Correct class II malocclusions and gain vertical dimension

Closing the posterior open bite using the Spahl Split Vertical appliance.

The Spahl Split Vertical (SSV) Appliance has become an important fixture in modern orthodontic treatment. The SSV answers the question: How do you close up the posterior open bite in order to obtain the necessary posterior molar contact to support that joint in its new relocated position?

Dr. Terrance J. Spahl answered this question with the design of the SSV. Improving on the Biofinisher technique by Dr. Jack Lynn, Dr. Spahl established four objectives.

The first objective involved using eruptive forces that could relatively quickly move posterior teeth in opposing arches occlusally in order to close up posterior open bites attendant to conventional mandibular advancement procedures.

Secondly, it needed to protect the newly erupted “green” teeth from excessive occlusal forces during mastication which would tend to “round trip” the posteriors by including forces that would drive the teeth back down into their sockets again. This reversing and eruptive process would allow for potential nerve damage and/or alveolar process and dental pain.

Thirdly, it needed to be esthetic, as well as simple and easy to use for both clinician and patient.

Lastly, it should be designed to simplify fabrication to reduce lab time and fees.

The SSV provides better patient compliance.

The SSV appliance is partially successful because it is empathetic towards the patient.

By designing the bite plane to stop short of the incisal edges, the bite is correspondingly more closed when the patient bites as the lower anteriors strike the bite plane. This makes the SSV more comfortable to wear, more esthetic, and more amenable to proper diction. “There’s just less lisping with less acrylic up there!”

Also its smaller size allows the posteriors to come closer together during biting. This smaller bite plane allows for much more efficient and comfortable mastication.

The photo above shows what this appliance looks like when worn at night. The lower arch is used, along with a series of vertical elastics to steadily close the teeth occlusally towards each other.

The Spahl Split Vertical (SSV) functions the same as the Biofinisher but more doctors are prescribing the SSV because it costs less to make, it does not require an additional appliance, like the Biofinisher often does, and it is made with less acrylic, so it is more comfortable with less lisping.

This technical bulletin was contributed in part by an article written by Dr. Terrance J. Spahl titled “The Spahl Split Vertical appliance” and published in the March/April 1992 Functional Orthodontist.