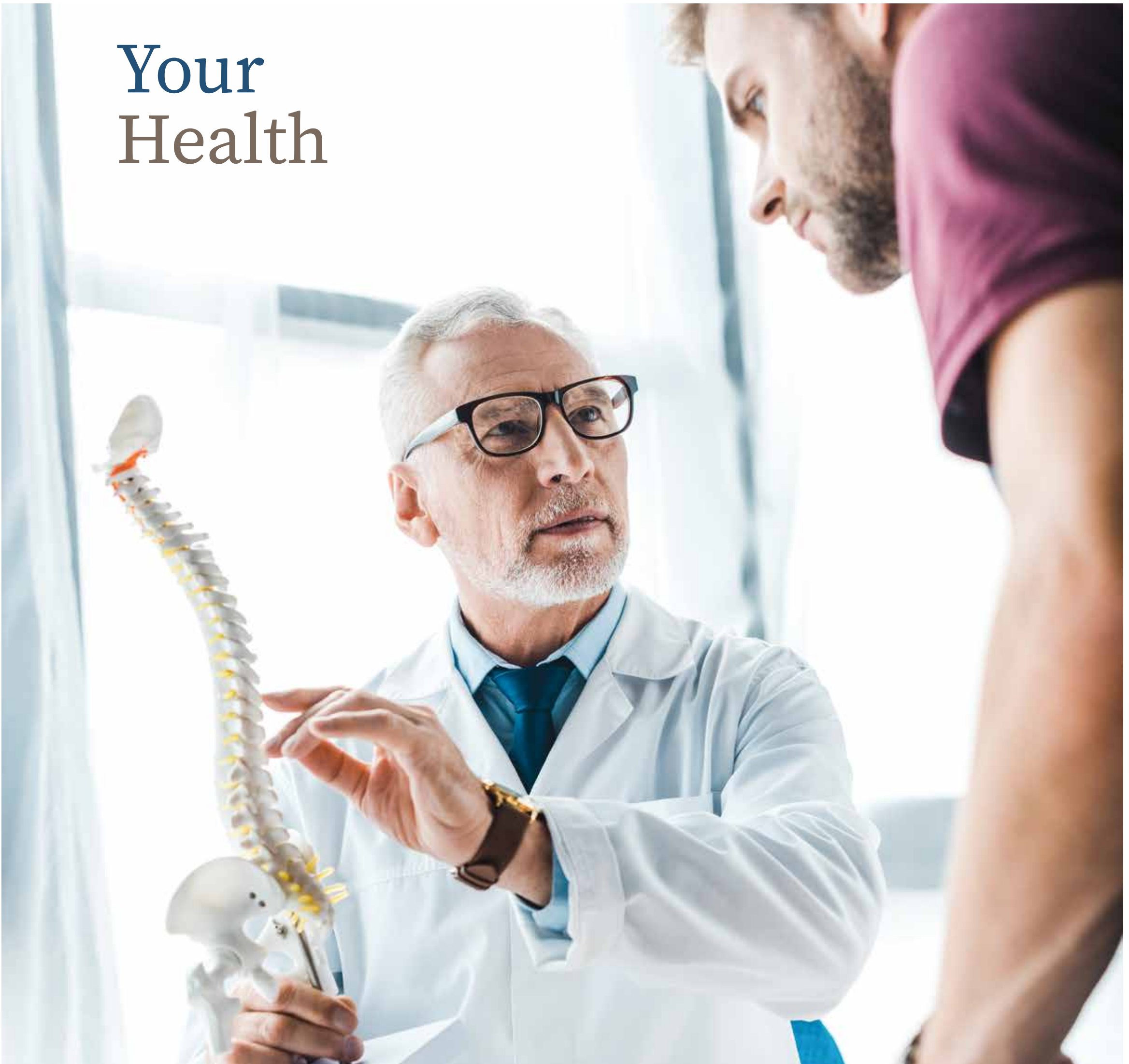


# Your Health



# Biologic Medicines

Biologic medications, also known as biologics, are a class of drugs derived from living organisms or their components.

They have revolutionized the treatment of various medical conditions, including autoimmune diseases, cancer and inflammatory disorders. Here's an overview of biologic medications and their therapeutic uses.

