

Principles of Prescribing

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Definition: Principle

- A comprehensive and fundamental law, doctrine or assumption
- The laws or facts of nature underlying the working of an artificial device

Definition: Doctrine

- Something that is taught
- A principle or position or the body of principles in a branch of knowledge or system of belief : dogma

Definition: Dogma

- Something held as an established opinion; especially, a definite authoritative tenet

Definition: Tenet

A principle, belief, or doctrine generally held to be true: especially, one held in common by members of an organization, group, movement, or profession.

General

The lens power chosen not only depends on refractive findings and patient symptoms, but also on patient/doctor goals and attitudes.

General

Any adaptation away from the Skeffington expected will limit the individual's ability to respond with ease and efficiency.

General

Use the least powerful lens needed.

General

Any time you can provide the people the opportunity to use themselves in a more symmetrical way we should do so.

General

Prescribe the lens today that establishes a direction of movement towards a less adapted state.

General

A person in a less adapted state has available to them more ways to respond to environmental demands.

General

Current adaptations were developed by the individual to solve a problem. By compensating for the current adaptation fully, one removes the short-term benefits that the person had acquired, thereby increasing the probability for further adaptation. The new adaptation may take the same form or may emerge in a different form.

General

In the absence of signs and symptoms we record our observations and data and follow the patient's development more closely (ex. 6-12 week follow-ups).

General

We don't just put lenses on because we measure it. There must be a benefit to the patient.

General

Soft lenses do not stabilize myopia progression.

General

In prescribing for myopia: from our perspective, there is a greater sense of urgency to put the proper near prescription on, not just the proper distance prescription.

General

In the sequence of deriving which lenses (near and distance) the patient will most benefit most from, the thought process begins by solving the benefits to be derived at near first, from the total data at hand, followed by the deriving of the lens for distance. By this we do not mean to imply that the prescription is written in an unconventional manner, only that the conceptualization process flows more logically from near to far.

General

Asymmetry in the prescription offers reduced chances for symmetrical behavior.

General

The lens that is best in the short term may not be the lens that is best for the long term. In prescribing, one must have a clear idea of the long and short-term needs of the patient. Differences in these sometimes competing and sometimes complementary needs may be difficult to resolve.

General

Buffers exist in the visual system. The +0.75 at distance is a buffer for the process on identification. The 1/2 exo at distance is a buffer for the process of centering. The 6 exo at near is a buffer for the process of centering. Prescriptions that encroach upon or consume the buffer may trigger the process leading to adverse development.

General

There is an optimal amount of plus which maximizes performance. More or less plus from this optimal amount does not continue to improve performance. In the use of plus it is not a case of; if some is good more is better. The judicious use of plus is the optimum lens.

General

The problem begins at near and spreads to distance.

Spheres Myopia

Myopia: 7 or 7a of plano is already a myope. From patient's perspectives, at times they obsess about the numbers, ex. Degree of myopia, number of lines on chart that can be read, future changes, size of the lens power needed to restore a "perfect" 20/20 (nearsightedness).

Spheres Myopia

... From our perspective, the above is less critical. In fact, setting the stage to free them from these worries or concerns (being more concerned about the process and flexibility of patient's seeing (*myopia - myoping - the process of building more nearsightedness*), may allow all the above to eventually stabilize or be shifted towards a less adapted state. If we want to change the lens power we need to change how the person sees the world.

Spheres Myopia First timer
(plano -> -0.75)

Once a person begins to use a minus lens the chance is greatly increased that they will always need a minus lens. Therefore, the case presentation for the first timer needs to stress this point.

Spheres Myopia First timer
(plano -> -0.75)

- If they don't complain we don't prescribe the minus lens.
- Can we get plus on at near?
- If the patient demands the minus, give them the least necessary to satisfy their need for distance only.

Spheres Myopia First timer
(plano -> -0.75)

If all the findings are low (ex. 20 < -1.25) and the range on the 20 & 21 is less than 2.00 diopters, and the equilibrium findings are compressed, there may be another triggering mechanism for the development of the myopia. Example: recent divorce, lead paint, emotion or environmental toxicity.

Spheres Myopia First timer (plano -> -0.75)

Special Case: adventitious partial pseudo-myopia (some of the myopia is in structure, some of the myopia is present for the purpose of allowing the person to overcome a basic binocular problem at distance which manifests as an exophoria at distance). First rule in this case is to forget myopia control with plus or reduced minus. ...

Spheres Myopia Low (-0.75 <> 2.00)

If at-risk for progression (ex. Low PRA 20, eso at near, 14B low, low plus acceptance on near-point retinoscopy) rarely give full minus. Give the minimum lens that satisfies their acuity need. If possible, compensatory lenses are made in task specific forms and they are encouraged to do without lenses.

