder that you need (300mg in the previous example).

3. Heat up some water (to 100° Celsius or 212° Fahrenheit) in a cooking pot, no more than a finger in height.

4. Add a quantity of DMSO that is equivalent to 10% of the total volume of the desired solution (3 ml if we follow the example) to the vial and put it inside the cooking pot.

5. Once the DMSO is heated up, drop the raw powder into the vial and let it dissolve.

6. Take the vial out of the cooking pot and fill it out with a quantity of PG (at room temperature) that is equivalent to 90% of the total volume of the desired solution (27 ml if we follow the example).

7. Stir the solution with a glass rod. Ready to research!

GLOSSARY

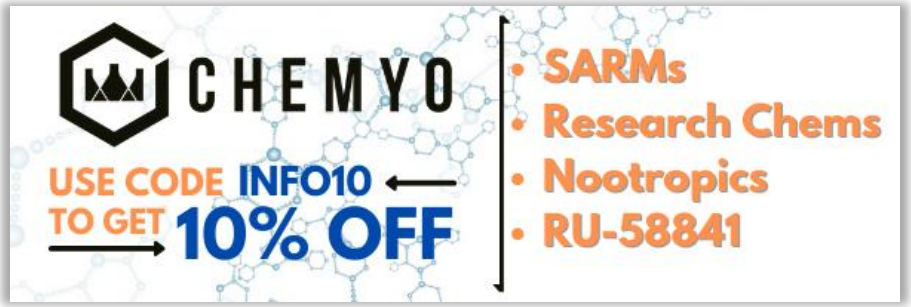
- **SARM:** Selective Androgen Receptor Modulator.
- **AAS:** Anabolic Androgenic Steroid.
- **PH:** Pro-Hormone.
- **DHT:** Dihydrotestosterone.
- **SERM:** Selective Estrogen Receptor Modulator.
- **RC:** Research Chemical.
- **Half-Life:** Time it takes for the blood levels of a substance to halve.
- **PCT:** Post-Cycle Therapy.
- **OCT:** On-Cycle Therapy.
- **OCT (2):** Over-the-Counter.
- **AI:** Aromatase Inhibitor. Blocks the conversion of Testosterone into Estrogen.
- **HGH:** Human Growth Hormone.
- **SHBG:** Sex-Hormone Binding Globulin.
- **LDL:** Low-Density Lipoprotein. Bad Cholesterol.
- **HDL:** High-Density Lipoprotein. Good Cholesterol.
- **FSH:** Follicle Stimulating Hormone. Promotes production of sperm.

- **LH:** Luteinizing Hormone. Stimulates leydig cells to produce Testosterone.
- **ED:** Every Day.
- **EOD:** Every Other Day.
- **MG:** Milligram.
- **ML:** Milliliter
- **NAC:** N-Acetyl Cysteine.
- **TUDCA:** Tauroursodeoxycholic Acid.
- **BPH:** Benign Prostatic Hyperplasia.
- **High BP:** High Blood Pressure.
- **Gyno:** Gynecomastia. Breast tissue in males.
- **TRT:** Testosterone Replacement Therapy.

SOURCES

If you want to acquire SARMs and other ancillaries but you do not know how to do so, below you will find some of the 3rd Party purity-tested sources that me and the vast majority of my IG followers use.

RAT's ARMY is now selling most of their PCT and AI products through e-mail. Place your order by clicking here. **Mention INFO20 for 20% OFF.**



MR.SARM IS FOR AUSTRALIAN AND NZ CUSTOMERS ONLY!

FURTHER READING

If you have enjoyed this e-book, you should check out my other e-books:

- THE ULTIMATE GUIDE TO MALE ENHANCEMENT
- THE PEPTIDE HANDBOOK
- A QUICK GUIDE TO PRO-HORMONES

If you want to want to learn more about Steroids, check out the best book on the subject ever written, “Anabolics” by Dr. Llewellyn.

- ANABOLICS 11TH EDITION BY DR. LLEWELLYN

And if you just want to dive deeper into SARMs and research chemicals in general, take a look at the scientific studies you will find in the next few pages.

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22. BONES AND JOINTS

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28. OTHER BENEFITS
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29. ANDROGENIC SIDE-EFFECTS
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RESEARCH CHEMS

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