Biologic medications are produced through biotechnology methods that involve living cells, such as bacteria, yeast or mammalian cells. These drugs are designed to target specific molecules or pathways involved in the disease process, offering a more targeted and effective treatment approach compared to traditional small molecule medications.

One of the key features of biologics is their ability to modulate the immune system, making them particularly effective in treating autoimmune diseases such as rheumatoid arthritis, psoriasis and inflammatory bowel disease. Biologics work by targeting cytokines, immune cells or other molecules that play a role in driving inflammation and tissue damage.

In addition to autoimmune diseases, biologic medications are used in the treatment of certain types of cancer. Monoclonal antibodies, for



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example, can be engineered to target cancer cells specifically, leading to more precise and less toxic treatment options for patients.

Biologics have shown promise in the field of regenerative medicine, where they can be used to stimulate tissue repair and regeneration. Stem cell-based therapies, growth fac-

tors and tissue-engineered products are examples of biologic treatments scientists are exploring for conditions such as spinal cord injury, heart disease and diabetes.

Despite their efficacy, biologic medications may carry risks and side effects. These can include infusion reactions, increased susceptibility

to infections and rare but serious adverse events such as allergic reactions or immune-mediated complications. Close monitoring and communication between patients and health care providers are essential to minimize these risks and ensure safe and effective treatment.

Biologic medications repre-

sent a significant advancement in the field of medicine, offering targeted and personalized treatment options for a wide range of diseases. It is likely that biologics will have an increased therapeutic potential as our understanding of them evolves, paving the way for new and innovative approaches to disease management.



# Lowering Drug Prices

If you've paid for a prescription with an eye-popping price tag, you know how important it is to reduce drug costs.

This critical issue affects millions of people worldwide. High drug costs can place a significant financial burden on individuals, families and health care systems, leading to disparities in access to essential medications.

Here are some ideas about ways to address this issue and make prescription drugs more affordable:

**Allow generic competition.** Encouraging competition from generic drug manufacturers can help drive down prices. Generic drugs are typically much cheaper than their brand-name counterparts but are equivalent in terms of safety, efficacy and quality. Policy measures such as expediting the approval process for generic drugs and addressing tactics brand-name manufacturers use to delay generic competition can promote affordability.

**Negotiate drug prices.** Empowering government agencies such as Medicare to negotiate drug prices with pharmaceutical companies can lead to significant cost savings. Currently, Medicare is prohibited from negotiating drug prices directly, which limits its ability to secure



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lower prices for patients. Allowing Medicare to leverage its purchasing power could result in lower drug costs for millions of Americans.

**Allow the importation of prescription drugs.** Allowing the importation of prescription drugs from countries with lower drug prices, such as Canada, can provide consumers with access to more

affordable medications. Importation policies must be carefully regulated to ensure the safety and quality of imported drugs while also complying with international trade agreements.

**Promote transparency in drug pricing.** Increasing transparency in drug pricing can help consumers make more informed decisions

about their health care spending. Requiring pharmaceutical companies to disclose the factors that contribute to drug pricing, such as research and development costs, manufacturing expenses and markup percentages, can shed light on the underlying reasons for high drug prices.

By implementing these strategies, policymakers,

health care providers and pharmaceutical companies can work together to make prescription drugs more affordable and accessible to all. Addressing the issue of high drug prices requires a multi-faceted approach that balances the need for innovation with the goal of ensuring affordable health care for everyone.