Spheres Myopia Medium (-2.00 <> -4.00)

Once the patient crosses this threshold, even when we pull out all the stops to reduce the measured myopia, the first portion of the myopia that they have developed has become “super-embedded”.

Spheres Myopia
High (-4.00 <> -8.50)

Some of these seem to maintain a significantly larger range of accommodation well into presbyopia than one would expect based on Donder's table and/or age. In this subgroup, they do not accept the plus lenses.

Spheres Myopia
Pathological (>-8.50)

Some of these patients seem to maintain a significantly larger range of accommodation well into presbyopia than one would expect based on Donder's table and/or age. In this subgroup, they do not accept the plus lenses.

Hyperopia

Most adverse hyperopia is a secondary iatrogenic illness caused by overzealous prescribing of plus.

Hyperopia

Buffers: leave at least a single buffer (+0.75) to as much as a double buffer (+1.50) uncompensated at distance unless the patient has specific needs or demands which are not met -with lesser amounts of plus.

Hyperopia

First timer + 1.50 to +3.00.
Watch real closely.

Hyperopia

First timer + 3.00 and above:

No trope: Provide the minimum lens necessary to get the child interacting, with their environment in a more efficient manner. (Ex. One-third of the measured power as starter lenses with re-exam in 3-6 months.

Hyperopia

First timer + 3.00 and above:

Trope: Provide the minimum lens necessary to get the child interacting, with their environment in a more efficient manner, unless a greater degree of plus allows the person to learn and use their eyes as a binocular integrator. (The eyes look straight.) The general guideline for choosing the starting power is one-third to one-half of the measured power with re-exam 4-12 weeks.

Hyperopia

First timer + 3.00 and above:

- The younger the patient the shorter the time between re-evaluations.
- The older the patient the longer the time between re-evaluations.

Reducing Hyperopia

Based on embeddedness, the goal to achieve maximum reduction of hyperopia is to under-compensate at both distance and near by a double buffer (1.50 diopters). When cutting plus, never prescribe less plus at near in the new prescription than the total amount of plus that was in the old distance prescription.

Cylinders/Astigmatism

When prescribing cylinders be aware of posture, because certain lenses may reinforce inefficient asymmetric postures and drive the person to further maladaptation. One way of looking at the benefit to the person of building genders is that it provides them the opportunity to be lazy. ...

Cylinders/Astigmatism

...By this we mean that they have within a single channel a single extended (bigger than normal on an optical basis) zone within which deriving of meaning and direction of action can occur without altering the posture of the mechanism of accommodation.

Cylinders/Power

General Statement: Treatment options may be available other than lenses and may take the form of altering the persons' approach during those tasks and may not require lenses.

Cylinders/Power Low

-0.75 or less, the cylinder is a secondary symptom of a problem with centering (180) or identification (90). First, try fixing the primary problem while not compensating at all for the symptom. Later, if and only if the patients' needs demand it, then prescribe the least amount necessary.

Cylinders/Power Medium

-1.00 to approximately -3.50; Giving the full amount seems to drive them towards building more power. When patients elect to have add powers included in their compensatory lenses, we can give more of the cylinder power and the risk for building more cylinder power decreases.

Cylinders/Power High

Greater than -3.50; nearly always axis 180. Compensatory lenses are often rejected. VA is not affected as much as one would expect on an optical basis. Full compensation does not seem to restore visual acuity to fun 20/20.

Cylinders/Power Sick

Rapidly increasing against the rule cylinder in the under 30-age group deserves careful monitoring; suspect possible keratoconus, corneal dystrophy, etc. Don't prescribe soft lenses.

Cylinders/Axis

Look for head tilt and or face plane shifts up or down or similar shifts in the demands of the task relative to head position. Treatment options may be available other than lenses and may take the form of altering the persons' approach during those tasks and may not require lenses.

Cylinders/Axis

In prescribing we tend to shift given axis towards symmetry away from measured asymmetry. Ex. Shift towards 90, shift towards 180, make sure they are complementary (add up to 180).

Cylinders/Axis

Axis 90 is different than axis 180

Cylinders/Axis

Differential effects of acuity for same degree of cylinder. Typically the same amount affects VA more at axis 90.

Cylinders/Axis

Each is an indicator, by way of being a secondary symptom, of a fundamental underlying problem in centering (180) or identification (90).

Cylinders/Axis

We have more latitude in prescribing axis 180 cylinder over the axis 90 cylinder and this latitude may not be reflected in the embeddedness. Meaning that in some cases that look embedded we still have freedom to significantly under-compensate the axis 180 cylinder and the patient will not only accept the lens but prefers the lens.