# Eyes: Windows to Health

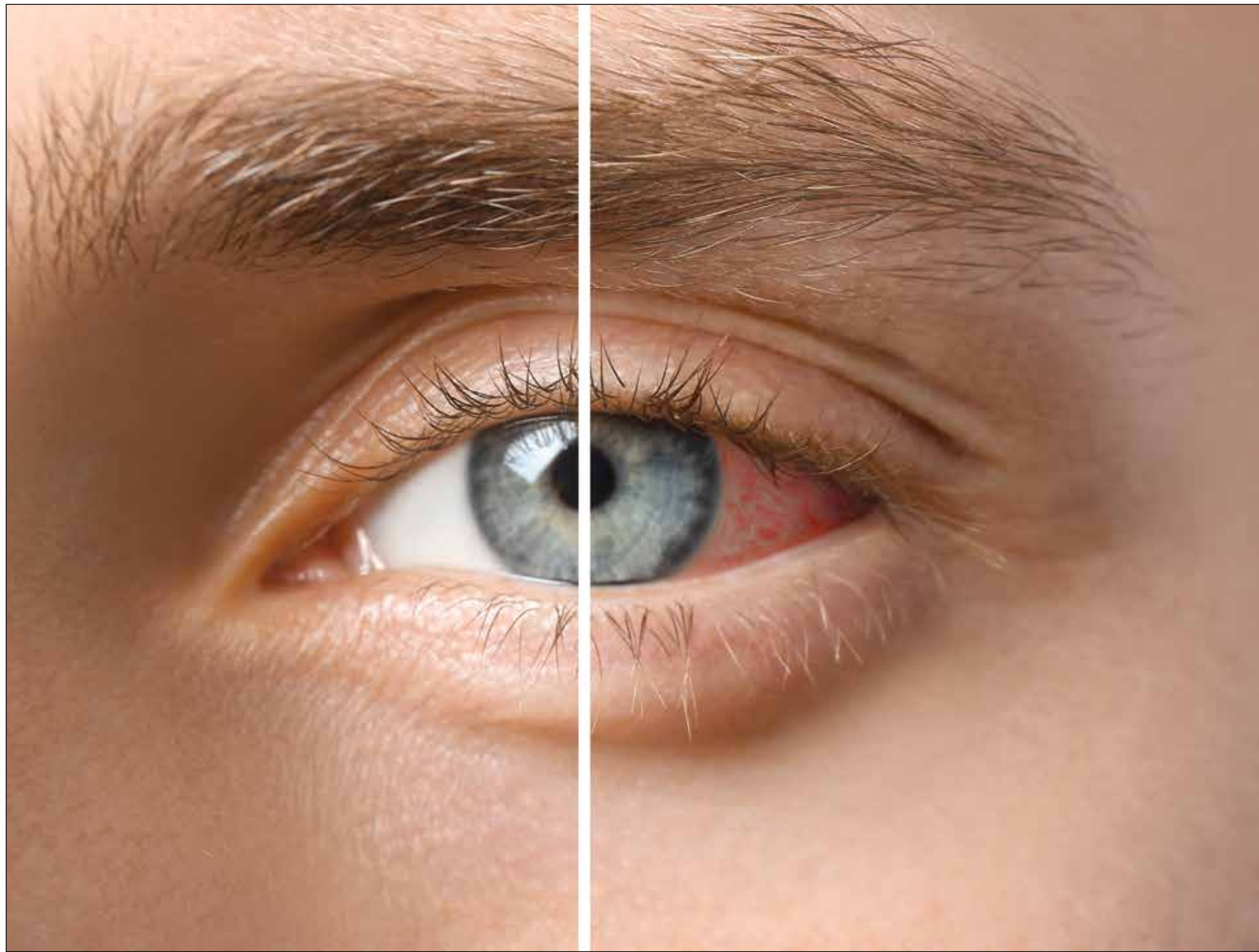
Eye problems can often be indicative of underlying health issues, serving as windows into one's overall well-being.

Several systemic health conditions can manifest with symptoms affecting the eyes, underscoring the importance of regular eye examinations as part of a comprehensive health care routine.

**Diabetes and diabetic retinopathy:** Diabetes can lead to diabetic retinopathy, a condition characterized by damage to the blood vessels in the retina. Symptoms may include blurred vision, floaters and even vision loss if left untreated. Managing blood sugar levels and undergoing regular eye exams are crucial for preventing and managing diabetic retinopathy.

**High blood pressure and hypertensive retinopathy:** Chronic hypertension can cause damage to the blood vessels in the retina, leading to hypertensive retinopathy. Symptoms may include blurred vision, headaches and vision changes. Controlling blood pressure through lifestyle modifications and medications is essential for preventing complications.

**Autoimmune diseases and uveitis:** Autoimmune diseases such as rheumatoid arthritis, lupus and sarcoidosis can cause inflammation of the



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uvea, the middle layer of the eye. Uveitis can result in eye pain, redness, light sensitivity and vision disturbances. Treatment typically involves addressing the underlying autoimmune condition and managing inflammation with medication.

**Thyroid disorders and thyroid eye disease:** Thyroid dis-

orders such as hyperthyroidism or Graves' disease can lead to thyroid eye disease, also known as Graves' orbitopathy. Symptoms may include bulging eyes, double vision, dry eyes and eye discomfort. Treatment may involve medications, surgery or other interventions to manage symptoms and prevent complications.

**Cardiovascular disease and retinal vein occlusion:**

Cardiovascular diseases such as atherosclerosis or hypertension can increase the risk of retinal vein occlusion, a blockage of the blood vessels in the retina. Symptoms may include sudden vision loss or blurred vision in one eye. Managing cardiovascular risk factors is

essential for preventing retinal vein occlusion and preserving vision.

Regular eye examinations by an optometrist or ophthalmologist can help detect early signs of eye problems related to general health and prompt referral to other health care providers for further evaluation and management.



# Macro vs. Micro Nutrients

Understanding the distinction between macro and micro nutrients is crucial for maintaining a balanced and nutritious diet.

While both types of nutrients are essential for overall health and well-being, they play different roles in the body and are required in varying amounts. Here's a breakdown of macro and micro nutrients.

## MACRO NUTRIENTS

Macro nutrients are nutrients that the body needs in large quantities to provide energy and support various physiological functions. The three primary macro nutrients are carbohydrates, proteins and fats. Carbohydrates serve as the body's primary source of energy, providing fuel for daily activities and exercise. Proteins are essential for building and repairing tissues, supporting muscle growth and maintaining immune function. Fats are important for energy storage, insulation and the absorption of fat-soluble vitamins.

## MICRO NUTRIENTS

Micro nutrients are nutrients that the body needs in smaller quantities to carry out specific functions and maintain health. This category includes vitamins and minerals, such as vitamin A, vitamin C, vitamin D, iron, calcium



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and zinc. These nutrients play critical roles in various physiological processes, including metabolism, immune function, bone health and cell signaling. While micro nutrients are required in smaller amounts compared to macro nutrients, they are nonetheless essential for overall well-being.

## BALANCED DIET

A balanced diet includes a variety of foods that provide both macro and micro nutrients in the appropriate proportions.

Consuming a diverse array of fruits, vegetables, whole grains, lean proteins and healthy fats can help ensure

that you get an adequate intake of both macro and micro nutrients. Additionally, paying attention to portion sizes and moderating intake of processed foods high in added sugars, salt and unhealthy fats can support overall nutritional health.

Macro and micro nutrients

are both essential components of a healthy diet, each playing unique roles in supporting various bodily functions. By focusing on consuming a balanced diet that includes a variety of nutrient-rich foods, you can ensure that your body receives the necessary nutrients to thrive.



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From personalized nutrition and fitness plans to targeted disease prevention strategies, here are some innovative ways to use your DNA for health:

**Personalized nutrition:** Genetic testing can provide insights into how your body metabolizes nutrients, allowing for personalized dietary recommendations tailored to your genetic profile. By identifying genetic variants related to nutrient absorption, metabolism and food sensitivities, you can optimize your diet to better support your unique nutritional needs and goals.

**Fitness and exercise optimization:** DNA testing can offer valuable information about genetic factors that influence athletic per-

formance, exercise response and injury risk. By understanding genetic predispositions such as muscle fiber composition, recovery ability and susceptibility to injuries, individuals can tailor their fitness routines to maximize results and minimize risks.

**Pharmacogenomics:** Pharmacogenomic testing analyzes how an individual's genetic makeup affects their response to medications. By identifying genetic variations that impact drug metabolism, efficacy and side effects, health care providers can prescribe medications more effectively and minimize the risk of adverse reactions.

**Predictive health screening:** Genetic screening can identify

individuals at increased risk for certain diseases or health conditions, allowing for proactive management and prevention strategies. By assessing genetic markers associated with conditions such as cancer, cardiovascular disease and neurodegenerative disorders, individuals can take steps to mitigate risk factors and prioritize preventive health care measures.