Anisometropia

Benefits of having an aniso:

The person developed the anisometropia to become more efficient at moving through space on the Z-axis, in the absence of an efficient binocular system.

Anisometropia

Benefits of having an aniso:

If binocularity is your weak link you may alter the refractive condition unevenly.

Anisometropia

Always cut the aniso; when you prescribe the full aniso this often drives the aniso difference to widen.

Anisometropia

There exists a power difference, 4.00 Diopters, above which thinking about trying to fix the aniso becomes difficult to conceive.

Anisometropia

In cases of perceptual size differences, real or suspected, are investigated using device such as cheirosopic tracing. The perceptual size differences may or may not match the actual power differences.

Near Spheres/Adds

Never prescribe more plus than the stress point (Harris Modification).

Near Spheres/Adds

There is an optimum lens, which allows the person to perform maximally efficiently, within the constraints of their normal patterns of behavior. (Ex. Kraskin optimum lens from stress-point retinoscopy).

Near Spheres/Adds

In most patients other near lenses are available that can be used to direct changes in either the use of the visual process or the development or organization of the visual process/refractive conditions.

Near Spheres/Adds

Hyperopia; most adverse hyperopia is a secondary iatrogenic illness caused by overzealous prescribing of plus. If the formerly stable hyperope returns measuring more plus at far, the previous prescription had too much plus at near and/or far.

Near Spheres/Adds

Development/Guidance; These lenses are usually provided in single vision form and are used during indoor/at-home activities. Bifocals are not the preferred form for supplying these lenses in.

Near Spheres/Adds Presbyopia

Too much plus in one year at near may cause the development of more adverse hyperopia at distance the following year.

Near Spheres/Adds Presbyopia

Too little amount of plus or plus applied too late may lead to low powered against the rule astigmatism. If left in this condition too long, the cylinder may turn to myopia. If they remain in contact with the task beyond this point and do not get the appropriate plus they may move into exhaustion and then need lots of plus.

Near Spheres/Adds Presbyopia

If you find less plus at near than the person is wearing and they are happy with their present lenses, don't cut the plus at near.

Near Spheres/Adds Myopia

In myopia one should first think of the near power first and of using a negative add to get out to distance.

The maximum relative plus for near to slow/halt progression is the Harris maximum on the modified Stress Point Retinoscopy.

Near Spheres/Adds Myopia

The Kraskin optimum lens as derived on Stress Point Retinoscopy will allow the person to use themselves with maximal efficiency as they are. This lens maximizes the “fight” zone and minimizes the “flight” zone in spatial terms.

Near Spheres/Adds Astigmatism Pre-Presbyope

In cases of against the rule astigmatism and you decide to give the against the rule astigmatism, prescribe the plus add of equal amount.

Example: plano - 0.75 X 90,
with a +0.75 add.

Near Spheres/Adds Astigmatism

With against the rule astigmatism (minus axis 90) too little add will foster a continued building of the cylinder.

Too much add may cause the development of adverse hyperopia.

Prisms

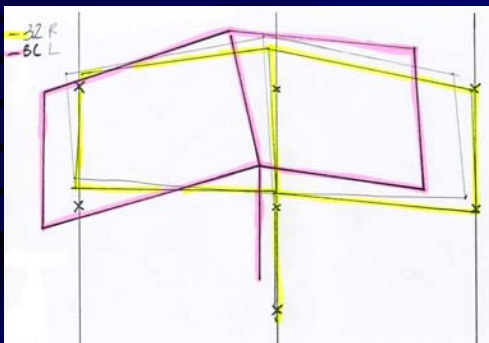
The primary effect of prisms that alter people to use their visual process differently is not by virtue of shifting the chief ray 1 cm for every meter traveled through space for each diopter of prism.

Prisms help primarily by acting as space shifters.

Prisms

As clinical tools prisms are very powerful. When clinically indicated, they provide effects that may not be predicted by chief ray shifting examples: posture changes, autism spectrum, aniso, incipient myopia or adverse hyperopia, etc.

Yoked Prism Effects



Prisms

Prisms may be used in a compensatory fashion either to compensate for a misalignment or to allow for asymmetric use of the self.

Examples: Fixation disparity, associated phoria, Mel Kaplan yoked prisms

Prisms

Prisms may be used in a treatment fashion in either yoked or non-yoked manners.

Examples:

Non-Yoked: Peli, Gottlieb, etc. spotting prisms, prism other than tropia, in-space neutralization or by associated phoria.

Yoked: Robert Kraskin approach, Padula et. al. postural/midline shifting prisms.