**Precision medicine:** The field of precision medicine aims to tailor medical treatments and interventions to individual genetic profiles, optimizing therapeutic outcomes and minimizing side effects. By incorporating genetic information into treatment decision-making processes, health care providers can deliver more

targeted and personalized care to patients across a wide range of medical specialties.

While using DNA for health presents exciting opportunities, it's essential to approach genetic testing and interpretation with caution and in consultation with qualified health care professionals. Genetic information is complex and nuanced, and its interpretation requires expertise to ensure accurate and actionable insights.

By leveraging the power of genetic information, individuals can take proactive steps to optimize their health and well-being, paving the way for a future of personalized and precision health care.



# Preparing for an MRI

Proper preparation is essential to ensure accurate MRI (magnetic resonance imaging) results and a smooth experience. Here are some steps to follow before your appointment.

First, inform your health care provider about any medical conditions you have, such as allergies, claustrophobia or implanted devices like pacemakers or metal implants, as these may affect the MRI procedure.

Second, follow any specific instructions your health care provider or the imaging center provides. This may include fasting for a certain period before the MRI, avoiding wearing jewelry or clothing with metal components or temporarily discontinuing certain medications.

Additionally, it's crucial to arrive on time for your appointment and bring any relevant medical records or insurance information. Wear comfortable, loose-fitting clothing without metal zippers or buttons. You may be asked to change into a hospital gown before the procedure.

During the MRI scan, you'll need to lie still on a narrow table that slides into the MRI machine, which can be loud and enclosed. If you're claustrophobic or anxious, speak to



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your health care provider beforehand about possible relaxation techniques or sedatives to help you stay calm during the procedure.

The doctor may order the use of injected contrast dye to get the best images of structures such as tumors, inflammation

and blood vessels. The dye, usually gadolinium, will be injected intravenously. It's very important to tell the technician performing the procedure if you have kidney disease or any other issues with kidney function, as you could have trouble excreting the dye. Answer any

questions from the radiologist accurately.

The entire appointment should take about an hour, but it could take longer if contrast is required. Check with your doctor or the imaging center for the expected duration of your specific procedure.

Following these preparation steps can help ensure a successful MRI experience and accurate imaging results. If you have any questions or concerns about the procedure, don't hesitate to discuss them with your health care provider or the imaging center staff.

# Squeezing In Exercise

In today's fast-paced world, finding time to exercise can be challenging amidst work, family responsibilities and other commitments.

Squeezing in exercise, however — even in short bursts — can have significant benefits for both physical and mental health. Here are some strategies for incorporating exercise into a busy schedule.

**Prioritize physical activity.** Make exercise a priority by scheduling it into your day, just like you would any other appointment. Block out time on your calendar for a workout or a brisk walk, and treat it as non-negotiable time dedicated to your health and well-being.

**Break it up.** Instead of trying to find a large chunk of time for a lengthy workout, break your exercise routine into smaller, more manageable segments throughout the day. For example, aim for three 10-minute walks or two 15-minute bodyweight workouts spread out across the day.

**Maximize efficiency.** Choose workouts that maximize efficiency and can be done in a short amount of time with minimal equipment. High-intensity interval training (HIIT), circuit training and bodyweight exercises are all effective options for getting a full-body workout in a short period.

**Incorporate activity into**



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**daily tasks.** Look for opportunities to sneak in extra activity throughout the day. Take the stairs instead of the elevator, park farther away from your destination or do squats while brushing your teeth. Every little bit of movement adds up and contributes to your overall

activity level.

**Make it enjoyable.** Find activities that you enjoy and look forward to, whether it's dancing, cycling, swimming or playing a sport. When exercise feels like fun rather than a chore, you're more likely to stick with it and make it a regu-

lar part of your routine.

**Be flexible.** Be creative with your exercise routine, especially on busy days when your schedule may be unpredictable. If you can't fit in your usual workout, find alternative ways to stay active, such as doing a quick yoga session at

home or going for a walk during your lunch break.

By implementing these strategies, you can find ways to squeeze in exercise even on the busiest of days, reaping the numerous physical and mental health benefits that regular physical activity provides.